

SOT23-6L Plastic-Encapsulate ESD Protection Diodes

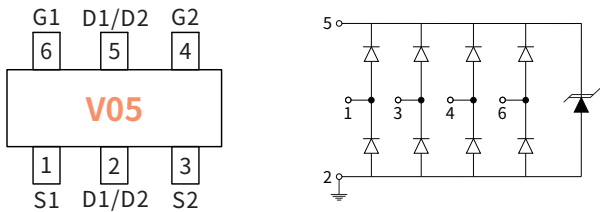
Features

- 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): 4A

Applications

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

Function Diagram



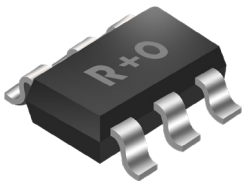
Reverse Working Voltage
5.0V Max.

Ultra small capacitance

C_{I/O-GND}=1.0pF(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)	±30	KV
		ESD per IEC 61000-4-2(Contact)	±30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	80	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	4.0	A
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 _r
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	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	—	—	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T_a=25^{\circ}C$	—	—	5.0	μA
Forward voltage	V_F	$I_F=10mA, T_a=25^{\circ}C$	—	0.8	1.0	V
Clamping Voltage	V_C	$I_{PP}=4.0A, t_p=8/20\mu s$	—	13.5	15	V
Junction Capacitance	C_J	$V_{RWM}=0V, f=1MHz, \text{Between I/O pins}$	—	0.5	—	pF
		$V_{RWM}=0V, f=1MHz, \text{pin to GND}$	—	1.0	—	

