POLYSWITCH RESETTABLE DEVICES

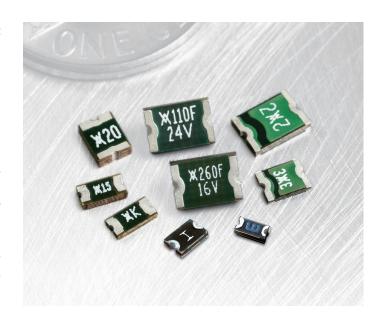


Surface-Mount Devices

PolySwitch surface-mount devices are an effective circuit protection method for computer, consumer, multimedia, portable and automotive electronics applications.

In an affort to reduce the size and cost of surface-mount devices, Littelfuse PolySwitch team introduced the miniSMD product series in 1995. Subsequently, we developed the microSMD, nanoSMD, picoSMD and femtoSMD family of products. The femtoSMD series reduced the device size to a 1608mm (0603 mils) footprint, which is one-twelfth the size of the popular miniSMD series.

Recent additions to the PolySwitch surface-mount series include 1.1A picoSMD 1210mm (0805 mils) and 0.35A femtoSMD 1608mm (0603 mils) devices.



BENEFITS

- Smaller size helps save board space and cost
- Many product choices optimizes design flexibility
- Compatible with high-volume electronics assembly
- Assists in meeting regulatory requirements
- Higher voltage ratings allow use in new applications

FEATURES

- · RoHS compliant
- Halogen free (refers to: Br≥900ppm, Cl≥900ppm, Br+Cl≥1500ppm)
- Broadest range of resettable devices available in the industry
- Current ratings from 0.05 to 3.1A
- Voltage ratings from 6V computer and electronic applications to 60V telecom applications
- · Agency recognition: UL, CSA, TÜV
- Small footprint
- Fast time-to-trip
- · Low resistance

APPLICATIONS

- Computer
- Portable electronics
- Multimedia
- · Game machines
- · Telephony and broadband
- · Mobile phones
- Automotive
- Industrial controls
- Battery

Surface-Mount Devices

Application Selection Table

- The table below lists PolySwitch surface-mount devices recommended for use in typical applications
- Specifications for the suggested PolySwitch surface-mount device part numbers can be found in this table
- Once a part has been selected, the user should evaluate and test each product for the intended application

			PolySwitch Resettable	Devices - Key Selection Cr	iteria
Protection Application	Additional Comments	Overcurrent Overvoltage	Small Size	Low Resistance	Fast Time-to-trip (Temperature Protection)
AC Adapter Input Power	Use w/ Zener & Triac		SMD250F	SMD250F	SMD200F
Battery Pack Protection			nanoSMDC150F	miniSMDC260F	miniSMDE200F/16
Charger Protection			nanoSMDC050F	miniSMDC110F/16	nanoSMDC075F
CPU/IC Protection			nanoSMDC110F	nanoSMDC150F	nanoSMDC075F
Data Acquisition/Sensor			microSMD005F	_	microSMD005F
DC Input/Output Power	≤6V		nanoSMDC075F	nanoSMDC150F	nanoSMDC050F/13.2
	≤12V		miniSMDC075F	miniSMDC110F/16	miniSMDC075F
DDC			nanoSMDC075F	nanoSMDC110F	nanoSMDC050F/13.2
Device Bay System	DB12, DB20		miniSMDC200F	miniSMDC260F	miniSMDC200F
	DB32		miniSMDC260F	SMD300F	miniSMDC200F
Ethernet/LAN			nanoSMDC050F/13.2	miniSMDC110F/16	nanoSMDC075F
Fan			microSMD035F	microSMD050F	microSMD035F
HDMI			picoSMDC035S	picoSMDC035S	picoSMDC035S
IEEE 802.3af	VoIP		decaSMDC050F/60	decaSMDC050F/60	decaSMDC050F/60
IEEE-1394	Power Provider		SMD100F/33	SMD185F	SMD100F/33
	Alt. Power Provider		SMD185F	SMD185F	SMD150F/33
	Self-Powered		SMD185F	SMD185F	SMD150F/33
LCD Inverter			nanoSMDC050F/13.2	miniSMDC110F/16	nanoSMDC075F
LCD Screen Power			nanoSMDC050F/13.2	nanoSMDC050F/13.2	microSMD035F
LNB (Low Noise Block)			SMD075F	SMD075F	SMD050F
Motor	≤6V		nanoSMDC110F	nanoSMDC150F	microSMD075F
	≤13.2V		miniSMDC075F	miniSMDC110F/16	miniSMDC075F
PS/2 Mouse/Keyboard			nanoSMDC075F	nanoSMDC110F	nanoSMDC050F/13.2
Signal - Data Communication	≤6V		nanoSMDC075F	nanoSMDC075F	nanoSMDC075F
	≤13.2V		miniSMDC050F	miniSMDC075F	miniSMDC020F
	≤30V		SMD030F-2018	SMD075F	SMD050F
SCSI			nanoSMDC110F	nanoSMDC150F	nanoSMDC075F
SIM/Smart Card Reader			femtoSMDC010F	femtoSMDC010F	femtoSMDC005F
Telecom - Modem	Digital Line	OC	miniSMDC014F	miniSMDC014F	miniSMDC014F
Telecom - PBX	Subscriber	ОС	miniSMDC014F	miniSMDC014F	miniSMDC014F
Temperature Sensor	CPU		nanoSMDC050F/13.2	nanoSMDC075F	nanoSMDC050F/13.2
USB	Individual Port		nanoSMDC075F	nanoSMDC110F	nanoSMDC050F/13.2
	2 Port Ganged		nanoSMDC150F	miniSMDC150F	miniSMDC125F
	3 Port Ganged		miniSMDC200F	miniSMDC200F	miniSMDC200F

Note: This list is not exhaustive. Littelfuse welcomes our customers' input for additional application ideas for PolySwitch resettable devices.

Table S1 — Product Series: Size, Current Rating, Voltage Rating/Maximum Resistance

	femtoSMD	picoSMD	nanoSMD	microSMD	miniSMD	midSMD
Size mm	1608	2012	3216	3225	4532	5050
(mils)	(0603)	(0805)	(1206)	(1210)	(1812)	(2018)
Hold Current (A)					
0.050	15V _{DC} /30.00Ω	_	_	30V _{DC} /50Ω	_	_
0.080	12V _{DC} /14.00Ω	_	_	_	_	_
0.100	12V _{DC} /8.00Ω	15V _{DC} /11.00Ω	60V _{DC} /15.00Ω	30V _{DC} /15Ω	60V _{DC} /12.70Ω	_
	_	_	_	_	_	_
0.120	9V _{DC} /5.80Ω	15V _{DC} /9.00Ω	48V _{DC} /6.50Ω	_	_	_
0.140	_	_	_	_	60V _{DC} /6.00Ω	_
0.160	9V _{DC} /4.20Ω	_	48V _{DC} /5.00Ω	_	_	_
0.200	9V _{DC} /3.00Ω	9V _{DC} /3.20Ω	24V _{DC} /3.10Ω	_	30V _{DC} /3.30Ω	_
0.250	_	_	16V _{DC} /2.10Ω	_	_	_
0.300	_	_	_	_	30V _{DC} /1.75Ω	60V _{DC} /2.30Ω
0.350	6V _{DC} /1.00Ω	6V _{DC} /1.40Ω	16V _{DC} /1.35Ω	6V _{DC} /1.30Ω	_	_
0.500	_	6V _{DC} /0.80Ω	13.2V _{DC} /0.75Ω	13.2V _{DC} /0.90Ω	24V _{DC} /1.00Ω	_
0.750	_	6V _{DC} /0.35Ω*	6V _{DC} /0.30Ω	6V _{DC} /0.40Ω	13.2V _{DC} /0.45Ω	_
	_	_	_	_	24V _{DC} /0.29Ω	_
	_	_	_	_	33V _{DC} /0.39Ω	_
1.000	_	_	_	_	_	15V _{DC} /0.40Ω
	_	_	_	_	_	_
1.100	_	6V _{DC} /0.17Ω*	6V _{DC} /0.20Ω	6V _{DC} /0.21Ω	8V _{DC} /0.21Ω	_
	_	_	_	_	16V _{DC} /0.18Ω	_
	_	_	_	_	24V _{DC} /0.18Ω	_
1.200					_	_
1.250					6V _{DC} /0.14Ω	_
	_	_	_	_	16V _{DC} /0.14Ω	_
1.500			6V _{DC} /0.11Ω	6V _{DC} /0.11Ω	6V _{DC} /0.11Ω	15V _{DC} /0.18Ω
	_	_	_	_	12V _{DC} /0.11Ω	_
	_	_	_	_	16V _{DC} /0.11Ω	_
	_	_	_	_	24V _{DC} /0.12Ω	_
1.600	_	_	<u> </u>	_	9V _{DC} /0.10Ω	_
1.750	_	_	<u> </u>	6V _{DC} /0.08Ω	_	_
1.850			<u> </u>	_		
2.000		_	6V _{DC} /0.072Ω	6V _{DC} /0.06Ω	8V _{DC} /0.07Ω	6V _{DC} /0.10Ω
	_	_	—	_	16V _{DC} /0.085Ω	_
2.500				_	_	_
2.600	_				6V _{DC} /0.043Ω	_
	_	_	_	_	12V _{DC} /0.047Ω	_
	_	_	_	_	13.2V _{DC} /0.050Ω	_
	_	_	_	_	16V _{DC} /0.050Ω	_
3.000					6V _{DC} /0.036Ω	
0.000	_	_	_	_	- ADC/0.02075	_
3.100						

Surface-Mount Devices

Table S1 — Product Series: Size, Current Rating, Voltage Rating/Maximum Resistance

	SMDC	SMD	SMD2	decaSMD	High Temperature SMD
Size mm	7555	7555	8763	5050	3216 & 3225
mils)	(2920)	(2920)	(3425)	(2018)	(1206) & (1210)
Hold Current (A))				
0.050	_	_	_	_	_
0.080	_	_	_	_	_
0.100	_	_	_	_	30V _{DC} /10.0Ω
	_	_	_	_	$30V_{DC}/11.0\Omega$
0.120	_	_	_	_	_
0.140	_	_	_	_	_
0.160	_	_	_	_	_
0.200	_	_	_	_	_
0.250	_	_	_	_	_
0.300	_	60V _{DC} /4.80Ω	_	_	_
0.350	_	_	_	_	_
0.500	_	60V _{DO} /1.40Ω	_	60V _{DC} /1.10Ω	6V _{DC} /0.90Ω
0.750	_	30V _{DC} /1.00Ω	_	_	6V _{DC} /0.36Ω
	_	60V _{DC} /1.00Ω	_	_	_
	_	_	_	_	_
1.000	_	30V _{DC} /0.48Ω	_	_	_
	_	33V _{DC} /0.41Ω	_	_	_
1.100	_	_	_	_	_
	_	_	_	_	_
	_	_	_	_	_
1.200		16V _{DC} /0.34Ω	_		
1.250	33V _{DC} /0.25Ω	15V _{DC} /0.25Ω	_		
	_	_	_	_	_
1.500		33V _{DC} /0.23Ω	15V _{DC} /0.25Ω	_	
	_	_	33V _{DC} /0.23Ω	_	_
	_	_	_	_	_
	_	_	_	_	_
1.600		_	16V _{DC} /0.15Ω	_	
1.750	_	_	—	_	_
1.850	33V _{DC} /0.15Ω	_	33V _{DC} /0.165Ω	_	_
2.000		24V _{DC} /0.125Ω	15V _{DO} /0.125Ω	_	_
	_		—	_	_
2.500		15V _{DC} /0.085Ω	15V _{DC} /0.85Ω		
2.600		6V _{DC} /0.075Ω	—		
000	_		_	_	_
	_	_	_	_	_
	_			_	_
3.000		— 6V _{DC} /0.048Ω	<u> </u>	<u> </u>	
7.000	Z4VDC/U.U/Z\$2		_	_	_
3.100	 18V _{DC} /0.036Ω	15V _{DC} /0.05Ω			

