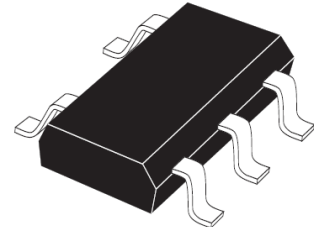




STANDARD CAPACITANCE TVS

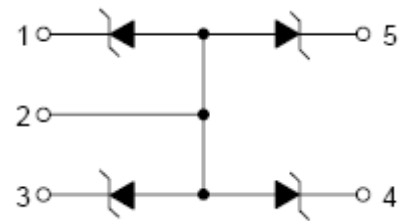
Features

- Small SOT-23-6L SMT Package
- Provide ESD Protection for each line to
IEC 61000-4-2(ESD) $\pm 16KV$ (air), $\pm 10KV$ (contact)
IEC 61000-4-4(EFT) 35A (5/50ns)
IEC 61000-4-5(Lightning) 6A(8/20)
- Low Leakage Current $< 2.5\mu A$ @5 Volts
- Fast Response Time < 1 ns
- Low Capacitance
- RoHS Compliant in Lead-Free Versions



Applications

- Instrumentation Equipment
- Serial and Parallel Ports
- Microprocessor Based Equipment
- Notebooks, Desktops, Servers



Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Peak Pulse Current (8/20)	I_{PP}	8.5	A
Operation Supply Voltage (pin-1,-3,-4,-5 to pin-2)	V_{DC}	6	V
pin-1,-3,-4,-5 to pin2 ESD per IEC 61000-4-2 (Air)	V_{ESD}	16	KV
pin-1,-3,-4,-5 to pin2 ESD per IEC 61000-4-2 (Contact)		10	KV
Operating Junction Temperature Range	T_J	-55 to 85	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}C$

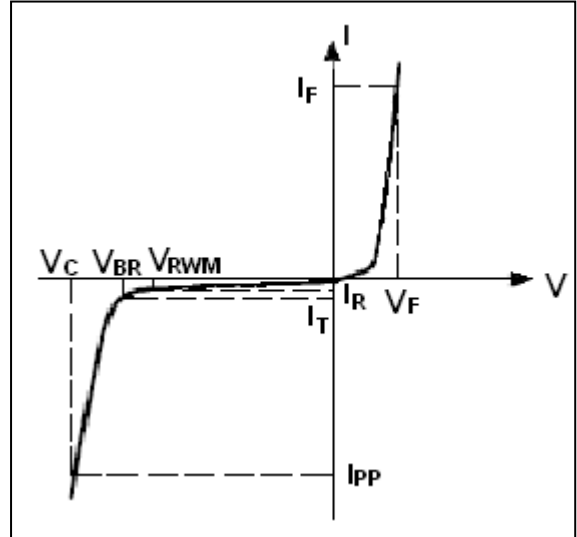
1. 8 X 20 us, non-repetitive Figure 1.

MSQA6V1W5

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Device	V_{RWM} (V)	I_R (μ A) @ V_{RWM}	V_{BR} (V) @ 1 mA			V_F (V) @ 15mA	Capacitance @ 0V Bias(pF)(note 2)	
	Max	Max	Min	Nom	Max	Max	Typ	Max
MSQA6V1W5	5	2.5	6.1		9	1.0	38	40

*Surge current waveform per Figure 1.

