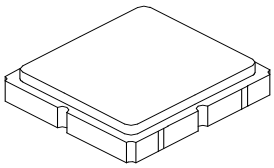
AEC-Q200

RoHS Compliance
This component is compliant with RoHS directive.
This component was always RoHS compliant from the first date of manufacture.

SF2395E

1224 MHz SAW Filter

- ***Surface Mount 3.0 x 3.0 mm Package***



SM3030-6

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

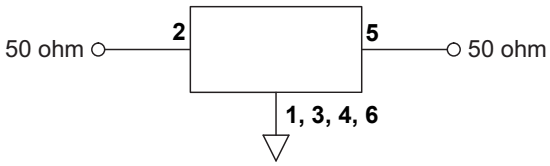
Electrical Characteristics - -40 to +85°C

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			1224		MHz
Insertion Loss, (1170 to 1278 MHz)	IL			4.4	5.5	dB
Pass Band Ripple, (1170 to 1278 MHz)				2.4	3.5	
Group Delay Variation (1170 to 1278 MHz)				12	30	ns
Return Loss (1170 to 1278 MHz)			6	6.8		dB
Attenuation, Referenced from 0 dB:						
50 to 1025 MHz			18	27		dB
1320 to 2000 MHz			9	18		
Temperature coefficient of frequency				-80		Ppm/°C

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	7A, YWWS

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

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Absolute Maximum Ratings - -40 to +105°C

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

Electrical Characteristics - -40 to +105°C

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			1224		MHz
Insertion Loss, (1170 to 1278 MHz)	IL			4.4	5.8	dB
Pass Band Ripple, (1170 to 1278 MHz)				2.4	3.8	
Group Delay Variation (1170 to 1278 MHz)				12	30	ns
Return Loss (1170 to 1278 MHz)			6	6.8		dB
Attenuation, Referenced from 0 dB:						
50 to 1025 MHz			18	27		dB
1320 to 2000 MHz			9	18		
Temperature coefficient of frequency				-80		Ppm/°C

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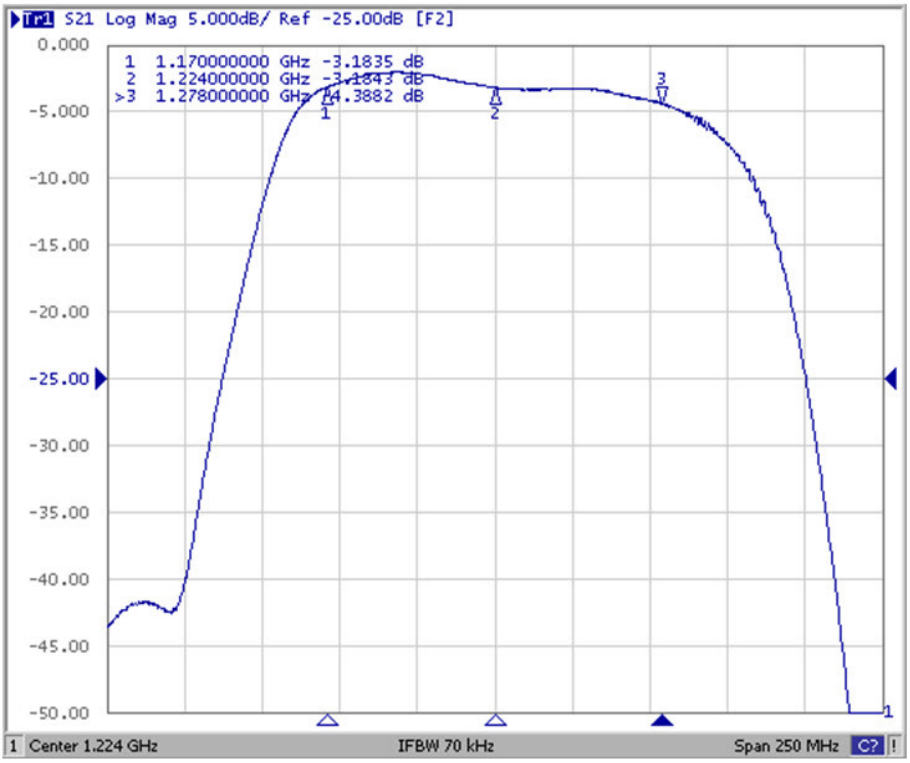
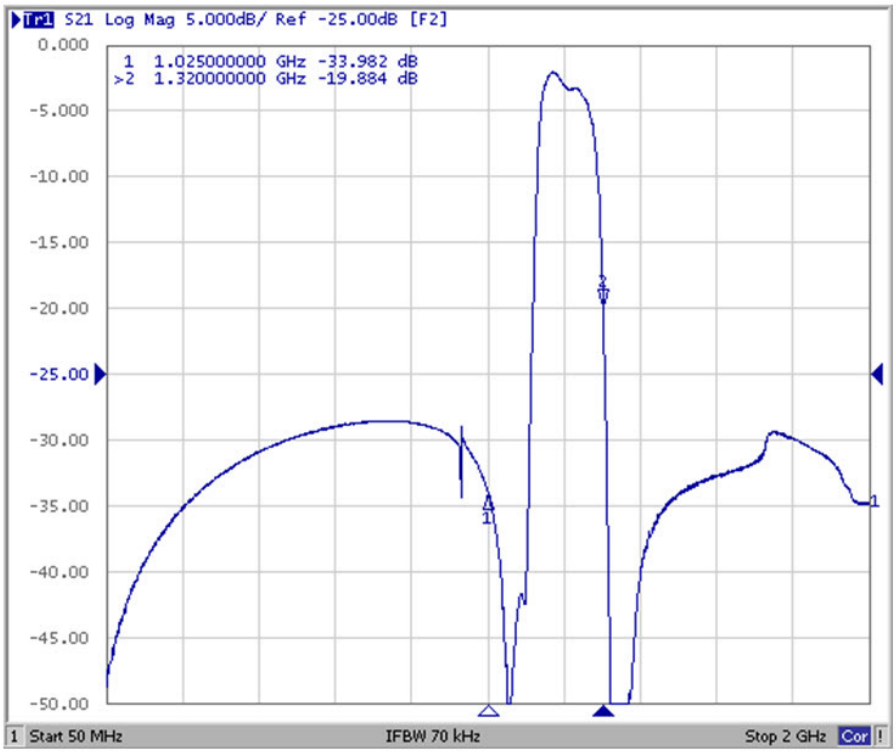
Frequency Characteristics