Table S2 — Thermal Derating [Hold Current (A) at Ambient Temperature (°C)]

Part					IVIAX	imum Ambi	ent lemper	ature				
Number	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	80°C	85°C	125
femtoSMDC Series Size 1608mm/0603m	ils											
femtoSMDC005F	0.08	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.02	_
femtoSMDC008F	0.13	0.11	0.10	0.08	0.08	0.07	0.06	0.06	0.05	0.04	0.04	_
femtoSMDC010F	0.16	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.04	_
femtoSMDC012F	0.18	0.16	0.14	0.12	0.12	0.11	0.10	0.08	0.08	0.07	0.06	_
femtoSMDC016F	0.25	0.22	0.18	0.17	0.16	0.14	0.12	0.11	0.10	0.08	0.07	-
femtoSMDC020F	0.30	0.27	0.24	0.20	0.20	0.17	0.16	0.14	0.12	0.11	0.10	-
femtoSMDC035F	0.53	0.47	0.41	0.36	0.35	0.30	0.27	0.25	0.22	0.19	0.17	_
picoSMDC Series Size 2012mm/0805m	ils											
picoSMDC010S	0.17	0.15	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.05	_
picoSMDC012S	0.20	0.17	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.06	0.05	_
picoSMDC020S	0.30	0.27	0.24	0.21	0.20	0.18	0.16	0.15	0.13	0.12	0.11	_
picoSMDC035S	0.55	0.49	0.44	0.37	0.35	0.31	0.28	0.26	0.23	0.20	0.18	_
picoSMDC050S	0.70	0.62	0.55	0.55	0.50	0.43	0.38	0.33	0.30	0.28	0.26	_
picoSMDC075S	1.13	1.01	0.90	0.78	0.75	0.67	0.61	0.55	0.49	0.43	0.40	_
picoSMDC110S	1.64	1.47	1.30	1.14	1.10	0.97	0.89	0.80	0.72	0.64	0.59	_
nanoSMDC Series Size 3216mm/1206m	ils											
nanoSMDC010F	0.15	0.14	0.12	0.10	0.10	0.09	0.08	0.07	0.06	0.05	0.05	
nanoSMDC012F	0.20	0.17	0.15	0.13	0.12	0.11	0.10	0.09	0.08	0.07	0.07	_
nanoSMDC016F	0.21	0.20	0.18	0.16	0.16	0.14	0.13	0.12	0.11	0.10	0.09	
nanoSMDC020F	0.34	0.30	0.26	0.22	0.20	0.17	0.15	0.13	0.11	0.09	0.08	_
nanoSMDC025F	0.38	0.33	0.30	0.26	0.25	0.22	0.20	0.19	0.16	0.13	0.11	_
nanoSMDC035F	0.58	0.51	0.44	0.38	0.35	0.31	0.28	0.24	0.21	0.18	0.16	_
nanoSMDC050F/13.2	0.78	0.69	0.61	0.52	0.50	0.44	0.39	0.35	0.30	0.25	0.24	
nanoSMDC075F	1.15	1.04	0.92	0.78	0.75	0.69	0.63	0.58	0.51	0.46	0.43	_
nanoSMDC110F	1.64	1.46	1.30	1.10	1.06	0.92	0.83	0.80	0.65	0.56	0.52	_
nanoSMDC150F	2.20	1.99	1.77	1.55	1.50	1.34	1.23	1.10	1.01	0.90	0.84	_
nanoSMDC200F	2.92	2.64	2.35	2.07	2.00	1.79	1.64	1.50	1.36	1.22	1.15	_
microSMD Series Size 3225mm/1210m	ils											
microSMD005F	0.08	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.02	_
microSMD010F	0.15	0.13	0.12	0.10	0.10	0.09	0.08	0.06	0.06	0.05	0.05	_
microSMD035F	0.51	0.46	0.40	0.35	0.34	0.30	0.27	0.24	0.22	0.19	0.18	_
microSMD050F	0.76	0.66	0.58	0.50	0.48	0.42	0.38	0.35	0.29	0.25	0.23	_
microSMD075F	1.10	0.97	0.86	0.75	0.72	0.64	0.58	0.55	0.47	0.42	0.39	_
microSMD110F	1.60	1.42	1.26	1.10	1.06	0.94	0.86	0.80	0.70	0.62	0.58	_
microSMD150F	2.30	2.02	1.76	1.50	1.43	1.24	1.11	1.00	0.85	0.72	0.65	_
microSMD175F	2.80	2.45	2.10	1.75	1.70	1.55	1.45	1.35	1.25	1.15	1.10	_
microSMD200F	2.60	2.44	2.35	2.00	1.96	1.78	1.67	1.50	1.45	1.15	1.10	_
miniSMDC Series Size 4532mm/1812m	ils				-							
miniSMDC010F	0.17	0.15	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.04	_
miniSMDC014F	0.23	0.20	0.17	0.14	0.13	0.11	0.10	0.09	0.07	0.06	0.05	_
miniSMDC020F	0.30	0.27	0.23	0.20	0.19	0.17	0.15	0.13	0.12	0.10	0.09	_
miniSMDC030F	0.49	0.44	0.39	0.32	0.30	0.27	0.24	0.22	0.18	0.16	0.14	_
miniSMDC050F	0.59	0.57	0.55	0.50	0.48	0.45	0.43	0.35	0.30	0.25	0.23	_
miniSMDC075F	1.10	0.99	0.87	0.75	0.72	0.63	0.57	0.49	0.45	0.39	0.35	_
miniSMDC075F/24	1.50	1.25	1.00	0.75	0.73	0.65					0.43	

Surface-Mount Devices

Table S2 — Thermal Derating [Hold Current (A) at Ambient Temperature (°C)] (Cont'd)

Part					Max	imum Ambi	ent Temper	ature				
Number	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	80°C	85°C	125°
miniSMDC Ser Size 4532mm/												
miniSMDC075F	/33 1.09	0.98	0.87	0.77	0.75	0.66	0.61	0.55	0.50	0.45	0.42	
miniSMDC100F	1.60	1.45	1.28	1.10	1.07	0.92	0.83	0.71	0.66	0.57	0.52	_
miniSMDC110F	1.60	1.45	1.28	1.10	1.07	0.92	0.83	0.71	0.66	0.57	0.52	_
miniSMDC110F/	/16 1.68	1.49	1.30	1.10	1.05	0.92	0.83	0.75	0.64	0.55	0.50	_
miniSMDC110F/	/24 2.00	1.70	1.40	1.10	1.06	0.95	0.88	0.80	0.73	0.65	0.61	_
miniSMDC125F	2.00	1.69	1.47	1.25	1.17	1.03	0.92	0.90	0.69	0.58	0.53	_
miniSMDC125F,	/16 2.00	1.69	1.47	1.25	1.17	1.03	0.92	0.90	0.69	0.58	0.53	_
miniSMDC150F	2.30	2.05	1.77	1.50	1.44	1.23	1.09	0.95	0.82	0.68	0.61	_
miniSMDC150F,	/12 2.40	2.10	1.80	1.50	1.44	1.25	1.13	1.00	0.88	0.75	0.69	_
miniSMDC150F,	/16 2.40	2.10	1.80	1.50	1.44	1.25	1.13	1.00	0.88	0.75	0.69	
miniSMDC150F		1.90	1.70	1.50	1.44	1.25	1.13	1.00	0.88	0.75	0.69	
miniSMDC160F	2.50	2.19	1.89	1.60	1.53	1.31	1.16	1.10	0.95	0.79	0.71	_
miniSMDC200F		2.44	2.22	2.00	1.96	1.78	1.67	1.50	1.45	1.34	1.29	
miniSMDC200F		2.74	2.40	2.07	2.00	1.74	1.57	1.40	1.24	1.07	0.99	
miniSMDC260F		3.16	2.80	2.60	2.54	2.32	2.18	2.00	1.90	1.76	1.69	
miniSMDC260F		3.16	3.00	2.60	2.54	2.32	2.18	2.00	1.90	1.76	1.69	
		3.16		2.60		2.32		2.00				
miniSMDC260F			3.00		2.54		2.18		1.90	1.76	1.69	
miniSMDC260F	•	3.20	3.00	2.60	2.53	2.30	2.15	2.00	1.85	1.70	1.63	_
midSMD Series	S	3.75	3.33	3.02	3.00	2.70	2.54	2.35	2.22	2.06	1.98	
SMD030F-2018	0.48	0.42	0.35	0.30	0.28	0.24	0.21	0.17	0.15	0.12	0.10	_
decaSMDC050F	-/60 1.00	0.85	0.70	0.55	0.53	0.45	0.40	0.35	0.30	0.25	0.23	_
SMD100F-2018	1.59	1.43	1.20	1.10	1.03	0.94	0.85	0.72	0.69	0.61	0.57	
SMD150F-2018	2.21	1.97	1.70	1.50	1.43	1.26	1.15	1.00	0.91	0.79	0.73	_
SMD200F-2018	2.81	2.54	2.27	2.00	1.93	1.73	1.59	1.46	1.32	1.19	1.12	_
SMDC Series Size 7555mm/2	2920mils											
SMDC125F/33	2.02	1.78	1.55	1.31	1.25	1.08	0.96	0.84	0.72	0.60	0.54	_
SMDC185F/33	2.83	2.50	2.20	1.85	1.74	1.53	1.37	1.22	1.04	0.88	0.80	
SMDC300F/24	4.70	4.19	3.70	3.17	3.00	2.66	2.41	2.20	1.90	1.65	1.50	_
SMDC310F/18	4.50	4.06	3.78	3.19	3.10	2.75	2.54	2.32	2.10	1.88	1.76	
SMD Series Size 7555mm/2	2920mils											
SMD030F	0.44	0.39	0.32	0.30	0.28	0.26	0.23	0.19	0.18	0.17	0.15	_
SMD050F	0.73	0.65	0.55	0.50	0.47	0.43	0.39	0.33	0.31	0.28	0.26	_
SMD075F	1.11	0.99	0.84	0.75	0.71	0.63	0.57	0.49	0.45	0.39	0.36	
SMD075F/60	1.11	0.99	0.84	0.75	0.71	0.63	0.57	0.49	0.45	0.39	0.36	_
SMD100F	1.59	1.43	1.20	1.10	1.03	0.94	0.85	0.72	0.69	0.61	0.57	_
SMD100F/33	1.48	1.35	1.20	1.10	1.06	0.98	0.91	0.83	0.79	0.73	0.69	_
	2.34	1.96	1.58	1.20	1.15	1.02	0.92	0.83	0.74	0.65	0.60	0.2
SMDH120		1.68	1.50	1.25	1.21	1.04	0.93	0.85	0.71	0.61	0.55	
SMDH120 SMD125F	1.69					1.25	1.12	0.99	0.86	0.74	0.67	_
SMD125F	1.89	2 01	1.76	150	1 44		1.14	0.00	0.00	U./T	0.07	
SMD125F SMD150F/33-29	920 2.27	2.01	1.76	1.50	1.44		1.55	1.40	1 25	1 10	1 03	_
SMD125F SMD150F/33-29 SMD200F/24-29	920 2.27 920 2.90	2.60	2.30	2.00	1.93	1.70	1.55	1.40	1.25	1.10	1.03	
SMD125F SMD150F/33-29 SMD200F/24-29 SMD250F/15-29	220 2.27 220 2.90 220 3.65	2.60 3.25	2.30	2.00	1.93 2.33	1.70 2.02	1.82	1.60	1.41	1.20	1.11	_
SMD125F SMD150F/33-29 SMD200F/24-29	920 2.27 920 2.90	2.60	2.30	2.00	1.93	1.70						

