

SOT23-6L Plastic-Encapsulate ESD Protection Diodes

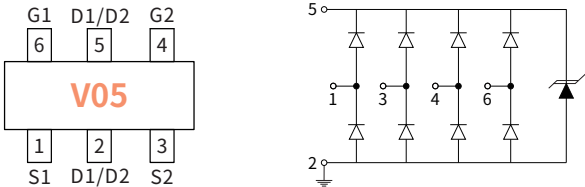
Features

- 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
 $C_{I/O-GND}=1.0pF(Typ.)$
 $C_{I/O-I/O}=0.5pF(Typ.)$

SOT-23-6L

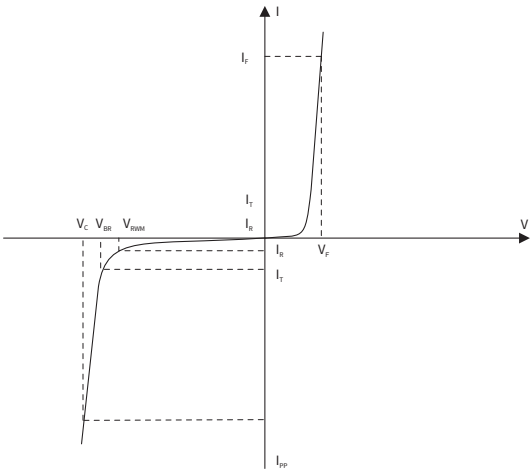


Maximum Ratings (Ta=25°C Unless otherwise specified)

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	$t_p = 8/20 \mu s$	75	W
I_{PP}	Rated Peak Pulse Current	$t_p = 8/20 \mu s$	5.0	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_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	—	—	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T_a=25^{\circ}C$	—	—	5	μA
Forward voltage	V_F	$I_F=10mA, T_a=25^{\circ}C$	—	0.8	1.0	V
Clamping Voltage	V_C	$I_{PP}=4.0A, t_p=8/20\mu s$	—	13.5	15	V
Junction Capacitance	C_J	$V_{RWM}=0V, f=1MHz, I/O \text{ pin to GND}$	—	0.5	—	pF
		$V_{RWM}=0V, f=1MHz, \text{Between I/O pins}$	—	1.0	—	

