

SOT23-6L Plastic-Encapsulate ESD Protection Diodes

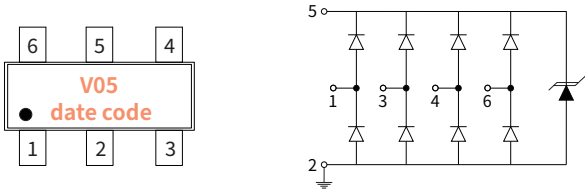
Features

- Low leakage current
- SOT-23-6L surface mount package
- IEC 61000-4-2 (ESD Air): ±20kV
- IEC 61000-4-2 (ESD Contact): ±20kV
- IEC 61000-4-5 (Lightning 8/20μs): 5.5A

Applications

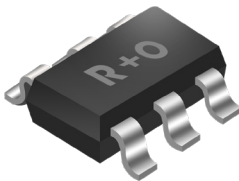
- Ethernet
- Digital Visual Interface (DVI)
- Electronic Control Units
- USB2.0
- Notebook and PC Computers

Function Diagram



Reverse Working Voltage
5.0V Max.
Ultra small capacitance
 $C_{I/O-GND}=0.8pF(Typ.)$
 $C_{I/O-I/O}=0.5pF(Typ.)$

SOT-23-6L

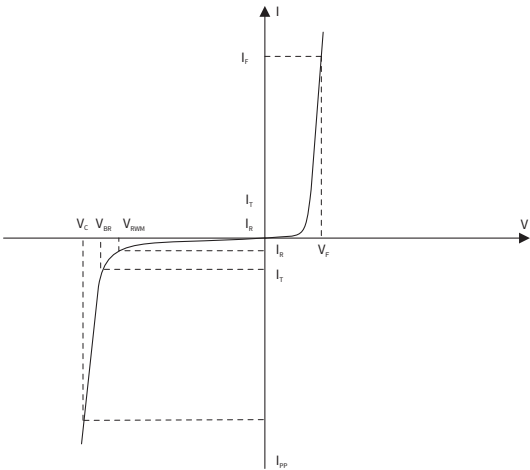


Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{ESD}	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Air)	±20	KV
		ESD per IEC 61000-4-2(Contact)	±20	KV
P_{PP}	Peak Pulse Power	$t_p = 8/20 \mu s$	100	W
I_{PP}	Rated Peak Pulse Current	$t_p = 8/20 \mu s$	5.5	A
T_J	Operating JunctionTemperature Range	—	-55 to +125	°C
T_{STG}	Storage Temperature 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 @ V_{RWM}
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	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^{\circ}C$	—	—	5.0	V
Breakdown Voltage	V_{BR}	$I_R=1mA, T_a=25^{\circ}C$	6.0	—	9.0	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T_a=25^{\circ}C$	—	—	0.5	μA
Forward voltage	V_F	$I_F=10mA, T_a=25^{\circ}C$	—	0.8	1.0	V
Clamping Voltage	V_C	$I_{PP}=5.5A, t_p=8/20\mu s$	—	14	18	V
Junction Capacitance	C_J	$V_{RWM}=0V, f=1MHz, \text{Between I/O pins}$	—	0.5	—	pF
		$V_{RWM}=0V, f=1MHz, \text{IO to GND}$	—	0.8	—	