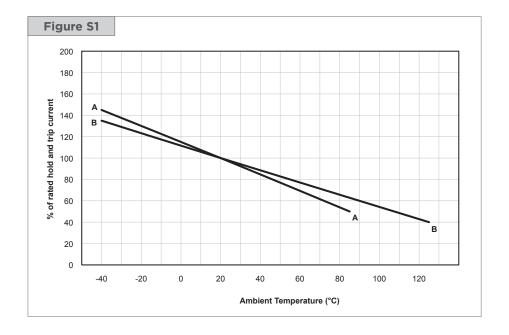
Surface-Mount Devices

Table S2 — Thermal Derating [Hold Current (A) at Ambient Temperature (°C)] (Cont'd)

Part					Maxi	mum Ambi	ent Temper	ature				
Number	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	80°C	85°C	125°0
SMD2 Series Size 8763mm/3425m	nils											
SMD150F	2.30	2.04	1.80	1.50	1.45	1.23	1.10	0.99	0.83	0.70	0.63	_
SMD150F/33	2.30	2.04	1.80	1.50	1.45	1.23	1.10	0.99	0.83	0.70	0.63	_
SMDH160	2.14	1.96	1.78	1.60	1.56	1.42	1.33	1.24	1.15	1.06	1.02	0.44
SMD185F	2.54	2.29	2.20	1.85	1.80	1.55	1.43	1.31	1.19	1.06	1.00	_
SMD200F	3.01	2.67	2.30	2.00	1.90	1.66	1.50	1.30	1.16	0.99	0.91	_
SMD250F	3.72	3.31	2.80	2.50	2.35	2.09	1.89	1.60	1.48	1.28	1.18	_
High Temperature S Size 3216mm/1206m		mm/1210mi	ls									
nanoSMDCH010F	0.18	0.16	0.15	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.06	0.03
nanoSMDH075F	1.07	0.98	0.90	0.78	0.75	0.70	0.66	0.61	0.56	0.52	0.50	0.30
microSMDCH010F	0.18	0.16	0.15	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.0
microSMDCH050F	0.85	0.78	0.75	0.54	0.50	0.48	0.45	0.42	0.38	0.35	0.35	0.18

Figure S1 — Thermal Derating Curve

- A = femtoSMD / picoSMD / nanoSMD / microSMD / miniSMD decaSMD / SMDC and SMD
- B = SMDH120 / SMDH160 and High Temperature SMD



Surface-Mount Devices

Table S3 — Electrical Characteristics for Surface-Mount Devices at Room Temperature

P	Part	I _H	I _T	V_{MAX}	I _{MAX}	P _{D MAX}	Max Tin	ne-to-Trip	R _{MIN}	R _{1MAX}	Figure for
	lumber	(A)	(A)	(V _{DC})	(A)	(W)	(A)	(S)	- (Ω)	(Ω)	Dimensions
	emtoSMDC Series Size 1608mm/0603mils										
f	emtoSMDC005F	0.05	0.15	15	40	0.50	0.50	0.10	3.80	30.00	S2
f	emtoSMDC008F	0.08	0.20	12	40	0.50	0.60	0.10	2.80	14.00	S2
f	emtoSMDC010F	0.10	0.25	12	40	0.50	0.70	0.10	1.70	8.00	S2
f	emtoSMDC012F	0.12	0.30	9	40	0.50	0.80	0.10	1.10	5.80	S2
f	emtoSMDC016F	0.16	0.40	9	40	0.50	1.00	0.10	1.00	4.20	S2
f	emtoSMDC020F	0.20	0.45	9	40	0.50	2.00	0.10	0.70	3.00	S2
f	emtoSMDC035F	0.35	0.70	6	40	0.50	3.50	0.10	0.28	1.00	S2
	oicoSMDC Series Size 2012mm/0805mils										
p	oicoSMDC010S	0.10	0.30	15	100	0.50	0.50	0.60	1.50	11.00	S2
p	oicoSMDC012S	0.12	0.30	15	100	0.50	1.00	0.10	1.50	9.00	S2
p	picoSMDC020S	0.20	0.47	9	100	0.50	2.00	0.10	0.75	3.20	S2
p	oicoSMDC035S	0.35	0.75	6	100	0.50	1.75	0.20	0.35	1.40	S2
p	oicoSMDC050S	0.50	1.00	6	100	0.50	8.00	0.10	0.15	0.80	S2
_	picoSMDC075S	0.75	1.50	6	40	0.70	8.00	0.20	0.10	0.35	S2
_	oicoSMDC110S	1.10	2.20	6	40	0.80	8.00	0.20	0.05	0.17	S2
	nanoSMDC Series Size 3216mm/1206mils										
	anoSMDC010F	0.10	0.25	60	10	0.80	0.50	1.00	1.60	15.00	S2
n	anoSMDC012F	0.12	0.39	48	10	0.50	1.00	0.20	1.40	6.50	S2
_	anoSMDC016F	0.16	0.45	48	10	0.50	1.00	0.30	1.10	5.00	S2
_	anoSMDC020F	0.20	0.42	24	100	0.60	8.00	0.10	0.65	3.10	S2
_	anoSMDC025F	0.25	0.58	16	100	0.60	8.00	0.10	0.40	2.10	S2
_	anoSMDC035F	0.35	0.75	16	20	0.60	3.50	0.10	0.45	1.35	S2
_	anoSMDC050F/13.2	0.50	1.10	13.2	100	0.80	8.00	0.10	0.20	0.75	S2
_	anoSMDC075F	0.75	1.50	6	100	0.80	8.00	0.10	0.09	0.30	S2
_	anoSMDC110F	1.10	2.20	6	100	0.80	8.00	0.10	0.07	0.20	S2
_	anoSMDC150F	1.50	3.00	6	100	0.80	8.00	0.30	0.04	0.20	S2
_	anoSMDC200F	2.00	4.00	6	100	1.00	8.00	1.50	0.04	0.072	S2
n	nicroSMD Series	2.00	4.00	0	100	1.00	0.00	1.50	0.02	0.072	
_	nicroSMD005F	0.05	0.15	30	10	1.00	0.25	1.50	3.60	50.00	S2
_	nicroSMD010F	0.05	0.15	30	10	0.80	0.25	1.00	2.10	15.00	S2 S2
_	nicroSMD010F	0.10	0.25	6	40	0.80	8.00	0.20	0.32	1.30	S2 S2
_		0.50	1.00	13.2	40	0.80		0.20	0.32	0.90	S2 S2
_	nicroSMD050F			6	40		8.00				S2 S2
_	nicroSMD075F	0.75	1.50			0.80	8.00	0.10	0.11	0.40	
_	nicroSMD110F	1.10	2.20	6	40	0.80	8.00	0.20	0.07	0.21	S2
_	nicroSMD150F	1.50	3.00	6	40	0.80	8.00	1.00	0.04	0.11	S2
_	nicroSMD175F	1.75	3.50	6	40	0.80	8.00	0.80	0.025	0.08	S2
n	nicroSMD200F niniSMDC Series	2.00	4.00	6	100	0.80	8.00	2.50	0.020	0.06	S2
- 5	Size 4532mm/1812mils	0.10	0.20	60	40	0.75	0.50	E 00	0.70	10.70	CO
	niniSMDC010F	0.10	0.30	60	40	0.75	0.50	5.00	0.70	12.70	S2
_	niniSMDC014F	0.14	0.28	60	10	0.75	8.00	0.008	1.50	6.00	S2
n		0.00		30	10	0.80	8.00	0.02	0.60	3.30	S2
n	niniSMDC020F	0.20	0.40			0.00	0.00	0.40	0.00	4 7-	
n	niniSMDC020F niniSMDC030F	0.30	0.60	30	40	0.80	8.00	0.10	0.20	1.75	S2
n	niniSMDC020F					0.80 0.80 1.00	8.00 8.00 8.00	0.10 0.15 0.20	0.20 0.15 0.11	1.75 1.00 0.45	S2 S2 S2

Table S3 — Electrical Characteristics for Surface-Mount Devices at Room Temperature

	Part	I _H	I _T	V_{MAX}	I _{MAX}	P _{D MAX}	MaxTin	ne-to-Trip	R _{MIN}	R _{1MAX}	Figure for
	Number	(A)	(A)	(V _{DC})	(A)	(W)	(A)	(S)	(Ω)	(Ω)	Dimensions
	miniSMDC Series Size 4532mm/1812mils										
1	miniSMDC075F/33	0.75	1.60	33	100	1.00	8.00	1.00	0.11	0.39	S2
1	miniSMDC100F	1.10	2.20	8	100	1.20	8.00	0.30	0.04	0.21	S2
1	miniSMDC110F	1.10	2.20	8	100	1.20	8.00	0.30	0.04	0.21	S2
1	miniSMDC110F/16	1.10	2.20	16	100	0.80	8.00	0.30	0.06	0.18	S2
1	miniSMDC110F/24	1.10	2.20	24	20	0.80	8.00	0.50	0.06	0.18	S2
1	miniSMDC125F	1.25	2.50	6	100	0.80	8.00	0.40	0.05	0.14	S2
1	miniSMDC125F/16	1.25	2.50	16	100	0.80	8.00	0.40	0.05	0.14	S2
1	miniSMDC150F	1.50	3.00	6	100	0.80	8.00	0.50	0.04	0.11	S2
1	miniSMDC150F/12	1.50	2.80	12	100	0.80	8.00	0.50	0.04	0.11	S2
1	miniSMDC150F/16	1.50	2.80	16	100	0.80	8.00	0.50	0.04	0.11	S2
1	miniSMDC150F/24	1.50	3.00	24	20	1.00	8.00	1.50	0.04	0.12	S2
1	miniSMDC160F	1.60	3.20	9	100	0.80	8.00	1.00	0.03	0.10	S2
1	miniSMDC200F	2.00	4.00	8	100	1.00	8.00	5.00	0.020	0.070	S2
1	miniSMDC200F/16	2.00	4.00	16	40	1.20	8.00	5.00	0.020	0.085	S2
1	miniSMDC260F	2.60	5.00	6	100	1.00	8.00	5.00	0.015	0.043	S2
1	miniSMDC260F/12	2.60	5.00	12	100	1.00	8.00	5.00	0.015	0.047	S2
1	miniSMDC260F/13.2	2.60	5.00	13.2	100	1.20	8.00	5.00	0.015	0.050	S2
1	miniSMDC260F/16	2.60	5.00	16	100	1.20	8.00	5.00	0.015	0.050	S2
1	miniSMDC300F	3.00	6.00	6	100	1.00	8.00	5.00	0.011	0.036	S2
	midSMD Series Size 5050mm/2018mils										
	SMD030F-2018	0.30	0.80	60	20	1.50	1.50	1.50	0.500	2.30	S3
(decaSMDC050F/60	0.55	1.10	60	10	1.00	8.00	0.10	0.200	1.10	S2
	SMD100F-2018	1.10	2.20	15	40	1.40	8.00	0.50	0.100	0.40	S3
,	SMD150F-2018	1.50	3.00	15	40	1.80	8.00	1.00	0.070	0.18	S3
	SMD200F-2018	2.00	4.20	6	40	1.50	8.00	3.00	0.048	0.10	S3
	SMDC Series Size 7555mm/2920mils										
	SMDC125F/33	1.25	2.50	33	40	1.50	8.00	2.00	0.040	0.250	S2
(SMDC185F/33	1.85	3.70	33	40	1.70	8.00	2.50	0.050	0.150	S2
,	SMDC300F/24	3.00	6.00	24	40	1.70	8.00	5.00	0.015	0.072	S2
,	SMDC310F/18	3.10	6.00	18	50	1.50	8.00	25.00	0.013	0.036	S2
	SMD Series Size 7555mm/2920mils										
(SMD030F	0.30	0.60	60	10	1.70	1.50	3.00	1.200	4.800	S4
	SMD050F	0.50	1.00	60	10	1.70	2.50	4.00	0.350	1.400	S4
	SMD075F	0.75	1.50	30	40	1.70	8.00	0.30	0.350	1.000	S4
	SMD075F/60	0.75	1.50	60	10	1.70	8.00	0.30	0.350	1.000	S4
-	SMD100F	1.10	2.20	30	40	1.70	8.00	0.50	0.120	0.480	S4
-	SMD100F/33	1.10	2.20	33	40	1.70	8.00	0.50	0.120	0.410	S4
-	SMDH120	1.20	2.30	16	50	2.00	8.00	2.00	0.150	0.340	S4
-	SMD125F	1.25	2.50	15	40	1.70	8.00	2.00	0.070	0.250	S4
-	SMD150F/33-2920	1.50	3.00	33	40	1.50	8.00	5.00	0.080	0.230	S4
-	SMD200F/24-2920	2.00	4.00	24	40	1.50	8.00	5.00	0.050	0.125	S4
-	SMD250F/15-2920	2.50	5.00	15	40	1.50	8.00	10.00	0.035	0.085	S4
-	SMD260F	2.60	5.20	6	40	1.70	8.00	20.00	0.025	0.075	S4
-	SMD300F	3.00	6.00	6	40	1.50	8.00	35.00	0.015	0.048	S4

