

SOT23-6L Plastic-Encapsulate ESD Protection Diodes

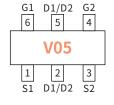
Features

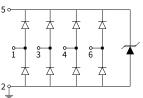
- · Low leakage current
- SOT-23-6L surface mount package
- IEC 61000-4-2 (ESD Air): ±30kV
- IEC 61000-4-2 (ESD Contact): ±30kV
- IEC 61000-4-5 (Lightning 8/20μs): 5A

Applications

- Automotive Applications
- CAN Bus
- Electronic Control Units
- Body Control Units
- ADAS Control Units
- Power Train Control Units

Function Diagram





Reverse Working Voltage 5.0V Max. Ultra small capacitance $C_{\text{I/O-GND}}{=}1.0\text{pF}(\text{Typ.})$ $C_{\text{I/O-I/O}}{=}0.5\text{pF}(\text{Typ.})$

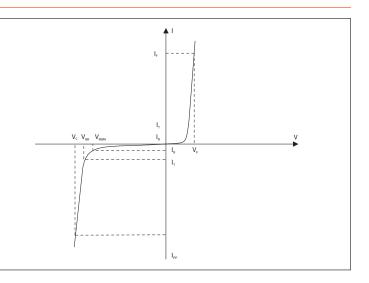


• Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V	Flactractatic Discharge Valtage	ESD per IEC 61000-4-2(Air)	±30	KV
V _{ESD}	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Contact)	±30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	75	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	5.0	А
T _J	Operating JunctionTemperature Range	_	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	_	-55 to +150	°C

Electrical Parameter

SYMBOL	PARAMETER	
V _c	Clamping Voltage @ I _{PP}	
V _{BR}	Breakdown Voltage @ I _T	
I _{PP}	Peak Pulse Current	
I _T	Test Current	
I _R	Reverse Leakage Current @ VRWM	
V _{RWM}	Peak Reverse Working Voltage	
P _{PP} Peak Pulse Power Dissipation		
C _J	Junction Capacitance @ V _R =0V,f=1MHz	
I _F	Forward Current	
V _F	Forward Voltage @I _F	

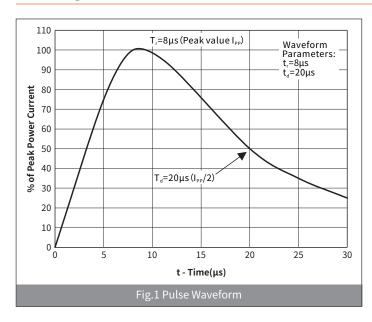


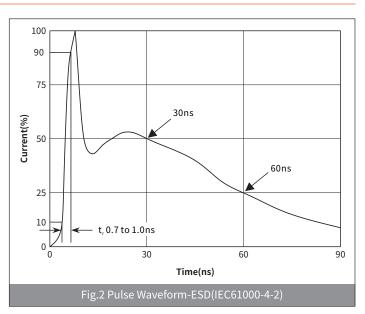


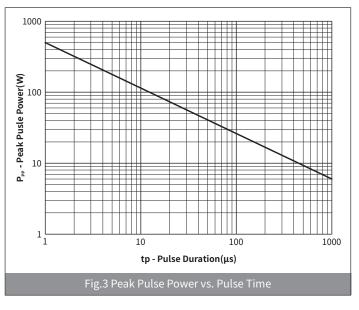
Electrical Characteristics (Ta=25°C Unless otherwise specified)

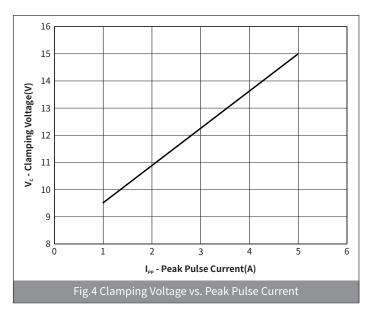
PARAMETER	SYMBOL	CONDITION	Min	Тур	Max	UNIT
Peak Reverse Working Voltage	V _{RWM}	T _a =25°C	_	_	5.0	V
Breakdown Voltage	V_{BR}	I _R =1mA,T _a =25°C	6.0	_	_	V
Reverse Leakage Current	I _R	V _{RWM} =5.0V,T _a =25°C	_	_	5	μΑ
Forward voltage	V _F	I _F =10mA,T _a =25°C	_	0.8	1.0	V
Clamping Voltage	V _C	I _{PP} =4.0A, t _p =8/20μs	_	13.5	15	V
Lunchian Conscitones	6	V _{RMW} =0V,f=1MHz,I/O pin to GND	_	0.5	_	
Junction Capacitance	C₁	V _{RMW} =0V,f=1MHz,Between I/O pins	_	1.0	_	pF

• Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)







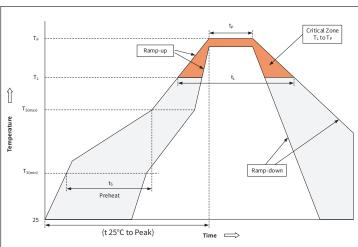




Ordering Information

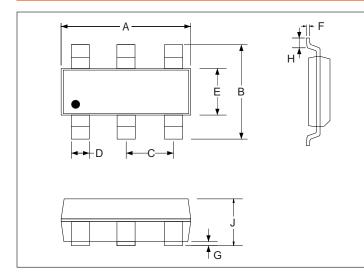
PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
SRV05-4A	SOT-23-6L 2.90×2.80×1.10		7'' REEL	3000

Recommended Soldering Conditions



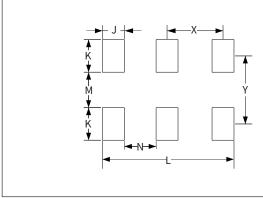
		Profile Feature	Pb-Free Assembly	
		Temperature Min (T _{S(min)})	+150°C	
	Pre-heat	Temperature Max(T _{S(max)})	+200°C	
		Time (Min to Max) (t _s)	60-180 secs.	
	Average ramp up i	rate (Liquid us Temp (T _L) to peak)	3°C /sec. Max	
	T _{S(max)} to T _L - Ramp	-up Rate	3°C /sec. Max	
	Reflow	Temperature(T _L)(Liquid us)	+217°C	
		Temperature(t _L)	60-150 secs.	
	Peak Temp (T _P)		+260(+0/-5)°C	
-	Time within 5°C of actual Peak Temp (t _P)		20-40secs	
	Ramp-down Rate		6°C /sec. Max	
'	Time 25°C to Peak Temp (T _P)		8 min. Max	
	Do not exceed		+260°C	

• Package Outline Dimensions (SOT23-6L)



		Dimensions			
Symbol	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
А	2.80	3.00	0.110	0.118	
В	2.60	3.00	0.102	0.118	
С	0.93	0.97	0.037	0.038	
D	0.41		0.016		
E	1.50	1.70	0.059	0.067	
F	0.11	0.19	0.004	0.007	
G	-	0.10	-	0.004	
Н	0.40	-	0.016	-	
J	1.00	1.20	0.035	0.057	

Suggested Pad Layout



	Dimensions			
Symbol	Millin	neters	Inc	hes
	Min.	Max.	Min.	Max.
J	0.60	-	0.024	-
K	0.90	-	0.035	-
М	-	1.40	-	0.055
N	-	0.35	-	0.014
Χ	-	0.95	-	0.037
Υ	-	2.30	-	0.090
L	-	2.50	-	0.098

Note:

This soldering footprint is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.