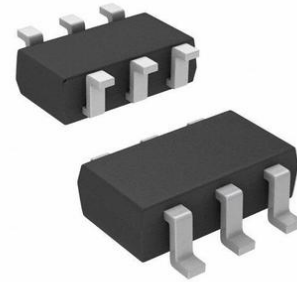


Features

- Ultra small package: SOT23-6
- Ultra low capacitance: 0.6pF typical
- Ultra low leakage: nA level
- Low clamping voltage
- 6-pin leadless package
- RoHS compliant



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (air), $\pm 15\text{kV}$ (contact)
- IEC 61000-4-5 (Lightning) 4.5A(8/20us)

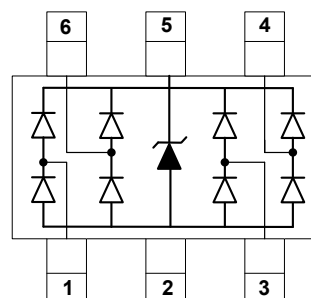
Mechanical Characteristics

- Package: SOT23-6
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS/WEEE Compliant
- MSD Level: 2

Applications

- Monitors and flat panel displays
- Set-top box and Digital TV
- Video graphics cards
- Digital Video Interface(DVI)
- Notebook Computers
- PCI Express and Serial SATA Ports

Schematic and PIN Configuration

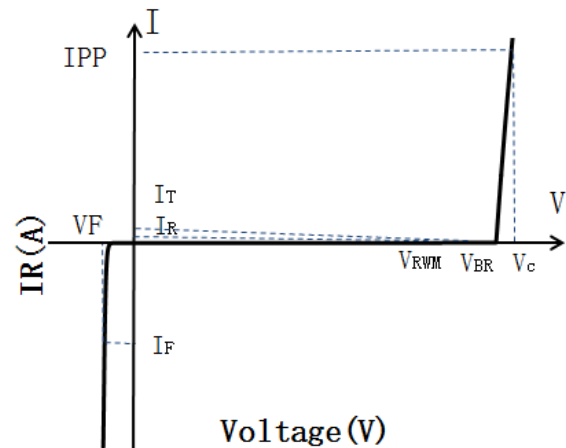


Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$, I/O-GND)	P_{PP}	60	W
Peak Pulse Power ($t_p = 8/20\mu s$, Vcc-GND)	P_{PP}	300	W
Peak Pulse Current ($t_p = 8/20\mu s$, I/O-GND)	I_{pp}	4.5	A
Peak Pulse Current ($t_p = 8/20\mu s$, Vcc-GND)	I_{pp}	17	A
ESD per IEC 61000-4-2(Air)	$V_{ESD, VDD}$	± 20	kV
ESD per IEC 61000-4-2(contact)	$V_{ESD, I/O}$	± 15	
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Portion Electronics Parameter

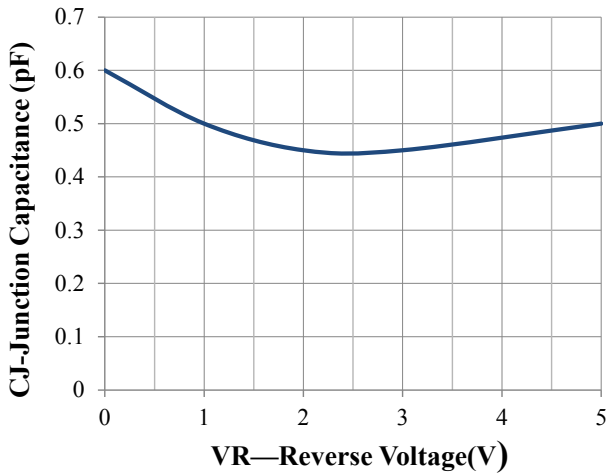
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C



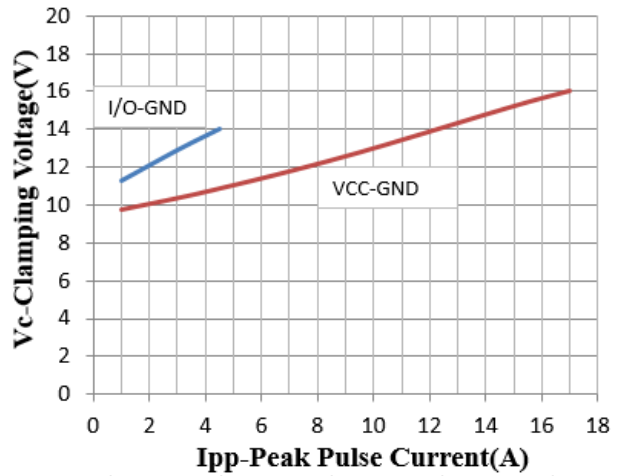
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}	Pin5 to GND, I/O-GND			5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6.0	7.5	8.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5.0V$			0.5	μA
Forward Breakdown Voltage	V_F	$I_F = 15mA$, GND to Pin 5/IO		0.8	1.0	V
Clamping Voltage	V_C	$I_{PP} = 4.5A$, $t_p = 8/20\mu s$, I/O to GND		14.0	15.0	V
		$I_{PP} = 17A$, $t_p = 8/20\mu s$, Pin 5 to GND		16.0	18.0	V
Junction Capacitance	C_j	$V_{pin5} = 5V$, $f = 1MHz$, IO-GND		0.6	0.7	pF
Junction Capacitance	C_j	$V_{pin5} = 5V$, $f = 1MHz$, IO-IO		0.3	0.4	pF