Surface-Mount Devices

Table S3 — Electrical Characteristics for Surface-Mount Devices at Room Temperature

(Cont'd)

Part	I _H	I _T	V _{MAX}	I _{MAX}	P _{D MAX}	MaxTim	e-to-Trip	R _{MIN}	R _{1MAX}	Figure for
Number	(A)	(A)	(V _{DC})	(A)	(W)	(A)	(S)	(Ω)	(Ω)	Dimensions
SMD2 Devices Size 8763mm/3425mile	s									
SMD150F	1.50	3.00	15	40	1.90	8.00	5.00	0.060	0.250	S4
SMD150F/33	1.50	3.00	33	40	1.90	8.00	5.00	0.080	0.230	S4
SMDH160	1.60	3.20	16	70	2.20	8.00	15.00	0.050	0.150	S4
SMD185F	1.85	3.60	33	40	1.50	8.00	5.00	0.065	0.165	S4
SMD200F	2.00	4.00	15	40	1.90	8.00	12.00	0.050	0.125	S4
SMD250F	2.50	5.00	15	40	1.90	8.00	25.00	0.035	0.085	S4
High Temperature SM Size 3216mm/1206mil		1210mils								
nanoSMDCH010F	0.10	0.35	30	10	0.80	1.00	0.10	1.10	10.00	S2
nanoSMDH075F	0.75	2.00	6	10	1.10	8.00	0.10	0.10	0.36	S5
microSMDCH010F	0.10	0.35	30	10	0.90	1.00	0.10	1.20	11.00	S2
microSMDCH050F	0.50	1.50	6	10	1.10	8.00	0.05	0.19	0.90	S2

Figures S2-S5 — Dimension Figures

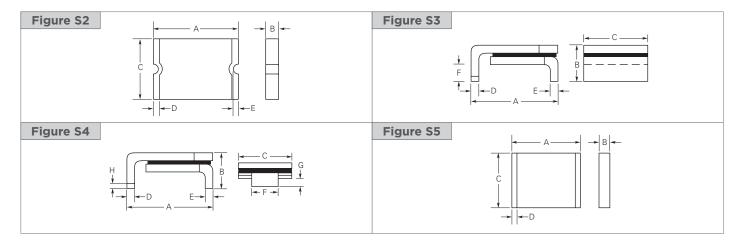


Table S4 — Dimensions in Millimeters (Inches)

Part -	A	A	1	В	(С	- 1)	E	Ē	I	F	(G	Н	F:
Number	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Figure
femtoSMDC Series Size 1608mm/0603	mils															
femtoSMDC005F	1.40	1.80	0.45	0.85	0.60	1.00	0.10	0.50	0.075	_	_	_	_	_	_	S2
	(0.055)	(0.071)	(0.017)	(0.033)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)	_	_	_	_	_	_	
femtoSMDC008F	1.40	1.80	0.45	0.85	0.60	1.00	0.10	0.50	0.075	_	_	_	_	_	_	S2
	(0.055)	(0.071)	(0.017)	(0.033)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)	_	_	_	_	_	_	
femtoSMDC010F	1.40	1.80	0.45	0.85	0.60	1.00	0.10	0.50	0.075	_	_	_	_	_	_	S2
	(0.055)	(0.071)	(0.017)	(0.033)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)	_	_	_	_	_	_	
femtoSMDC012F	1.40	1.80	0.35	0.75	0.60	1.00	0.10	0.50	0.075	_						S2
	(0.055)	(0.071)	(0.013)	(0.030)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)	_	_	_	_	_	_	

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Surface-Mount Devices

Table S4 — Dimensions in Millimeters (Inches)

Part		A		В		C)				F		G	Н	Figure
Number	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	riguie
femtoSMDC Series Size 1608mm/060																
femtoSMDC016F	1.40	1.80	0.35	0.75	0.60	1.00	0.10	0.50	0.075	_	_	_	_	_	_	S2
	(0.055)	(0.071)	(0.013)	(0.030)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)	_	_	_	_	_	_	
femtoSMDC020F	1.40	1.80	0.35	0.75	0.60	1.00	0.10	0.50	0.075	_	_	_	_	_	_	S2
	(0.055)	(0.071)	(0.013)	(0.030)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)	_	_	_	_		_	
femtoSMDC035F	1.40	1.80	0.55	0.95	0.60	1.00	0.10	0.50	0.075	_	_	_	_	_	_	S2
	(0.055)	(0.071)	(0.021)	(0.037)	(0.023)	(0.039)	(0.004)	(0.020)	(0.003)							
picoSMDC Series Size 2012mm/080	ōmils															
picoSMDC010S	2.00	2.20	0.60	1.00	1.30	1.50	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.079)	(0.087)	(0.023)	(0.040)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
picoSMDC012S	2.00	2.20	0.44	0.68	1.30	1.50	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.079)	(0.087)	(0.017)	(0.027)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
picoSMDC020S	2.00	2.20	0.44	0.68	1.30	1.50	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.079)	(0.087)	(0.017)	(0.027)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
picoSMDC035S	2.00	2.20	0.44	0.68	1.30	1.50	0.25	0.75	0.076	_		_	_	_		S2
	(0.079)	(0.087)	(0.017)	(0.027)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
picoSMDC050S	2.00	2.20	0.63	0.93	1.30	1.50	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.079)	(0.087)	(0.025)	(0.036)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
picoSMDC075S	2.00	2.20	0.63	0.93	1.30	1.50	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.079)	(0.087)	(0.025)	(0.036)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
picoSMDC110S	2.00	2.20	0.80	1.20	1.30	1.50	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.079)	(0.087)	(0.031)	(0.047)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
nanoSMDC Series Size 3216mm/120																
nanoSMDC010F	3.00	3.40	0.62	1.00	1.37	1.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.134)	(0.024)	(0.039)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
nanoSMDC012F	3.00	3.40	0.62	1.00	1.37	1.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.134)	(0.024)	(0.039)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
nanoSMDC016F	3.00	3.40	0.62	1.00	1.37	1.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.134)	(0.024)	(0.039)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
nanoSMDC020F	3.00	3.40	0.58	0.82	1.37	1.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
														_	_	
	(0.118)	(0.134)	(0.023)	(0.032)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)	_	_	_	_			00
nanoSMDC025F															_	52
nanoSMDC025F	(0.118) 3.00 (0.118)	(0.134) 3.40 (0.134)	(0.023) 0.58 (0.023)	(0.032) 0.82 (0.032)	(0.054) 1.37 (0.054)	(0.071) 1.80 (0.071)	(0.010) 0.25 (0.010)	(0.030) 0.75 (0.030)	(0.003) 0.076 (0.003)						_	S2
nanoSMDC025F	3.00 (0.118)	3.40 (0.134)	0.58 (0.023)	0.82 (0.032)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	_ _ _ _		_ _ _ _	_ _ _ _		_ _ _	
	3.00 (0.118) 3.00	3.40 (0.134) 3.40	0.58 (0.023) 0.58	0.82 (0.032) 0.82	1.37 (0.054) 1.37	1.80 (0.071) 1.80	0.25 (0.010) 0.25	0.75 (0.030) 0.75	0.076 (0.003) 0.076	_					_	S2 S2
	3.00 (0.118) 3.00 (0.118)	3.40 (0.134)	0.58 (0.023) 0.58 (0.023)	0.82 (0.032) 0.82 (0.032)	1.37 (0.054) 1.37 (0.054)	1.80 (0.071) 1.80 (0.071)	0.25 (0.010) 0.25 (0.010)	0.75 (0.030) 0.75 (0.030)	0.076 (0.003) 0.076 (0.003)					_ _ _ _		S2
nanoSMDC035F	3.00 (0.118) 3.00 (0.118) 2 3.00	3.40 (0.134) 3.40 (0.134) 3.40	0.58 (0.023) 0.58 (0.023) 0.50	0.82 (0.032) 0.82 (0.032) 0.74	1.37 (0.054) 1.37 (0.054) 1.37	1.80 (0.071) 1.80 (0.071) 1.80	0.25 (0.010) 0.25 (0.010) 0.25	0.75 (0.030) 0.75 (0.030) 0.75	0.076 (0.003) 0.076 (0.003) 0.076	_ _ _						
nanoSMDC035F nanoSMDC050F/13.	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118)	3.40 (0.134) 3.40 (0.134) 3.40 (0.134)	0.58 (0.023) 0.58 (0.023) 0.50 (0.019)	0.82 (0.032) 0.82 (0.032) 0.74 (0.029)	1.37 (0.054) 1.37 (0.054) 1.37 (0.054)	1.80 (0.071) 1.80 (0.071) 1.80 (0.071)	0.25 (0.010) 0.25 (0.010) 0.25 (0.010)	0.75 (0.030) 0.75 (0.030) 0.75 (0.030)	0.076 (0.003) 0.076 (0.003) 0.076 (0.003)	_ _ _ _					_ _ _ _	S2 S2
nanoSMDC035F	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118) 3.00	3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40	0.58 (0.023) 0.58 (0.023) 0.50 (0.019) 0.44	0.82 (0.032) 0.82 (0.032) 0.74 (0.029) 0.68	1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37	1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80	0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25	0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75	0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076						_ 	S2
nanoSMDC035F nanoSMDC050F/13.: nanoSMDC075F	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118) 3.00 (0.118)	3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134)	0.58 (0.023) 0.58 (0.023) 0.50 (0.019) 0.44 (0.017)	0.82 (0.032) 0.82 (0.032) 0.74 (0.029) 0.68 (0.027)	1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054)	1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071)	0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010)	0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030)	0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003)	_ _ _ _ _					_ _ _ _	\$2 \$2 \$2
nanoSMDC035F nanoSMDC050F/13.	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118) 3.00 (0.118) 3.00	3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40	0.58 (0.023) 0.58 (0.023) 0.50 (0.019) 0.44 (0.017) 0.28	0.82 (0.032) 0.82 (0.032) 0.74 (0.029) 0.68 (0.027) 0.67	1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37	1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80	0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25	0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75	0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003)				- - - - - - - - - -		- - - -	S2 S2
nanoSMDC035F nanoSMDC050F/13.: nanoSMDC075F nanoSMDC110F	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118) 3.00 (0.118) 3.00 (0.118)	3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134)	0.58 (0.023) 0.58 (0.023) 0.50 (0.019) 0.44 (0.017) 0.28 (0.011)	0.82 (0.032) 0.82 (0.032) 0.74 (0.029) 0.68 (0.027) 0.67 (0.026)	1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054)	1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071)	0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010)	0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030)	0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003)						- - - -	\$2 \$2 \$2 \$2
nanoSMDC035F nanoSMDC050F/13.: nanoSMDC075F	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118) 3.00 (0.118) 3.00 (0.118) 3.00	3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40	0.58 (0.023) 0.58 (0.023) 0.50 (0.019) 0.44 (0.017) 0.28 (0.011)	0.82 (0.032) 0.82 (0.032) 0.74 (0.029) 0.68 (0.027) 0.67 (0.026)	1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054)	1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071)	0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010)	0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030)	0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003)	- - - - - - -		- - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -		- - - - - - -	\$2 \$2 \$2
nanoSMDC035F nanoSMDC050F/13.: nanoSMDC075F nanoSMDC110F	3.00 (0.118) 3.00 (0.118) 2 3.00 (0.118) 3.00 (0.118) 3.00 (0.118)	3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134) 3.40 (0.134)	0.58 (0.023) 0.58 (0.023) 0.50 (0.019) 0.44 (0.017) 0.28 (0.011)	0.82 (0.032) 0.82 (0.032) 0.74 (0.029) 0.68 (0.027) 0.67 (0.026)	1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054) 1.37 (0.054)	1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071) 1.80 (0.071)	0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010) 0.25 (0.010)	0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030) 0.75 (0.030)	0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003) 0.076 (0.003)		- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -			\$2 \$2 \$2 \$2