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

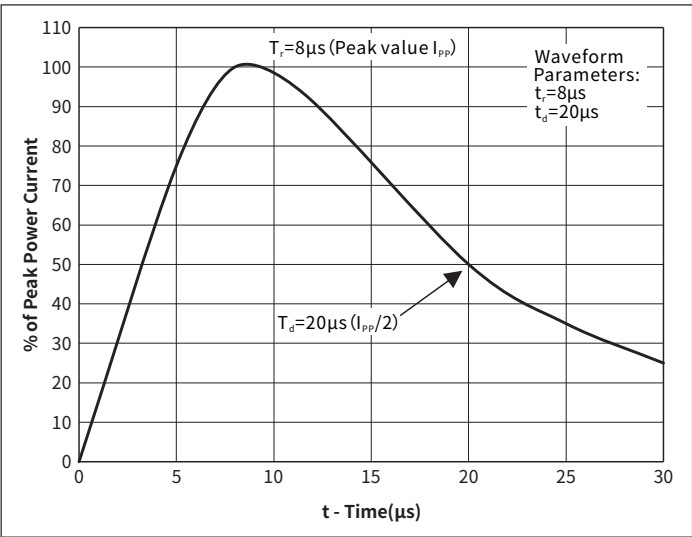


Fig.1 Pulse Waveform

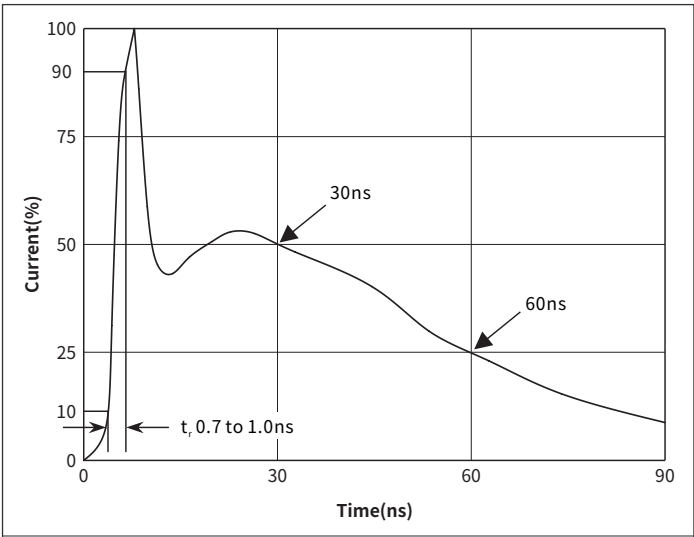


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

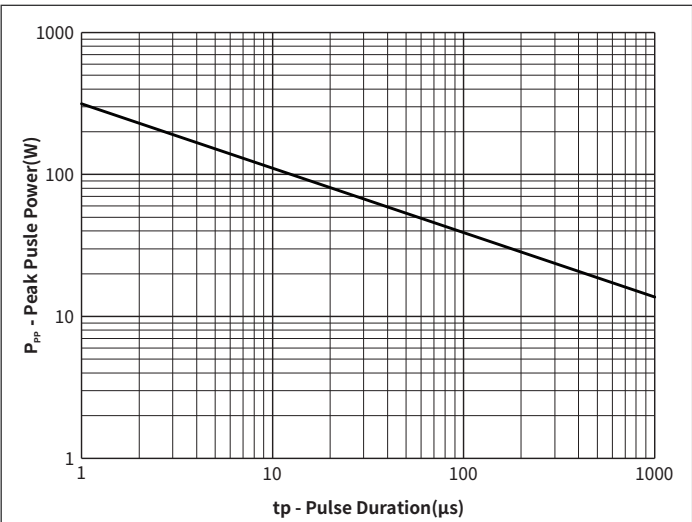


Fig.3 Peak Pulse Power vs. Pulse Time

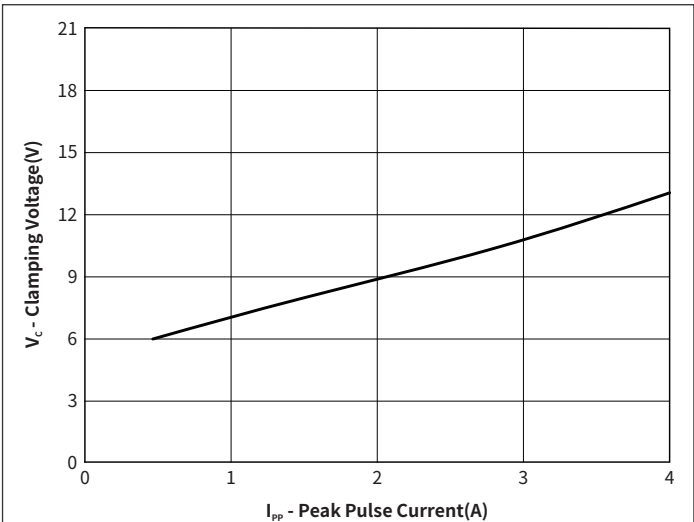
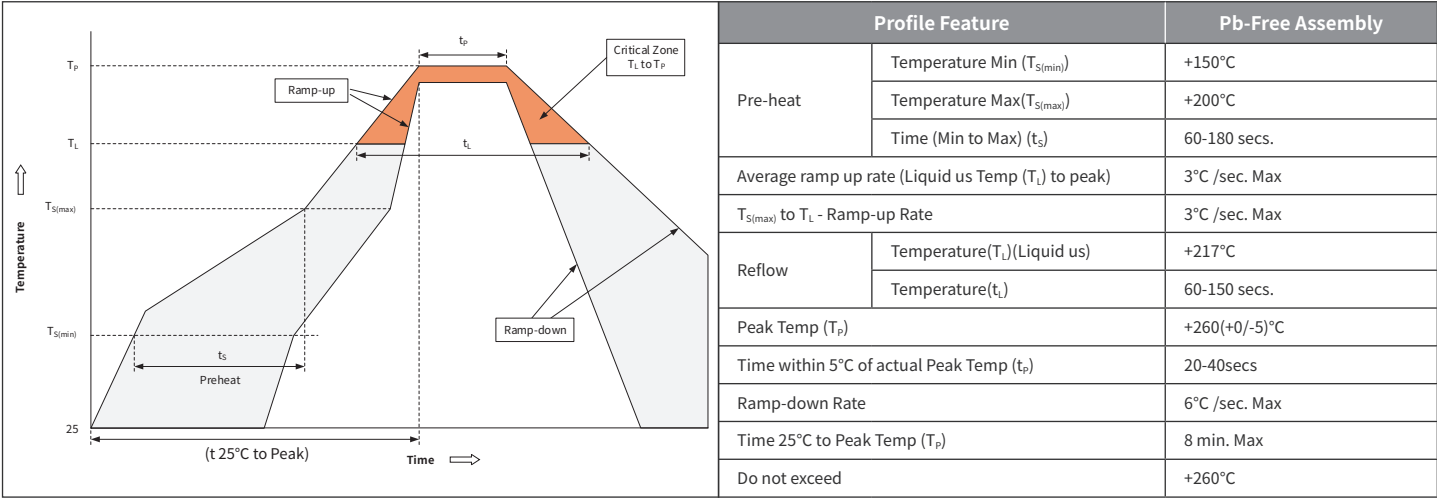


