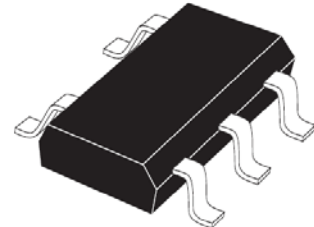




STANDARD CAPACITANCE TVS

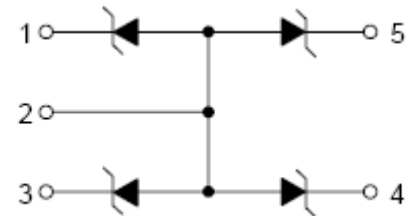
Features

- Small SOT-353 SMT Package
- Peak Power Dissipation 200W @8 x 20 us Pulse
- Low Leakage Current < 1uA @3 Volts
- Fast Response Time < 1 ns
- Low Capacitance
- ESD Protection to IEC 61000-4-2 Level 4
- 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 Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$	P_{PK}	200	W
Power Dissipation	P_D	150	mW
Maximum Junction Temperature	T_{Jmax}	150	$^\circ\text{C}$
Operating Junction Temperature Range	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

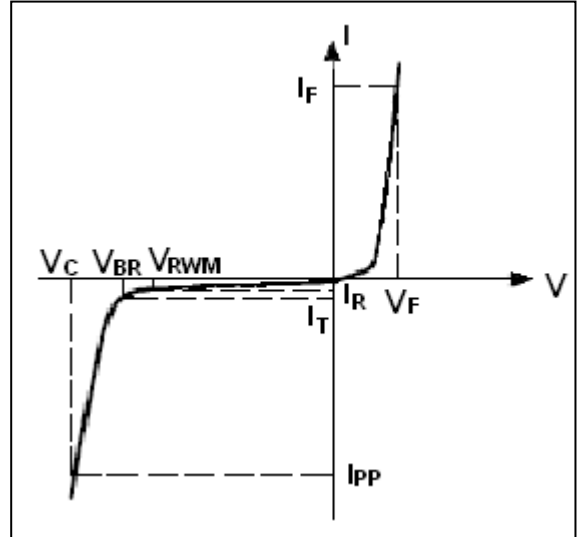
1. 8 X 20 us, non-repetitive Figure 1.

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	Marking	V_{RWM} (V)	I_R (uA) @ V_{RWM}	V_{BR} (V) @ 1 mA			V_F (V) @ 200mA	Capacitance @ 0V Bias(pF)(note 2)	
		Max	Max	Min	Nom	Max	Max	Typ	Max
MSQA6V1W5	WE	3	1.0	6.1	6.6	7.2	1.25	--	90

*Surge current waveform per Figure 1.

2. Capacitance of one diode at $f=1\text{MHz}$, $V_R=0\text{V}$, $T_A=25^\circ\text{C}$.

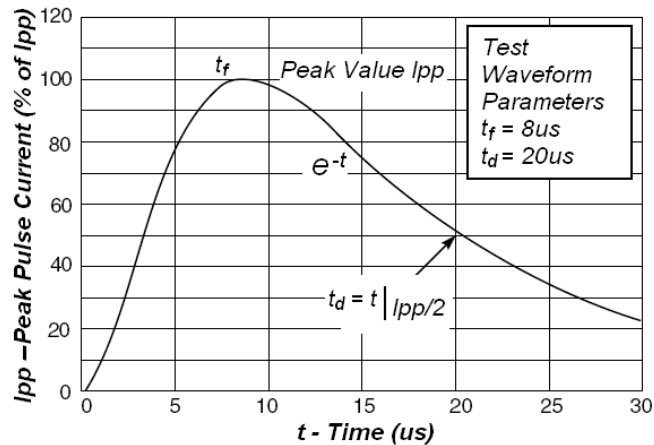


Fig1. Pulse Waveform

MSQA6V1W5

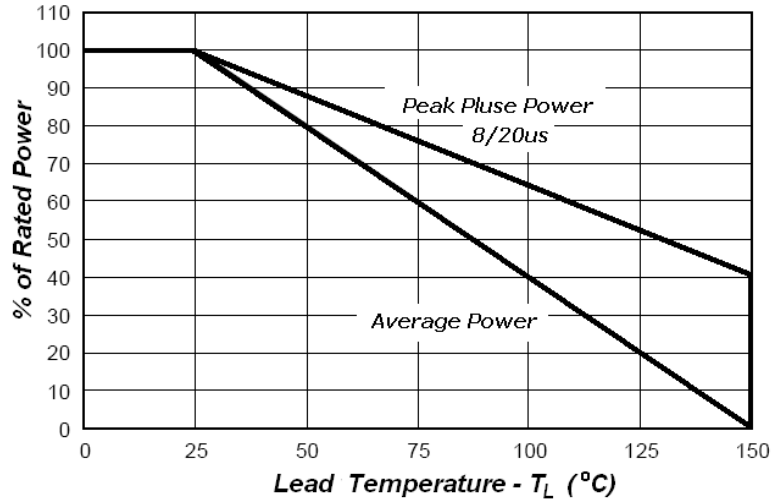
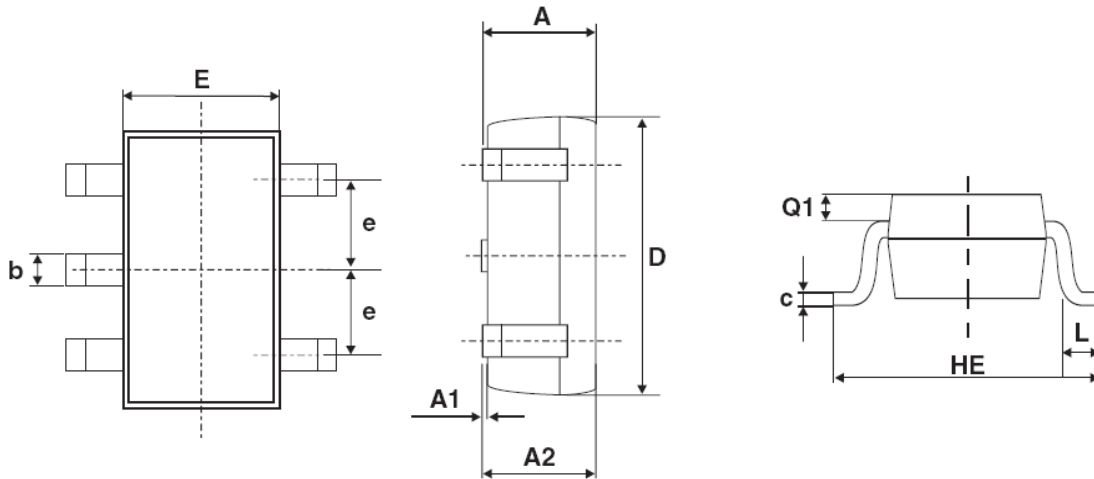


Fig2. Power Derating

Package Dimensions

SOT-353



Dim	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	---	1.10	0.031	---	0.043
A1	0	---	0.1	0	---	0.004
A2	0.8	---	1	0.031	---	0.039
b	0.15	---	0.3	0.006	---	0.012
c	0.1	---	0.18	0.004	---	0.007
D	1.8	---	2.2	0.071	---	0.086
E	1.15	---	1.35	0.045	---	0.053
e	0.65 Typ			0.025 Typ		
H	1.8	---	2.4	0.071	---	0.094
Q1	0.1	---	0.4	0.004	---	0.016