Surface-Mount Devices

Table S4 — Dimensions in Millimeters (Inches)

Part	1	Α	1	В	(С	1	D	1	E		F		G	Н	
Number	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Figure
microSMD Series Size 3225mm/1210	mils															
microSMD005F	3.0	3.43	0.50	0.85	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.019)	(0.034)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD010F	3.0	3.43	0.50	0.85	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.019)	(0.034)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD035F	3.0	3.43	0.38	0.62	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.015)	(0.025)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD050F	3.0	3.43	0.38	0.62	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.015)	(0.025)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD075F	3.0	3.43	0.38	0.62	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.015)	(0.025)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD110F	3.0	3.43	0.28	0.48	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.011)	(0.019)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD150F	3.0	3.43	0.51	1.22	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.020)	(0.048)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD175F	3.0	3.43	0.40	0.76	2.35	2.80	0.25	0.75	0.076	_	_	_	_	_	_	S2
	(0.118)	(0.135)	(0.016)	(0.030)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
microSMD200F	3.0	3.43	0.79	1.17	2.35	2.80	0.25	0.75	0.076	_		_	_	_	_	S2
	(0.118)	(0.135)	(0.031)	(0.046)	(0.092)	(0.110)	(0.010)	(0.030)	(0.003)	_	_	_	_	_	_	
miniSMDC Series Size 4532mm/1812	mils															
miniSMDC010F	4.37	4.73	0.635	0.89	3.07	3.41	0.25	0.95	0.20							S2
THIRISIVIDCOTOL	(0.172)	(0.186)	(0.025)	(0.035)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							32
miniSMDC014F	4.37	4.73	0.635	0.89	3.07	3.41	0.25	0.95	0.20							S2
THIIIISIVIDC014I	(0.172)	(0.186)	(0.025)	(0.035)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)			_				32
miniSMDC020F	4.37	4.73	0.635	0.89	3.07	3.41	0.25	0.95	0.20							S2
THIHISIVIDCOZOI		(0.186)	(0.025)	(0.035)			(0.010)									32
miniCNADC020F	(0.172) 4.37	4.73	0.635	0.89	3.07	(0.134)	0.25	0.040)	(0.008)							C2
miniSMDC030F									0.20	_	_	_	_	_	_	S2
	(0.172)	(0.186)	(0.025)	(0.035)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC050F	4.37	4.73	0.38	0.62	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
. :014000755	(0.172)	(0.186)	(0.015)	(0.025)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC075F	4.37	4.73	0.38	0.62	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
. :01 10 00 75 5 10 1	(0.172)	(0.186)	(0.015)	(0.025)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC075F/24	4.37	4.83	0.81	1.46	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.190)	(0.032)	(0.057)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC075F/33	4.37	4.83	0.94	1.46	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.190)	(0.037)	(0.057)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC100F	4.37	4.73	0.38	0.62	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.186)	(0.015)	(0.025)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC110F	4.37	4.73	0.38	0.62	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.186)	(0.015)	(0.025)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC110F/16	4.37	4.83	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.190)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC110F/24	4.37	4.83	0.81	1.46	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.190)	(0.032)	(0.057)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_		_			_	
miniSMDC125F	4.37	4.73	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
	(0.172)	(0.186)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)							
miniSMDC125F/16	4.37	4.83	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_		_	_	S2
	(0 172)	(0.190)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	

Surface-Mount Devices

Table S4 — Dimensions in Millimeters (Inches)

Pa	art		4		В		0)		E		=		G	Н	Ei.a
	umber	Min	Max	Min	Max	Min	Figu										
	iniSMDC Series ze 4532mm/1812n	nils															
m	iniSMDC150F	4.37	4.73	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S2
		(0.172)	(0.186)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC150F/12	4.37	4.83	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.190)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC150F/16	4.37	4.83	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.190)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC150F/24	4.37	4.83	1.00	1.94	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.190)	(0.040)	(0.077)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC160F	4.37	4.73	0.28	0.48	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.186)	(0.011)	(0.019)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC200F	4.37	4.73	0.51	1.22	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.186)	(0.020)	(0.048)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC200F/16	4.37	4.73	0.51	1.22	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.186)	(0.020)	(0.048)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC260F	4.37	4.73	0.48	0.78	3.07	3.41	0.25	0.95	0.20	_	_	_	_	_	_	S
		(0.172)	(0.186)	(0.019)	(0.031)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC260F/12	4.37	4.83	1.02	1.52	3.07	3.41	0.25	0.95	0.20	_	_		_	_	_	S
		(0.172)	(0.190)	(0.042)	(0.060)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC260F/13.2	4.37	4.83	1.02	1.52	3.07	3.41	0.25	0.95	0.20	_	_	_		_		5
	, , ,	(0.172)	(0.190)	(0.042)	(0.060)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC260F/16	4.37	4.83	1.02	1.52	3.07	3.41	0.25	0.95	0.20							9
		(0.172)	(0.190)	(0.042)	(0.060)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	iniSMDC300F	4.37	4.73	0.45	0.76	3.07	3.41	0.25	0.95	0.20							9
		(0.172)	(0.186)	(0.018)	(0.030)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)	_	_	_	_	_	_	
m	idSMD Series	(=	(01100)	((0.000)	(+	((=====	(01010)	(0.000)							
	ze 5050mm/2018n	nils															
SI	MD030F-2018	4.72	5.44	_	1.78	4.22	4.93	0.25	0.36	0.25	0.36	0.30	0.46	_	_	_	9
		(0.186)	(0.214)	_	(0.070)	(0.166)	(0.194)	(0.010)	(0.014)	(0.010)	(0.014)	(0.012)	(0.018)	_	_	_	
de	ecaSMDC050F/60	4.70	5.31	0.63	0.89	4.19	4.81	0.25	0.95	0.25	_	_	_	_	_	_	(
		(0.185)	(0.209)	(0.025)	(0.035)	(0.165)	(0.189)	(0.010)	(0.040)	(0.010)	_	_	_	_	_	_	
SI	MD100F-2018	4.72	5.44	_	1.52	4.22	4.93	0.25	0.36	0.25	0.36	0.30	0.46	_	_	_	9
		(0.186)	(0.214)	_	(0.060)	(0.166)	(0.194)	(0.010)	(0.014)	(0.010)	(0.014)	(0.012)	(0.018)	_	_	_	
SI	MD150F-2018	4.72	5.44	_	1.52	4.22	4.93	0.25	0.36	0.25	0.36	0.30	0.46	_	_	_	5
		(0.186)	(0.214)	_	(0.060)	(0.166)	(0.194)	(0.010)	(0.014)	(0.010)	(0.014)	(0.012)	(0.018)	_	_	_	
SI	MD200F-2018	4.72	5.44	_	1.52	4.22	4.93	0.25	0.36	0.25	0.36	0.30	0.46	_	_	_	(
		(0.186)	(0.214)	_	(0.060)	(0.166)	(0.194)	(0.010)	(0.014)	(0.010)	(0.014)	(0.012)	(0.018)	_	_	_	
	MDC Series ze 7555mm/2920n	nile															
_	MDC125F/33	7.30	7.70	0.45	0.71	4.90	5.30	0.25	0.95	0.20							
۱۱	AID(1501 100	(0.287)	(0.303)	(0.018)	(0.028)	(0.193)				(0.008)	_	_	_	_	_	_	3
	VDC10EE/22						(0.209)	(0.010)	(0.040)								
Οľ	MDC185F/33	7.30	7.70	0.90	1.20	4.90	5.30	0.25	0.95	0.20	_	_	_	_	_	_	3
	ADC200F/24	(0.287)	(0.303)	(0.035)	(0.047)	(0.193)	(0.209)	(0.010)	(0.040)	(0.008)							
SI	MDC300F/24	7.30	7.70	0.80	1.10	4.90	5.30	0.25	0.95	0.20	_	_	_	_	_	_	5
	ADC010E/10	(0.287)	(0.303)	(0.031)	(0.043)	(0.193)	(0.209)	(0.010)	(0.040)	(0.008)							
SI	MDC310F/18	7.30	7.70	1.10	1.70	4.90	5.30	0.95	1.45	0.35	_	_	_	_	_	_	S
		(0.287)	(0.303)	(0.043)	(0.067)	(0.193)	(0.209)	(0.037)	(0.057)	(0.014)							

Surface-Mount Devices

Table S4 — Dimensions in Millimeters (Inches)