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

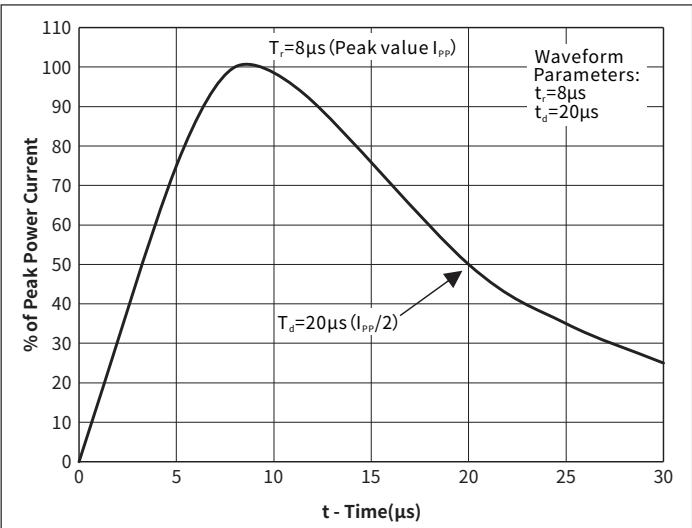


Fig.1 Pulse Waveform

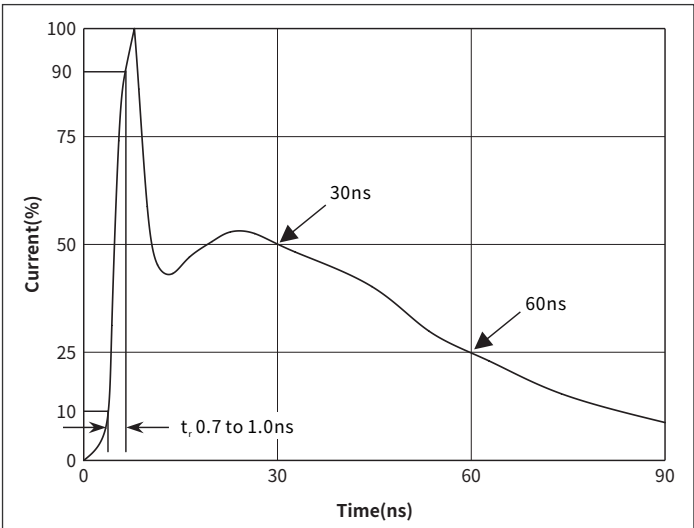


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

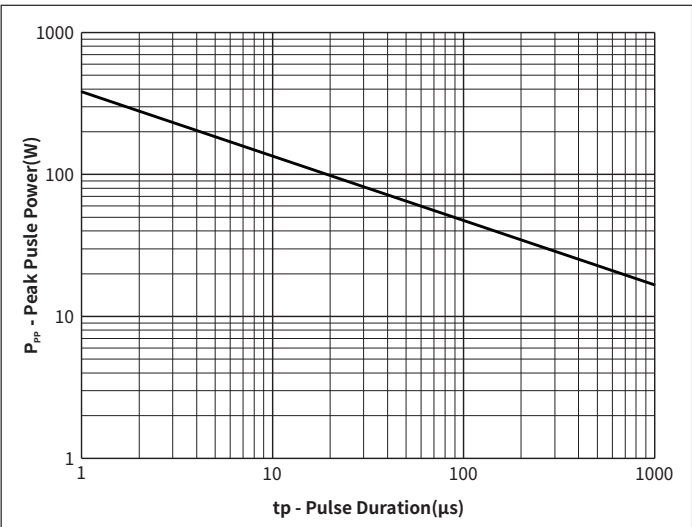


Fig.3 Peak Pulse Power vs. Pulse Time

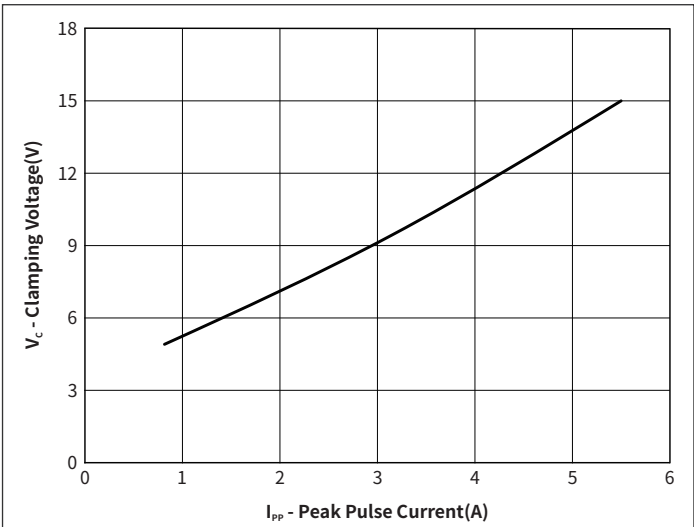


Fig.4 Clamping Voltage vs. Peak Pulse Current