2. Capacitance of one diode at $f=1\text{MHz}$, $V_R=0\text{V}$, $T_A=25^\circ\text{C}$. pin-1,-3,-4,-5 to pin2

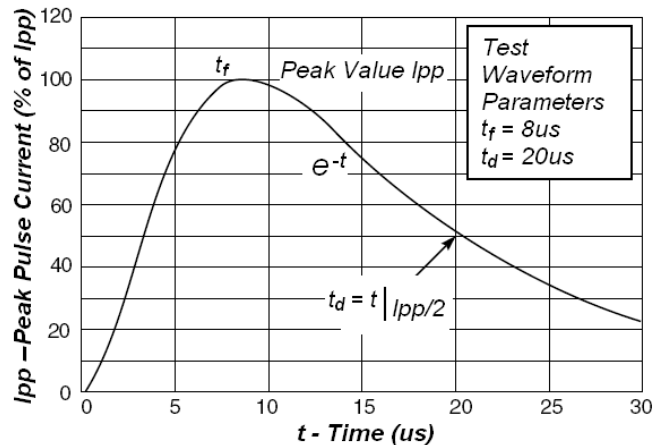


Fig1. Pulse Waveform

MSQA6V1W5

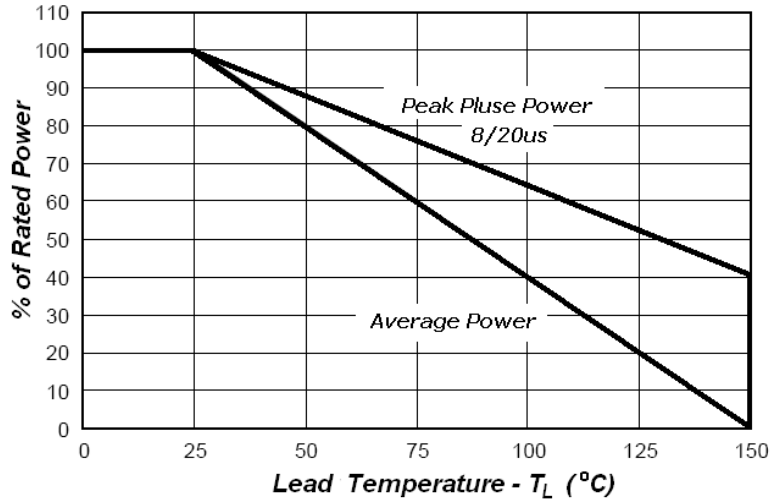
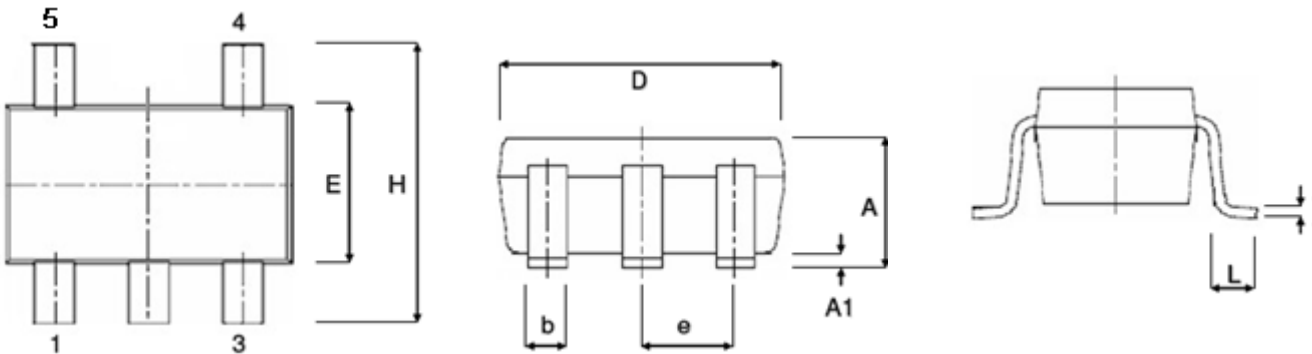


Fig2. Power Derating

Package Dimensions

SOT-23-5L



Dim	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.05	---	1.35	0.041	---	0.053
A1	0.05	---	0.15	0.002	---	0.006
b	0.30	---	0.50	0.012	---	0.020
c	0.08	---	0.20	0.003	---	0.008
D	2.80	---	3.00	0.110	---	0.118
E	1.50	---	1.70	0.059	---	0.067
e	0.95 Typ			0.0374 Typ		
H	2.60	---	3.00	0.102	---	0.118
L	0.35	---	0.55	0.014	---	0.022