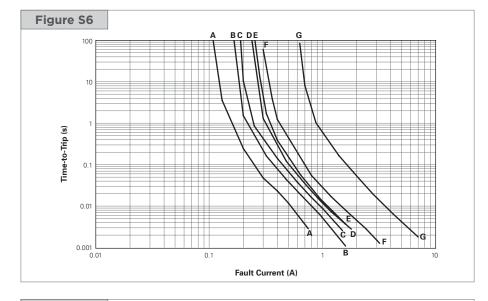
	Part		Α	E	3				D		E		F		G	Н	
	Number	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	
	SMD Series Size 7555mm/2920ı	mils															
	SMD030F	6.73	7.98	_	3.18	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
		(0.265)	(0.314)	_	(0.125)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD050F	6.73	7.98	_	3.18	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
		(0.265)	(0.314)	_	(0.125)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD075F	6.73	7.98	_	3.18	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
		(0.265)	(0.314)		(0.125)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD075F/60	6.73	7.98	_	3.18	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)	_	(0.125)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD100F	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD100F/33	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMDH120	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD125F	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD150F/33-2920	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD200F/24-2920	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD250F/15-2920	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD260F	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)	_	(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD300F	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD300F/15	6.73	7.98	_	3.00	4.80	5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
_		(0.265)	(0.314)		(0.118)	(0.19)	(0.214)	(0.022)	(0.028)	(0.022)	(0.028)	(0.085)	(0.095)	(0.026)	(0.054)	(0.017)	
	SMD2 Devices Size 8763mm/3425ı	mils															
	SMD150F	8.00	9.40	_	3.00	6.00	6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
		(0.315)	(0.370)	_	(0.118)	(0.236)	(0.264)	(0.022)	(0.028)	(0.022)	(0.028)	(0.145)	(0.155)	(0.026)	(0.054)	(0.017)	
Ī	SMD150F/33	8.00	9.40	_	3.00	6.00	6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
		(0.315)	(0.370)	_	(0.118)	(0.236)	(0.264)	(0.022)	(0.028)	(0.022)	(0.028)	(0.145)	(0.155)	(0.026)	(0.054)	(0.017)	
	SMDH160	8.00	9.40	_	3.00	6.00	6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
		(0.315)	(0.370)	_	(0.118)	(0.236)	(0.264)	(0.022)	(0.028)	(0.022)	(0.028)	(0.145)	(0.155)	(0.026)	(0.054)	(0.017)	
	SMD185F	8.00	9.40	_	3.00	6.00	6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
		(0.315)	(0.370)	_	(0.118)	(0.236)	(0.264)	(0.022)	(0.028)	(0.022)	(0.028)	(0.145)	(0.155)	(0.026)	(0.054)	(0.017)	
	SMD200F	8.00	9.40	_	3.00	6.00	6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
		(0.315)	(0.370)	_	(0.118)	(0.236)	(0.264)	(0.022)	(0.028)	(0.022)	(0.028)	(0.145)	(0.155)	(0.026)	(0.054)	(0.017)	
	SMD250F	8.00	9.40	_	3.00	6.00	6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
		(0.315)	(0.370)	_	(0.118)	(0.236)	(0.264)	(0.022)	(0.028)	(0.022)	(0.028)	(0.145)	(0.155)	(0.026)	(0.054)	(0.017)	
	High Temperature \$			210mils													
-	nanoSMDCH010F	3.00	3.40	0.30	0.70	1.37	1.80	0.25	0.75	0.076							
		(0.118)	(0.134)	(0.012)	(0.028)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)	_	_	_	_	_		
-	nanoSMDH075F	3.00	3.40	0.60	1.00	1.40	1.80	0.20	0.80	(0.003)							
	HariooiviDi 10/01	(0.118)	(0.134)	(0.023)	(0.039)	(0.055)	(0.071)	(0.008)	(0.032)	_	_	_	_	_	_	_	
	microSMDCH010F	3.00	3.43	0.57	0.97	2.35	2.80	0.25	0.75	0.076							
_	ITHE CONTRIDUCTORULE	5.00									_	_	_	_	_	_	
_		(0 110)	(U 10E)	(U U22)	(U USO)	(() ()(2))											
-	microSMDCH050F	(0.118)	(0.135)	0.022)	(0.038)	(0.092)	(0.110)	0.25	(0.030)	0.003)							

Surface-Mount Devices

Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

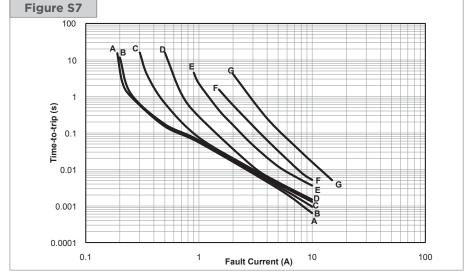
femtoSMDCxxxF

A = femtoSMDC005F
B = femtoSMDC008F
C = femtoSMDC010F
D = femtoSMDC012F
E = femtoSMDC016F
F = femtoSMDC020F
G = femtoSMDC035F



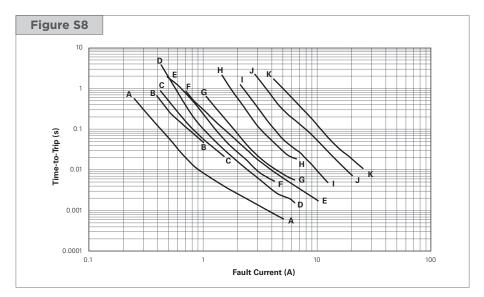
picoSMDCxxxS

A = picoSMDC010S
B = picoSMDC012S
C = picoSMDC020S
D = picoSMDC035S
E = picoSMDC050S
F = picoSMDC075S
G = picoSMDC110S



nanoSMDCxxxF

A = nanoSMDC010F
B = nanoSMDC012F
C = nanoSMDC016F
D = nanoSMDC020F
E = nanoSMDC025F
F = nanoSMDC035F
G = nanoSMDC050F/13.2
H = nanoSMDC075F
I = nanoSMDC110F
J = nanoSMDC150F
K = nanoSMDC200F



Surface-Mount Devices

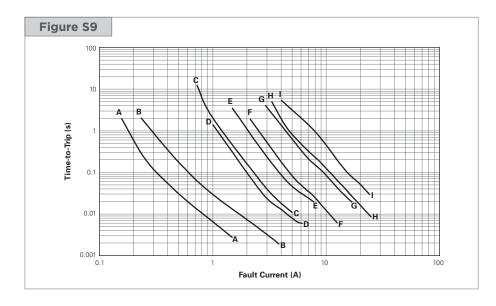
Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

(Cont'd)

microSMDxxxF

A = microSMD005F
B = microSMD010F
C = microSMD035F
D = microSMD050F
E = microSMD075F
F = microSMD110F
G = microSMD150F
H = microSMD175F

= microSMD200F



miniSMDCxxxF

A = miniSMDC010F,
miniSMDC014F

B = miniSMDC020F

C = miniSMDC030F

D = miniSMDC050F

E = miniSMDC075F

F = miniSMDC075F/24

G = miniSMDC075F/33

H = miniSMDC100F, miniSMDC110F

 $\begin{array}{lll} I & = & miniSMDC110F/16 \\ J & = & miniSMDC110F/24 \\ K & = & miniSMDC125F \\ L & = & miniSMDC125F/16 \\ \end{array}$

M = miniSMDC150F, miniSMDC150F/12

N = miniSMDC150F/16

O = miniSMDC150F/24

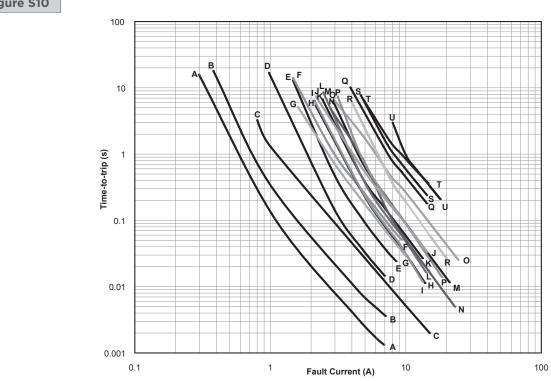
P = miniSMDC160F Q = miniSMDC200F R = miniSMDC200F/16 S = miniSMDC260F

T = miniSMDC260F/12, miniSMDC260F/13.2

U = miniSMDC300F

miniSMDC260F/16



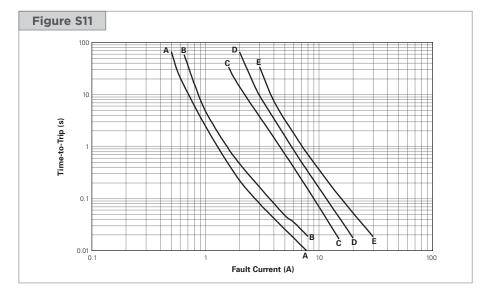


Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

(Cont'd)

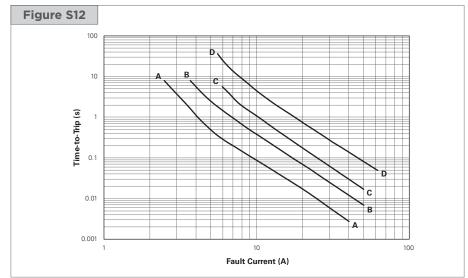
midSMD

A = SMD030F-2018 B = decaSMDC050F/60 C = SMD100F-2018 D = SMD150F-2018 E = SMD200F-2018



SMDCxxxF

A = SMDC125F/33 B = SMDC185F/33 C = SMDC300F/24 D = SMDC310F/18



SMDxxxF

A = SMD030FB = SMD050F

C = SMD075F, SMD075F/60D = SMD100F, SMD100F/33

E = SMDH120

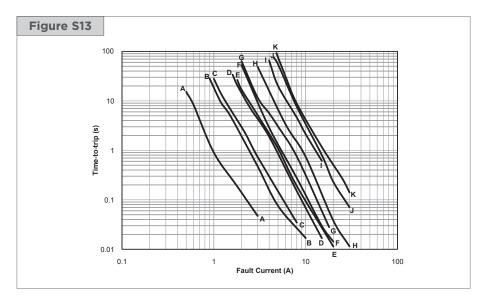
F = SMD150F/33-2920

G = SMD125F

H = SMD200F/24-2920I = SMD250F/15-2920

J = SMD260F

K = SMD300F, SMD300F/15



Surface-Mount Devices

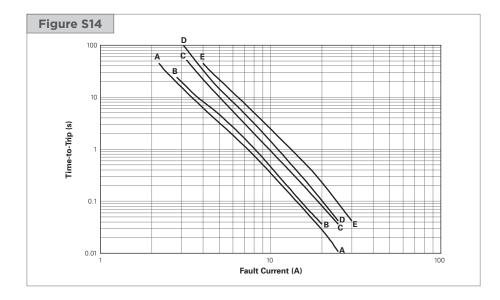
Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

(Cont'd)

SMD2xxxF

A = SMD150F, SMD150F/33

B = SMDH160= SMD185F D = SMD200F= SMD250F



High Temperature SMD

A = nanoSMDCH010F= microSMDCH010F = microSMDCH050F D = nanoSMDH075F

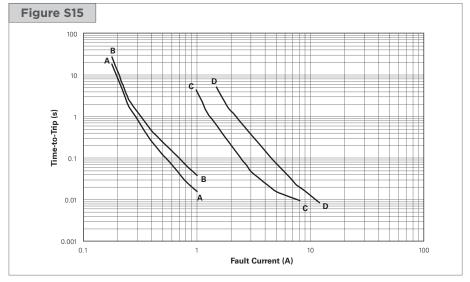


Table S5 — Physical Characteristics and Environmental Specifications

Operating temperature range -40°C to 85°C, -40°C to 125°C for SMDH120, SMDH160 and HighTemperature SMD

Physical Characteristic	CS								
Ferminal Pad Material	100% Matte Tin with Nickel Unde	erplate							
Soldering Characteristics	ANSI/J-STD-002 Category 3 for femtoSMD, picoSMD, nanoSMD, microSMD, miniSMD and SMDC Series								
	ANSI/J-STD-002 Category 1 for SMD Series								
Solder Heat Withstand	per IEC-STD 68-2-20, Test Tb, Sec	ction 5, Method 1A							
Flammability Resistance	per IEC 695-2-2 Needle Flame Te	st for 20 seconds							
Recommended Storage Conditions	40°C max, 70% R.H. max; Device	es May Not Meet Specified Ratings	if Storage Conditions Are Exceeded						
Environmental Specifi	cations								
Test .	Test Method	Conditions	Resistance Change						
Storage Life	PS300, Section 5.3.2	60°C, 1000 hrs	±3% typ						
		85°C, 1000 hrs	±5% typ						
Humidity Aging	PS300, Section 5.3.1	85°C, 85% RH, 100 hrs	±1.2% typ						
Thermal Shock	MIL-STD-202, Method 107G	85°C, -40°C (20 Times)	-33% typ						
		125°C, -55°C (10 Times)	-33% typ						
/ibration	MIL-STD-883C	per MIL-STD-883C	No Change						
Solvent Resistance	PS300, Section 5.2.2	Freon	No Change						
		Trichloroethane	No Change						
		Hydrocarbons	No Change						