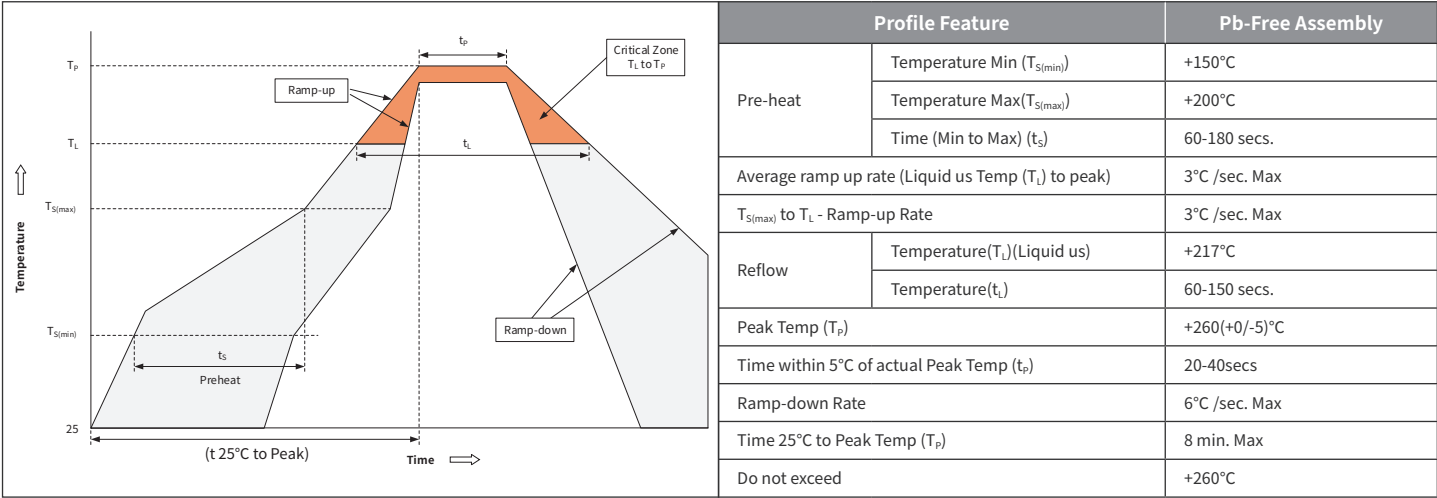
SRV05-4B

Uni-directional 5V Ultra Small Capacitance ESD

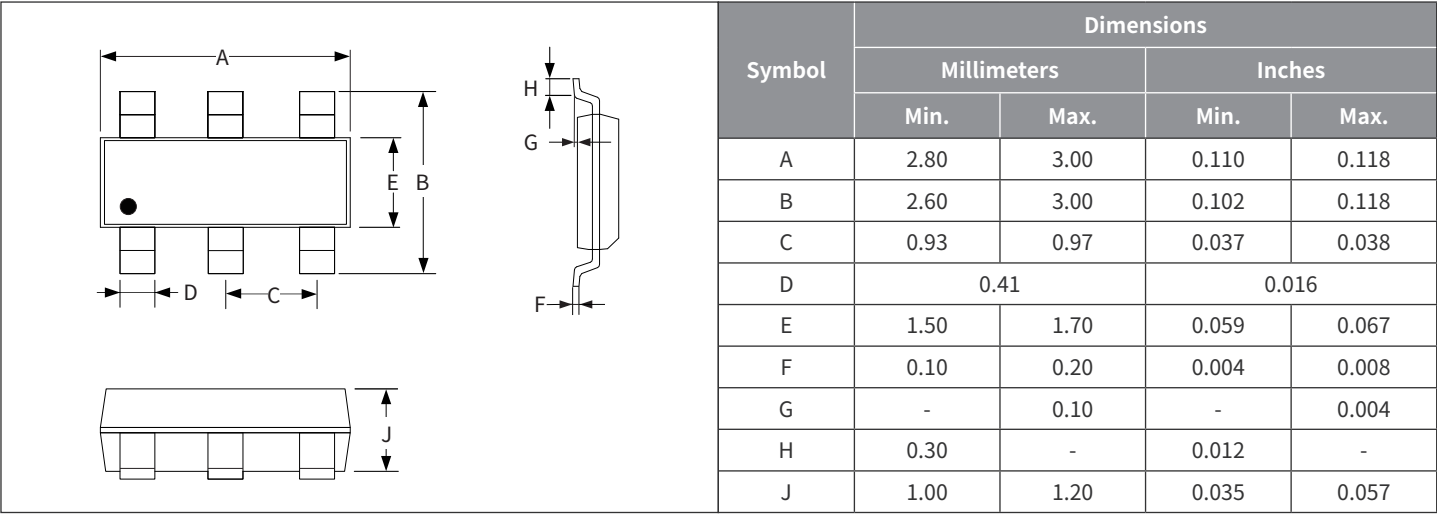
Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23-6L	R1	0.008	3000	30000	120000	7"

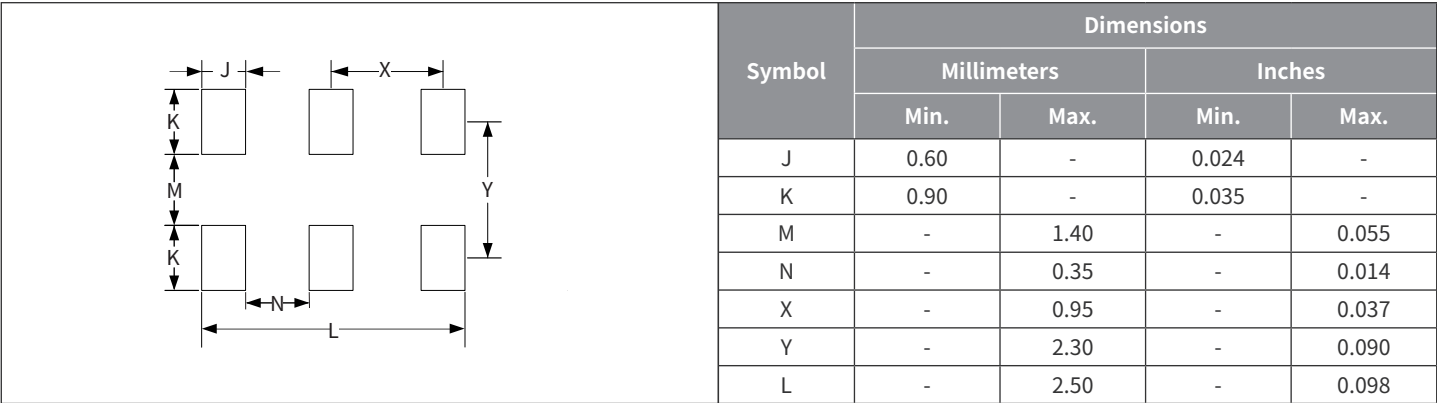
Recommended Soldering Conditions



Package Outline Dimensions (SOT23-6L)



Suggested Pad Layout



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