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

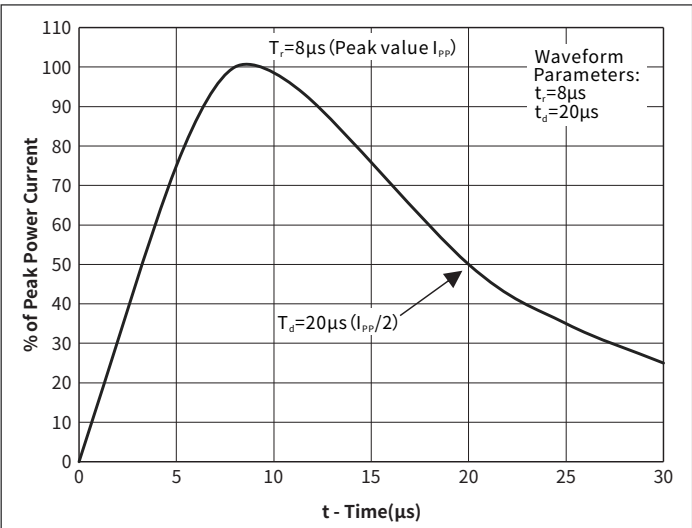


Fig.1 Pulse Waveform

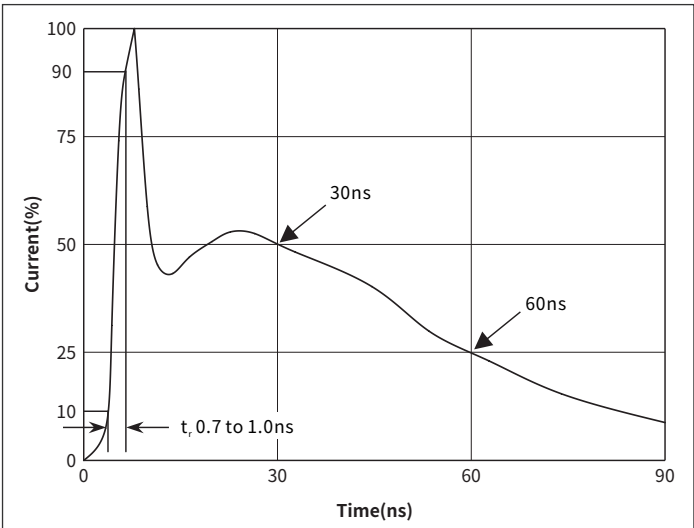


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

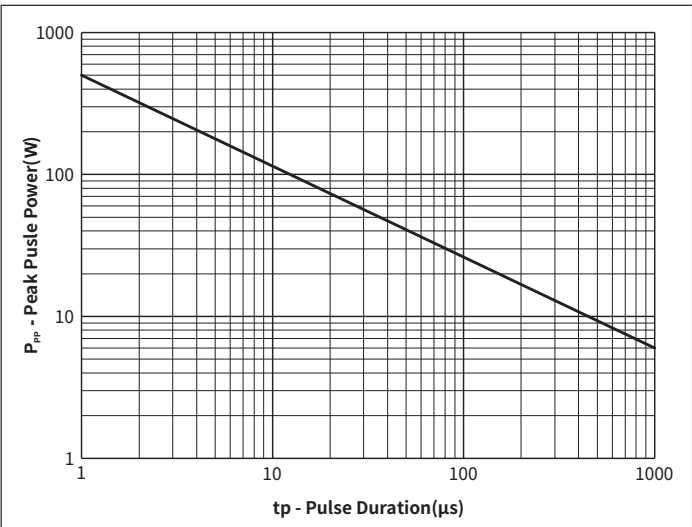


Fig.3 Peak Pulse Power vs. Pulse Time

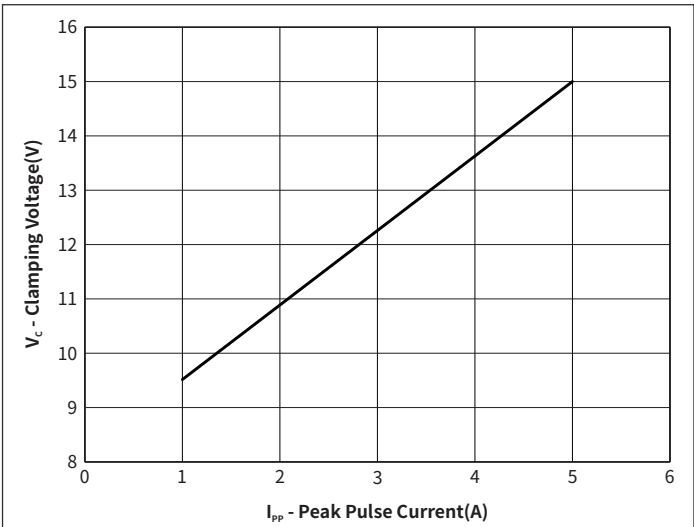
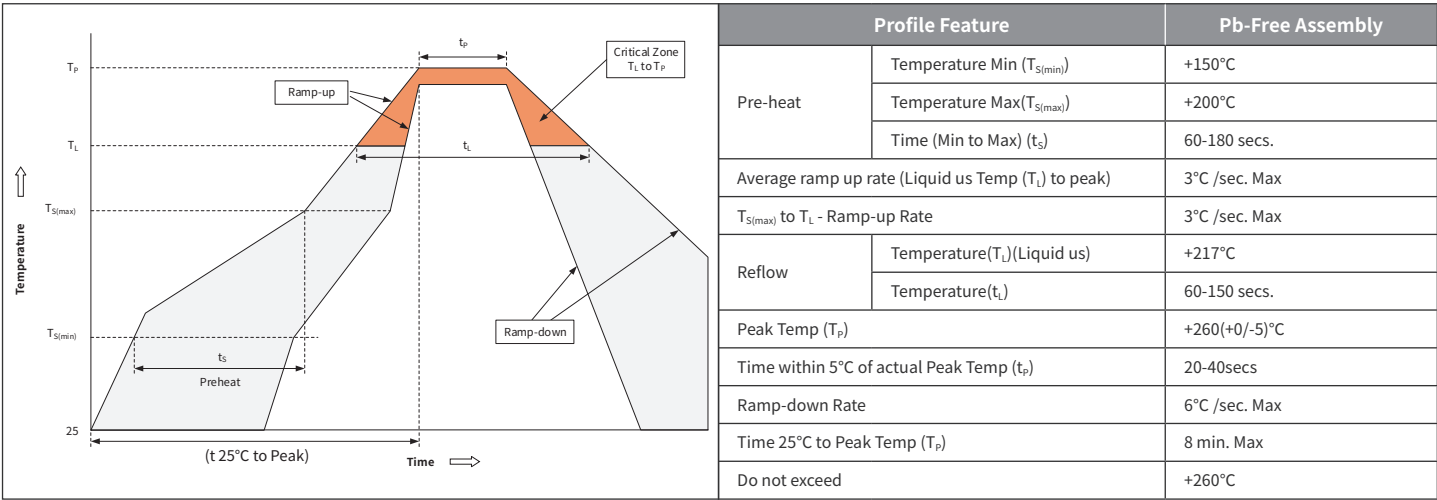