Fig.4 Clamping Voltage vs. Peak Pulse Current

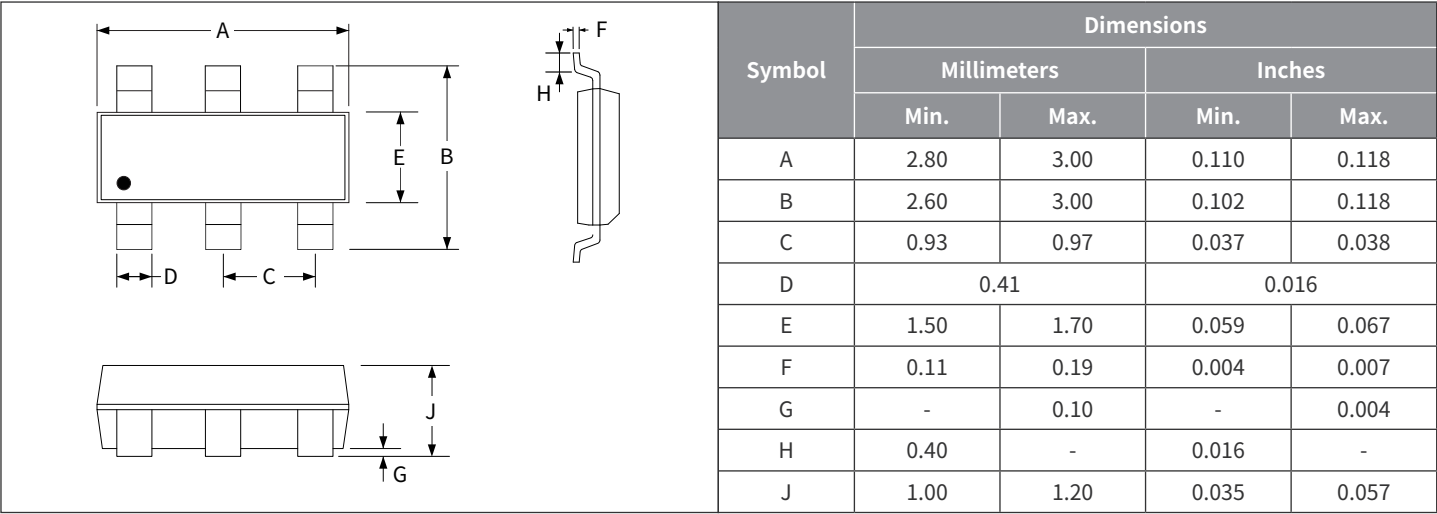
● Ordering Information

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

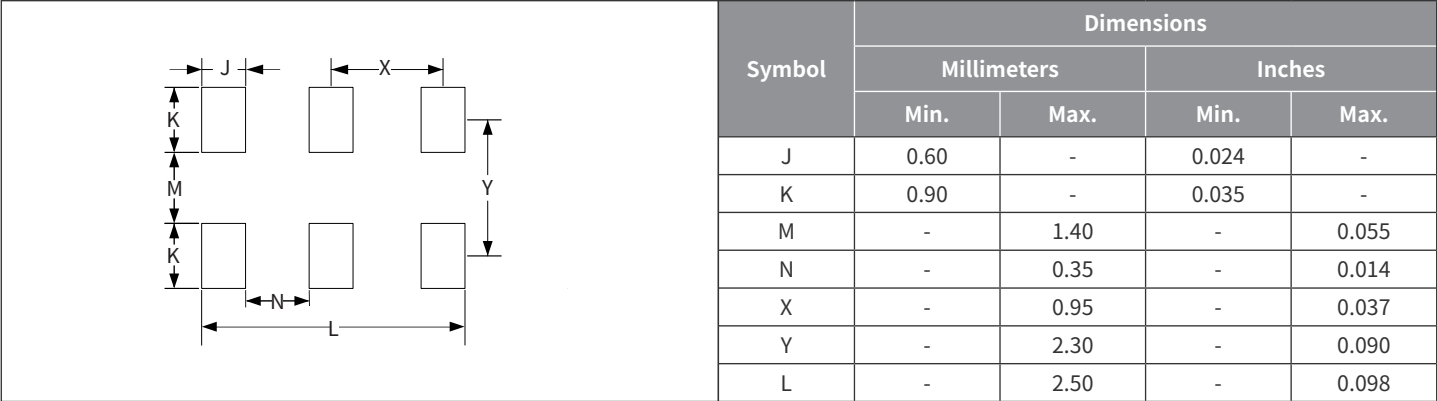
● Recommended Soldering Conditions



● 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.