Table S6 — Packaging and Marking Information

				Recommende	ed Pad Layout Fig	ures [mm (in)]	
Part Number	Tape and Reel Quantity	Standard Package	Part Marking	Dimension A (Nom)	Dimension B (Nom)	Dimension C (Nom)	Agency Recognition
femtoSMDC Series Size 1608mm/0603mils							
femtoSMDC005F	4,000	20,000	А	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA
femtoSMDC008F	4,000	20,000	Т	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA
femtoSMDC010F	4,000	20,000	В	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA, TÜV
femtoSMDC012F	5,000	25,000	С	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA
femtoSMDC016F	5,000	25,000	Е	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA
femtoSMDC020F	5,000	25,000	F	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA, TÜV
femtoSMDC035F	4,000	20,000	K	0.80 (0.032)	0.60 (0.024)	0.80 (0.032)	UL, CSA
picoSMDC Series Size 2012mm/0805mils							
picoSMDC010S	3,000	15,000	С	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, CSA, TÜV
picoSMDC012S	4,000	20,000	F	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, CSA, TÜV
picoSMDC020S	4,000	20,000	Н	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, CSA, TÜV
picoSMDC035S	4,000	20,000	I	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, CSA, TÜV
picoSMDC050S	3,000	15,000	K	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, CSA, TÜV
picoSMDC075S	3,000	15,000	М	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, CSA, TÜV
picoSMDC110S	3,000	15,000	S	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	UL, TÜV
nanoSMDC Series Size 3216mm/1206mils							
nanoSMDC010F	3,000	15,000	А	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	UL, TÜV
nanoSMDC012F	3,000	15,000	Р	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nanoSMDC016F	3,000	15,000	N	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV

NEW

Surface-Mount Devices

Table S6 — Packaging and Marking Information

Part Number InanoSMDC Series Size 3216mm/1206mils InanoSMDC020F InanoSMDC035F InanoSMDC035F InanoSMDC050F/13.2 InanoSMDC110F InanoSMDC110F InanoSMDC200F InicroSMD Series Size 3225mm/1210mils InicroSMD005F InicroSMD005F InicroSMD005F InicroSMD005F InicroSMD075F InicroSMD010F InicroSMD010F InicroSMD010F InicroSMD010F InicroSMD010F InicroSMD010F InicroSMD110F InicroSMD110F InicroSMD110F InicroSMD175F InicroSMD175F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMDC Series InicroSMDC Series	3,000 3,000 3,000 3,000 3,000 3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000 4,000 4,000 4,000 4,000	\$\text{Standard Package}\$ 15,000 15,000 15,000 15,000 15,000 15,000 20,000 20,000 20,000 20,000 20,000	Part Marking 02	Dimension A (Nom) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098) 2.50 (0.098) 2.50 (0.098)	Dimension B (Nom) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	Dimension C (Nom) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	Agency Recognition UL, CSA, TÜV UL, CSA, TÜV
Size 3216mm/1206mils InanoSMDC020F InanoSMDC025F InanoSMDC035F InanoSMDC050F/13.2 InanoSMDC110F InanoSMDC150F InanoSMDC200F InicroSMD Series Size 3225mm/1210mils InicroSMD005F InicroSMD005F InicroSMD005F InicroSMD005F InicroSMD075F InicroSMD075F InicroSMD010F InicroSMD010F InicroSMD010F InicroSMD015F InicroSMD015F InicroSMD015F InicroSMD175F InicroSMD175F InicroSMD175F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMD200F InicroSMDC Series	3,000 3,000 3,000 3,000 3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 15,000 15,000 15,000 15,000 15,000 20,000 20,000 20,000	C 03 M L K 15 T 05 10 3	1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV
nanoSMDC025F nanoSMDC035F nanoSMDC050F/13.2 nanoSMDC075F nanoSMDC110F nanoSMDC150F nanoSMDC200F nicroSMD Series Size 3225mm/1210mils nicroSMD005F nicroSMD005F nicroSMD005F nicroSMD05F nicroSMD075F nicroSMD075F nicroSMD010F nicroSMD010F nicroSMD110F nicroSMD150F nicroSMD150F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD200F nicroSMD200F niniSMDC Series	3,000 3,000 3,000 3,000 3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 15,000 15,000 15,000 15,000 15,000 20,000 20,000 20,000	C 03 M L K 15 T 05 10 3	1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV
nanoSMDC035F nanoSMDC050F/13.2 nanoSMDC075F nanoSMDC110F nanoSMDC150F nanoSMDC200F microSMD Series size 3225mm/1210mils nicroSMD005F nicroSMD005F nicroSMD035F nicroSMD075F nicroSMD075F nicroSMD010F nicroSMD010F nicroSMD015F nicroSMD075F nicroSMD150F nicroSMD150F nicroSMD150F nicroSMD150F nicroSMD175F nicroSMD200F nicroSMD200F niniSMDC Series	3,000 3,000 3,000 3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 15,000 15,000 15,000 15,000 20,000 20,000 20,000 20,000	03 M L K 15 T	1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV
nanoSMDC050F/13.2 nanoSMDC075F nanoSMDC110F nanoSMDC150F nanoSMDC200F microSMD Series Size 3225mm/1210mils nicroSMD005F nicroSMD005F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD110F nicroSMD150F nicroSMD150F nicroSMD150F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD200F niniSMDC Series	3,000 3,000 3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 15,000 15,000 15,000 20,000 20,000 20,000 20,000	M L K 15 T	1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV
nanoSMDC075F nanoSMDC110F nanoSMDC150F nanoSMDC200F nicroSMD Series Size 3225mm/1210mils nicroSMD005F nicroSMD005F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD110F nicroSMD150F nicroSMD150F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD175F nicroSMD200F niniSMDC Series	3,000 3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 15,000 15,000 20,000 20,000 20,000 20,000	L K 15 T 05 10	1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV
nanoSMDC110F nanoSMDC150F nanoSMDC200F nicroSMD Series Size 3225mm/1210mils nicroSMD005F nicroSMD010F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD110F nicroSMD150F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD200F nicroSMD200F niniSMDC Series	3,000 3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 15,000 20,000 20,000 20,000 20,000	K 15 T 05 10 3	1.60 (0.063) 1.60 (0.063) 1.60 (0.063) 2.50 (0.098) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV UL, CSA, TÜV UL, CSA, TÜV UL, CSA, TÜV
nanoSMDC150F nanoSMDC200F nicroSMD Series Size 3225mm/1210mils nicroSMD005F nicroSMD010F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD200F nicroSMD200F niniSMDC Series	3,000 3,000 4,000 4,000 4,000 4,000 4,000 4,000	15,000 15,000 20,000 20,000 20,000 20,000	15 T 05 10 3	1.60 (0.063) 1.60 (0.063) 2.50 (0.098) 2.50 (0.098)	1.00 (0.039) 1.00 (0.039) 1.00 (0.039)	2.00 (0.079) 2.00 (0.079) 2.00 (0.079)	UL, CSA, TÜV UL, CSA, TÜV UL, CSA, TÜV
microSMD Series Size 3225mm/1210mils microSMD005F microSMD010F microSMD035F microSMD050F microSMD075F microSMD075F microSMD110F microSMD150F microSMD150F microSMD175F microSMD175F microSMD200F miniSMDC Series	4,000 4,000 4,000 4,000 4,000 4,000 4,000	20,000 20,000 20,000 20,000 20,000	T 05 10 3	2.50 (0.098) 2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV UL, CSA, TÜV
nicroSMD Series Size 3225mm/1210mils nicroSMD005F nicroSMD010F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000 4,000 4,000 4,000 4,000	20,000 20,000 20,000 20,000	05 10 3	2.50 (0.098) 2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
Size 3225mm/1210mils nicroSMD005F nicroSMD010F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000 4,000 4,000 4,000	20,000 20,000 20,000	10 3	2.50 (0.098)			
nicroSMD010F nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000 4,000 4,000 4,000	20,000 20,000 20,000	10 3	2.50 (0.098)			
nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000 4,000 4,000	20,000	3		1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nicroSMD035F nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000 4,000 4,000	20,000	3				,,
nicroSMD050F nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000 4,000	20,000			1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nicroSMD075F nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD200F niniSMDC Series	4,000 4,000	20,000		2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nicroSMD110F nicroSMD150F nicroSMD175F nicroSMD200F niniSMDC Series	4,000		75	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nicroSMD175F nicroSMD200F niniSMDC Series		20,000	11	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nicroSMD200F		20,000	15	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
nicroSMD200F	4,000	20,000	17	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
	3,000	15,000	20	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	UL, CSA, TÜV
				· · · · · · · · · · · · · · · · · · ·			
niniSMDC010F	2,000	10,000	10	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC014F	2,000	10,000	14	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC020F	2,000	10,000	2	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC030F	2,000	10,000	3	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC050F	2,000	10,000	5	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC075F	2,000	10,000	7	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC075F/24	1,500	7,500	075F 24V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC075F/33	1,500	7,500	075F 33V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC100F	2,000	10,000	1	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC110F	2,000	10,000	1	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC110F/16	2,000	10,000	110F 16V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC110F/24	1,500	7,500	110F 24V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
miniSMDC125F	2,000	10,000	12	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
miniSMDC125F/16	2,000	10,000	125F 16V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
miniSMDC150F	2,000	10,000	15	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
miniSMDC150F/12	2,000	10,000	150F 12V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC150F/16	2,000	10,000	150 16V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC150F/24	1,000	5,000	150F 24V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
miniSMDC160F	2,000	10,000	16	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC200F	2,000	10,000	20	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
miniSMDC200F/16	2,000	10,000	200F 16V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, TÜV
niniSMDC260F	2,000	10,000	260F	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
niniSMDC260F/12	1,500	7,500	260F 12V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV
							UL, CSA, TÜV
niniSMDC260F/13.2	1,500	7,500	260F 13V	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	
niniSMDC260F/16 niniSMDC300F	2,000	7,500	260F 16V 30	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	UL, CSA, TÜV UL, CSA, TÜV