Fig.4 Clamping Voltage vs. Peak Pulse Current

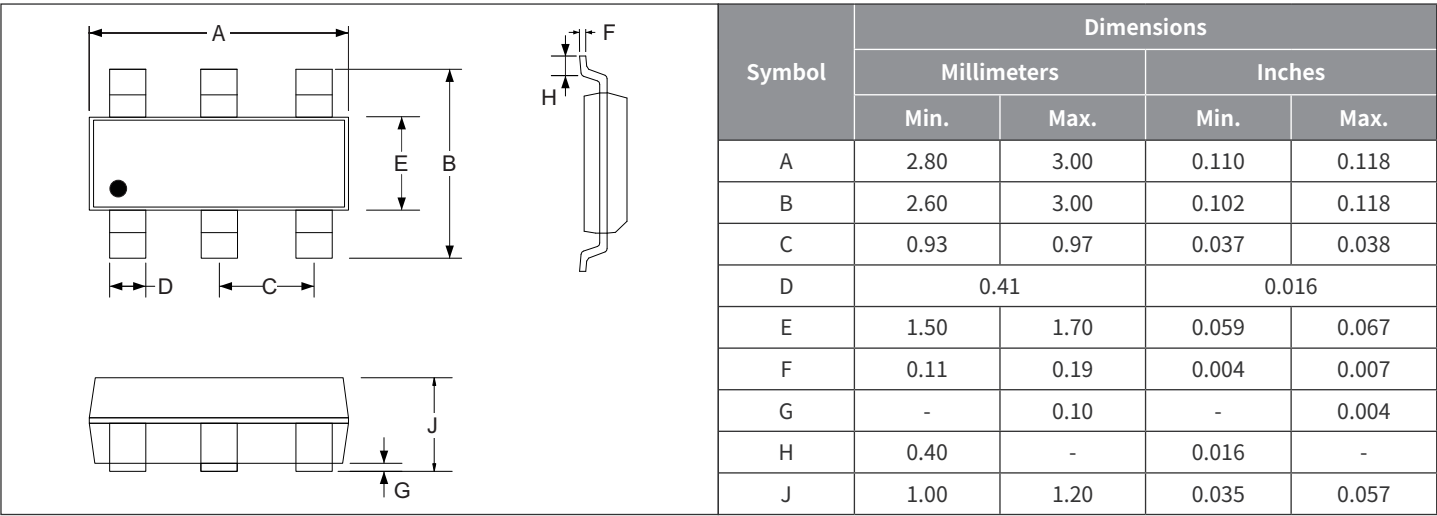
● Ordering Information

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

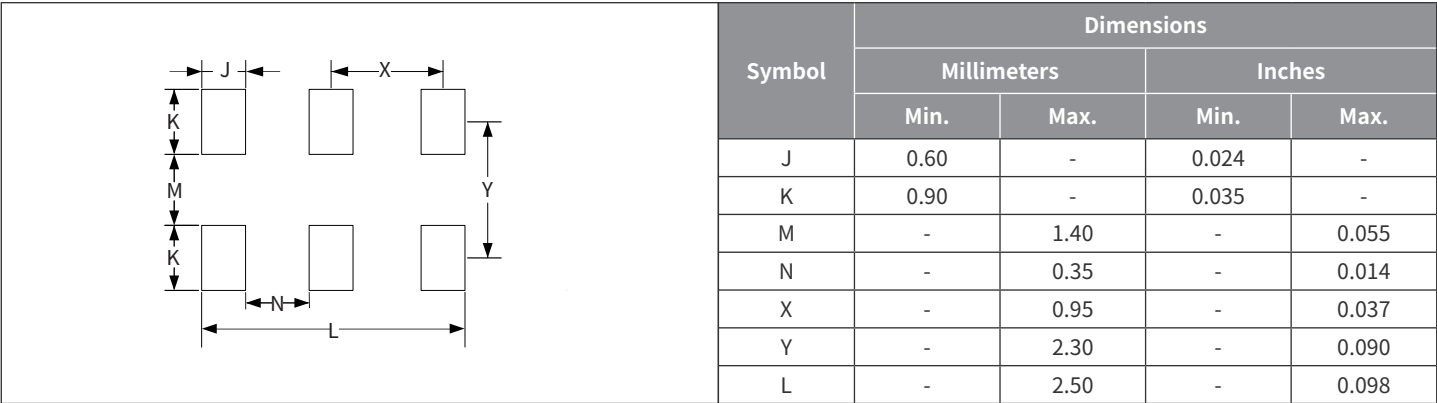
● Recommended Soldering Conditions



● 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.