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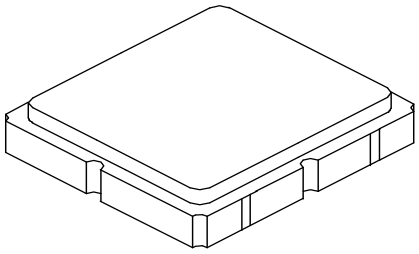
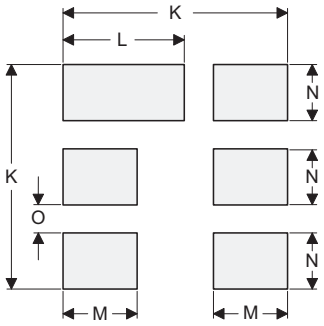
SM3030-6 Case

6-Terminal Ceramic Surface-Mount Case
3.0 X 3.0 mm Nominal Footprint





PCB Footprint Top View

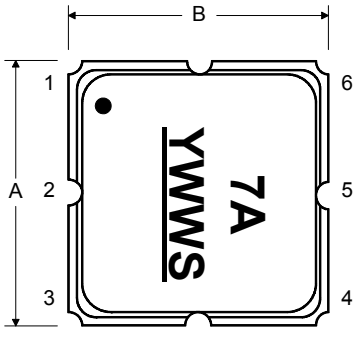
Case and PCB Footprint Dimensions

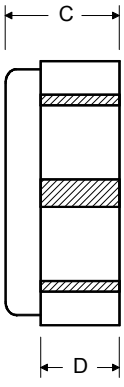
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.99	3.00	3.01	0.117	0.118	0.118
B	2.99	3.00	3.01	0.117	0.118	0.118
C	-	-	1.40	-	-	0.054
D	-	0.90	-	-	0.035	-
E	2.39	2.54	2.69	0.094	0.110	0.105
F	1.45	1.60	1.75	0.057	0.063	0.068
G	0.70	0.85	1.00	0.027	0.033	0.039
H	1.35	1.50	1.65	0.053	0.059	0.064
I	0.45	0.60	0.75	0.017	0.024	0.029
J	1.15	1.30	1.45	0.045	0.051	0.057
K	-	3.20	-	-	0.126	-
L	-	1.70	-	-	0.067	-
M	-	1.05	-	-	0.041	-
N	-	0.81	-	-	0.032	-
O	-	0.38	-	-	0.015	-