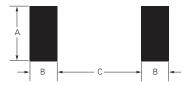
Surface-Mount Devices

Table S6 — Packaging and Marking Information

					Recommende	ed Pad Layout Fig	ures [mm (in)]	
	Part Number	Tape and Reel Quantity	Standard Package	Part Marking	Dimension A (Nom)	Dimension B (Nom)	Dimension C (Nom)	Agency Recognitio
	midSMD Series Size 5050mm/2018mils							
	SMD030F-2018	4,000	20,000	A03F	4.60 (0.18)	1.50 (0.059)	3.40 (0.134)	UL, CSA, TÜV
	decaSMDC050F/60	1,000	5,000	050F 60V	4.32 (0.17)	1.40 (0.055)	3.61 (0.142)	UL, CSA, TÜV
	SMD100F-2018	4,000	20,000	A10F	4.60 (0.18)	1.50 (0.059)	3.40 (0.134)	UL, CSA, TÜV
	SMD150F-2018	4,000	20,000	A15F	4.60 (0.18)	1.50 (0.059)	3.40 (0.134)	UL, CSA, TÜV
	SMD200F-2018	4,000	20,000	A20F	4.60 (0.18)	1.50 (0.059)	3.40 (0.134)	UL, CSA, TÜV
	SMDC Series Size 7555mm/2920mils							
1	SMDC125F/33	4,000	20,000	125F	5.30 (0.209)	2.00 (0.079)	4.60 (0.18)	UL
1	SMDC185F/33	4,000	20,000	185F 33V	5.30 (0.209)	2.00 (0.079)	4.60 (0.18)	UL, CSA, TÜV
1	SMDC300F/24	4,000	20,000	300F 24V	5.30 (0.209)	2.00 (0.079)	4.60 (0.18)	UL, CSA, TÜV
1	SMDC310F/18	3,000	15,000	310F 18V	5.30 (0.209)	2.00 (0.079)	4.60 (0.18)	UL, CSA, TUV
	SMD Series Size 7555mm/2920mils							
	SMD030F	2,000	10,000	030F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD050F	2,000	10,000	050F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD075F	2,000	10,000	075F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD075F/60	2,000	10,000	756F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD100F	2,000	10,000	100F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD100F/33	2,000	10,000	103F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMDH120	2,000	10,000	H12	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD125F	2,000	10,000	125F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD150F/33-2920	2,000	10,000	S15F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD200F/24-2920	2,000	10,000	S20F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD250F/15-2920	2,000	10,000	S25F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD260F	2,000	10,000	260F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD300F	2,000	10,000	300F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD300F/15	2,000	10,000	315F	3.10 (0.12)	2.30 (0.09)	5.10 (0.201)	UL, CSA, TÜV
	SMD2 Devices Size 8763mm/3425mils							
	SMD150F	1,500	7,500	150F	4.60 (0.18)	2.30 (0.09)	6.10 (0.240)	UL, CSA, TÜV
	SMD150F/33	1,500	7,500	153F	4.60 (0.18)	2.30 (0.09)	6.10 (0.240)	UL, CSA, TÜV
	SMDH160	1,500	7,500	160F	4.60 (0.18)	2.30 (0.09)	6.10 (0.240)	UL, CSA, TÜV
	SMD185F	1,500	7,500	185F	4.60 (0.18)	2.30 (0.09)	6.10 (0.240)	UL, CSA, TÜV
	SMD200F	1,500	7,500	200F	4.60 (0.18)	2.30 (0.09)	6.10 (0.240)	UL, CSA, TÜV
	SMD250F	1,500	7,500	250F	4.60 (0.18)	2.30 (0.09)	6.10 (0.240)	UL, CSA, TÜV
	High Temperature SMD Size 3216mm/1206mils 8		s					
1	nanoSMDCH010F	4,000	20,000	H01	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	_
1	nanoSMDH075F	3,000	15,000	H75	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	_
1	microSMDCH010F	3,000	15,000	H01	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	_
1	microSMDCH050F	4,000	20,000	H05	2.50 (0.098)	1.00 (0.039)	2.00 (0.079)	_

Surface-Mount Devices

Figure S16 — Recommended Pad Layout



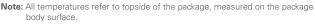
Agency Recognition

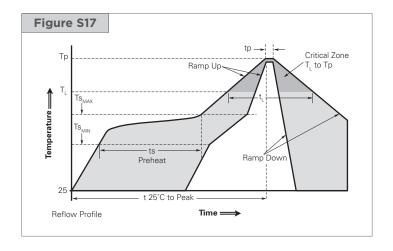
UL	File # E74889 for all Surface-mount Devices
CSA	File # CA78165 for all Surface-mount Devices
TÜV	Certificate Number Available Upon Request (Certified to IEC 60730-1)

Solder Reflow and Rework Recommendation

Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Average Ramp-up Rate (Ts _{MAX} to Tp)	3°C/s max
Preheat	
• Temperature min (Ts _{MIN})	150°C
• Temperature max (Ts _{MAX})	200°C
• Time (ts _{MIN} to ts _{MAX})	60-120s
Time Maintained Above:	
• Temperature (T _L)	217°C
• Time (t _L)	60-150s
Peak/Classification Temperature (Tp)	260°C
Time within 5°C of Actual Peak Temperat	ure
Time (tp)	30s max
Ramp-down Rate	3°C/s max
Time 25°C to Peak Temperature	8 mins max
·	·





Solder Reflow

- Recommended reflow methods:
 - IR
 - Hot air
 - Nitrogen
- Recommended maximum paste thickness: 0.25mm (0.010in)
- Devices can be cleaned using standard methods and aqueous solvents.
- Experience has shown the optimum conditions for forming acceptable solder fillets occur when a reasonable amount of solder paste is placed underneath each device's termination. As such, we request that customers comply with our recommended solder pad layouts.
- Customer should validate that the solder paste amount and reflow recommendations meet its application.
- We request that customer board layouts refrain from placing raised features (e.g. vias, nomenclature, traces, etc.) underneath PolySwitch devices. It is possible that raised features could negatively impact solderability performance of our devices.

Rework

- femtoSMD, picoSMD, nanoSMD, microSMD, miniSMD and SMDC series: standard industry practices.
 (Please also avoid direct contact to the device.)
- SMD series: Rework should be confined to removal of the installed product and replacement with a fresh device.

Table S7 - Tape and Reel Specifications (Millimeters)

Description	femtoSMDC EIA 481-1	picoSMDC EIA 481-1	nanoSMDC nanoSMDCH010F and nanoSMDH075F EIA 481-1	microSMD microSMDCH010F and microSMDCH050F EIA 481-1	miniSMDC and decaSMDC050F/60 EIA 481-1	midSMD except decaSMDC050F/60 EIA 481-2	SMDC EIA 481-1	SMD EIA 481-2	SMD2 EIA 481-2
W	8.0 ± 0.30	8.0 ± 0.30	8.0 ± 0.30	8.0 ± 0.30	12.0 ± 0.30	16.0 ± 0.30	16.0 ± 0.30	16.0 ± 0.30	16.0 ± 0.30
P ₀	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10
P ₁	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	12.0 ± 0.10
P ₂	2.0 ± 0.05	2.0 ± 0.10	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.10	2.0 ± 0.10	2.0 ± 0.10	2.0 ± 0.10
A_0	0.95 ± 0.05	1.70 ± 0.10	1.95 ± 0.10	2.9 ± 0.10	Table S8	5.11 ± 0.15	Table S8	5.6 ± 0.23	6.9 ± 0.23
B ₀	1.85 ± 0.05	2.45 ± 0.10	Table S8	Table S8	Table S8	5.6 ± 0.23	Table S8	8.1 ± 0.15	9.6 ± 0.15
B ₁ max	4.35	4.35	4.35	4.35	6.15	6.4	12.1	12.1	12.1
D_0	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05	1.5 + 0.10/00	1.5 + 0.10/00	1.5 + 0.10/00	1.5 + 0.10/00
F	3.50 ± 0.05	3.50 ± 0.05	3.50 ± 0.05	3.50 ± 0.05	5.50 ± 0.10	7.50 ± 0.10	7.50 ± 0.10	7.50 ± 0.10	7.50 ± 0.10
E ₁	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10
E ₂ min	6.25	6.25	6.25	6.25	10.25	14.25	14.25	14.25	14.25
T max	0.3	0.3	0.3	0.3	0.35	0.4	0.35	0.4	0.4
T ₁ max	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
K ₀	Table S8	Table S8	Table S8	Table S8	Table S8	1.8 ± 0.15	Table S8	3.2 ± 0.15	3.4 ± 0.15

Table S8 — Tape and Reel Specifications (Millimeters)

	femtoSMDC005F femtoSMDC008F femtoSMDC010F femtoSMDC035F	femtoSMDC012F femtoSMDC016F femtoSMDC020F	picoSMDC012S picoSMDC020S picoSMDC035S	picoSMDC010S picoSMDC050S picoSMDC075S	picoSMDC110S	nanoSMDCH010F and All nanoSMDC series except nanoSMDC010F nanoSMDC012F nanoSMDC016F nanoSMDC200F	nanoSMDH075F nanoSMDC010F nanoSMDC012F nanoSMDC016F nanoSMDC200F	microSMDCH050F and All microSMD series except microSMD200F
A ₀	0.95 ± 0.05	0.95 ± 0.05	1.70 ± 0.1	1.70 ± 0.1	1.70 ± 0.1	1.95 ± 0.1	1.95 ± 0.1	2.9 ± 0.1
B ₀	1.85 ± 0.05	1.85 ± 0.05	2.45 ± 0.1	2.45 ± 0.1	2.45 ± 0.1	$3.50 \pm 0.1/-0.08$	3.5 ± 0.1	3.5 ± 0.1
K ₀	0.90 ± 0.1	0.55 ± 0.05	0.86 ± 0.1	1.12 ± 0.1	1.35 ± 0.1	0.89 ± 0.1	1.27 ± 0.1	0.9 ± 0.1
	microSMDCH010F microSMD200F	miniSMDC010F miniSMDC014F~075F miniSMDC100F~110F/16 miniSMDC125F~150F/16 miniSMDC160F~260F miniSMDC300F	miniSMDC075F/24 miniSMDC075F/33 miniSMDC110F/24 miniSMDC260F/12 miniSMDC260F/13.2 miniSMDC260F/16	miniSMDC150F/24	decaSMDC050F/60	SMDC125F/33	SMDC185F/33 SMDC300F/24	SMDC310F/18
A_0	2.9 ± 0.1	3.5 ± 0.1	3.7 ± 0.1	3.7 ± 0.1	5.0 ± 0.1	5.5 ± 0.1	5.35 ± 0.1	5.5 ± 0.1
B ₀	3.55 ± 0.1	4.95 ± 0.1	4.9 ± 0.1	4.9 ± 0.1	5.4 ± 0.1	7.9 ± 0.1	7.85 ± 0.1	8.0 ± 0.1
K ₀	1.27 ± 0.1	0.9 ± 0.1	1.4 ± 0.1	1.78 ± 0.1	1.7 ± 0.1	0.9 ± 0.1	1.45 ± 0.1	2.0 ± 0.1

Table S9 — Reel Dimensions (Millimeters)

	femto/pico/nano/microSMD/ High Temperature SMD	miniSMDC	midSMD	SMD/SMDC	SMD2
A max	185	185	330	330	330
N min	50	50	50	50	50
W ₁	8.4 + 1.5/00	12.4 + 2.0/00	16.4 + 2.0/00	16.4 + 2.0/00	16.4 + 2.0/00
W ₂ max	14.4	18.4	22.4	22.4	22.4

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Figure S18 — EIA Referenced Taped Component Dimensions

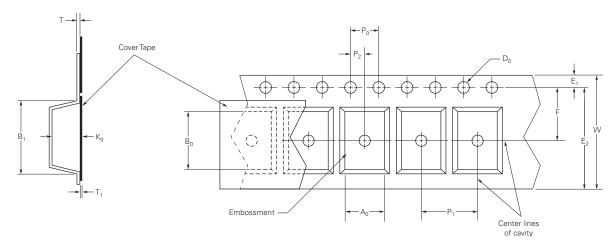
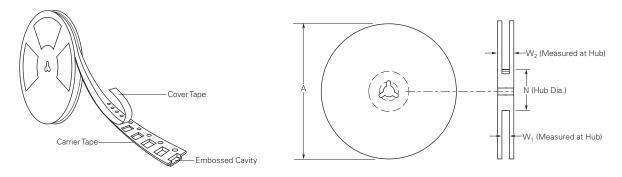
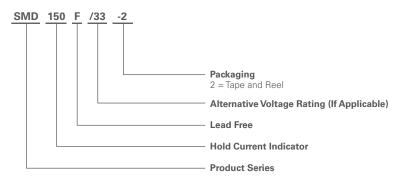


Figure S19 — EIA Referenced Reel Dimensions



Part Numbering System



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\ Warning :

- Users should independently evaluate the suitability of and test each product selected for their own application.
- · Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- These devices are intended for protection against damage caused by occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Contamination of the PPTC material with certain silicone-based oils or some aggressive solvents can adversely impact the performance of the devices.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- PPTC devices are not recommended for installation in applications where the device is constrained such that its PTC properties are inhibited, for example in rigid potting materials or in rigid housings, which lack adequate clearance to accommodate device expansion.
- Operation in circuits with a large inductance can generate a circuit voltage (Ldi/dt) above the rated voltage of the device.

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Notice:

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse documentation. The sale and use of Littelfuse products is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse.

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