Case Materials

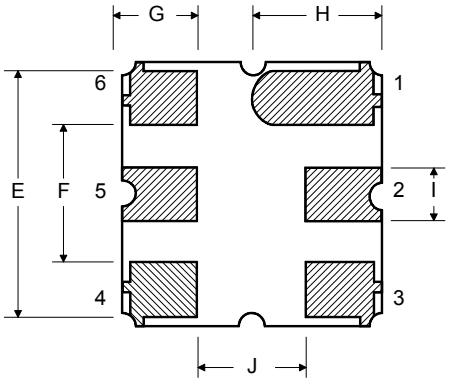
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

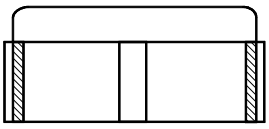
TOP VIEW





BOTTOM VIEW





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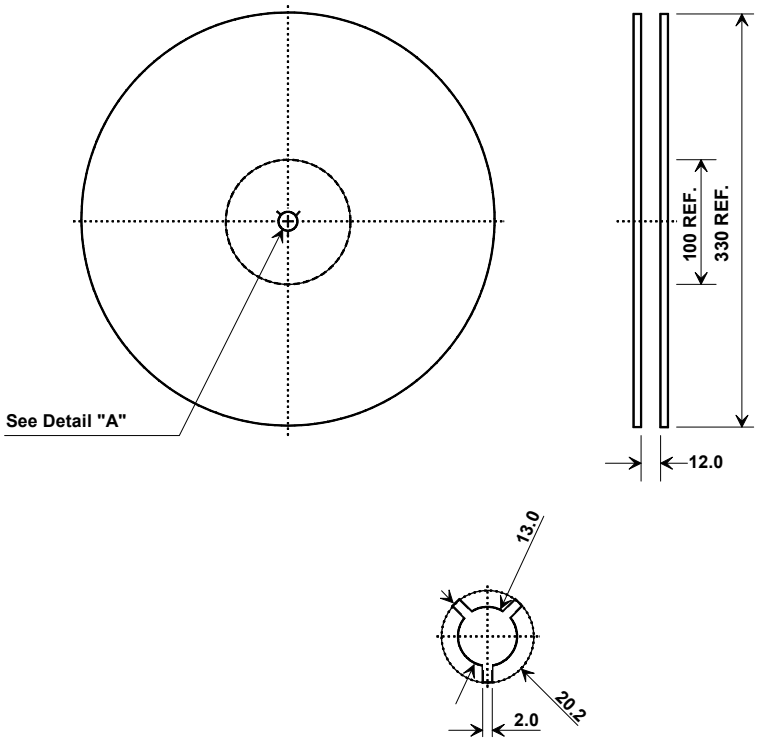
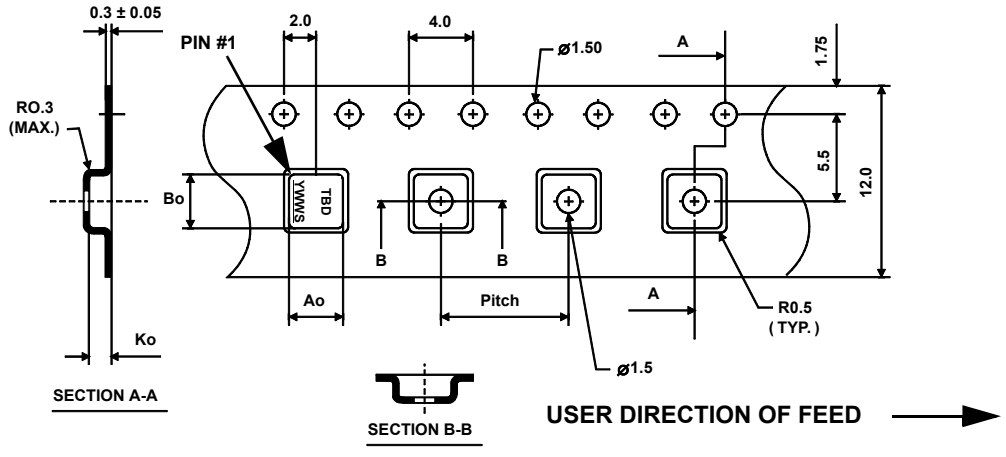
Tape and Reel Specifications



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm



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