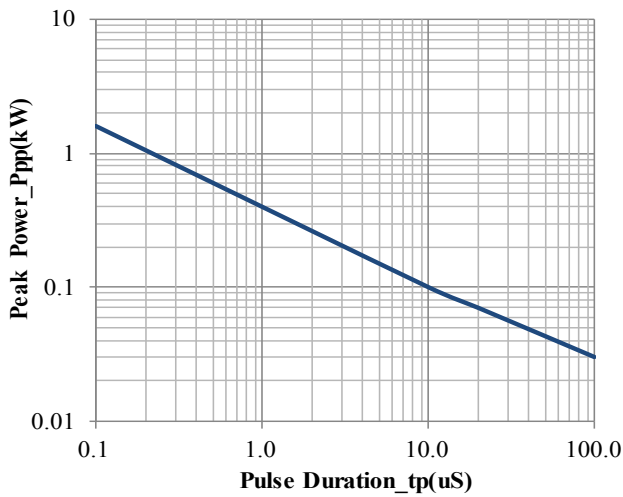
Typical Characteristics(TA=25°C unless otherwise Specified)



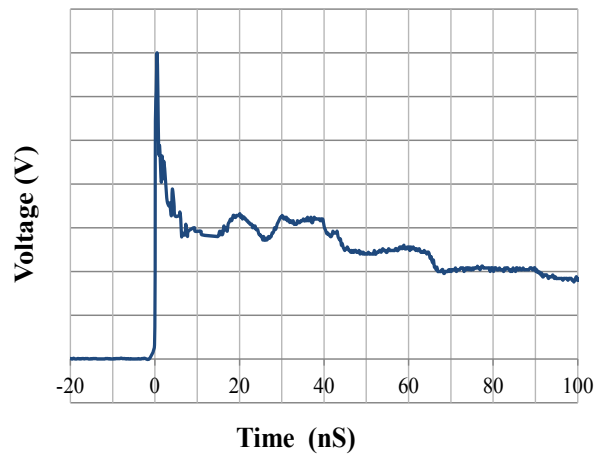
Junction Capacitance vs. Reverse Voltage



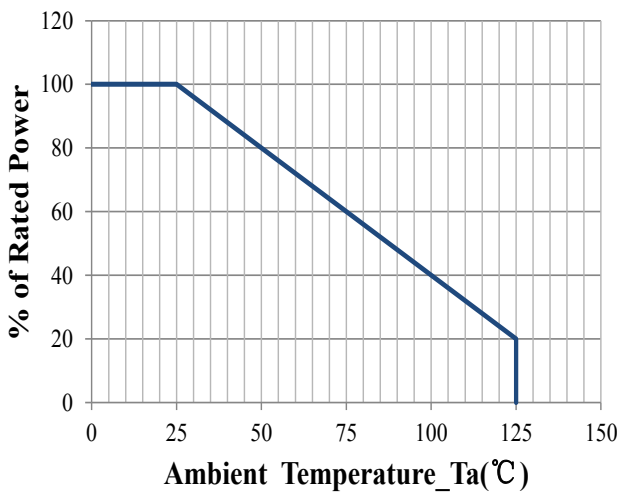
Clamping Voltage vs. Peak Pulse Current



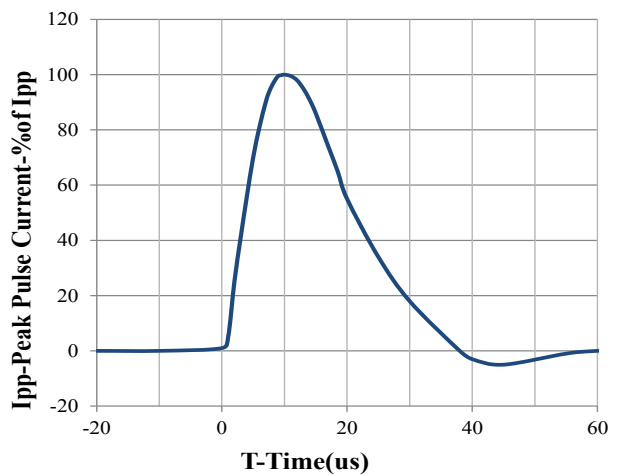
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

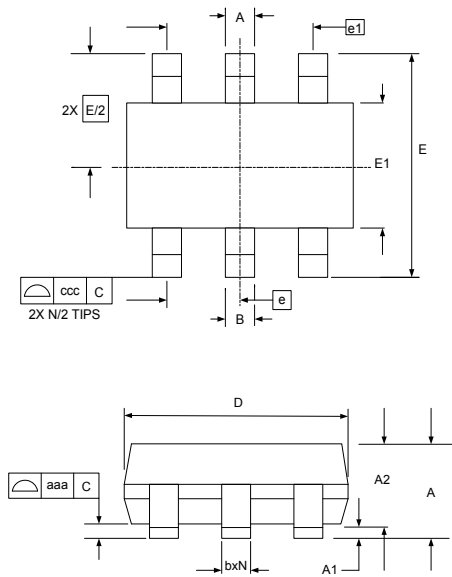


Power Derating Curve



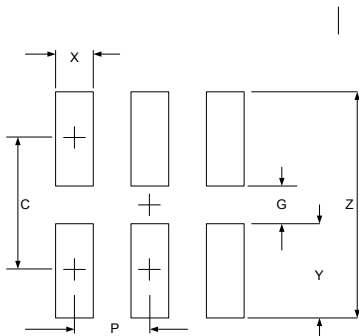
8 X 20us Pulse Waveform

SOT23-6 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.90		1.45	0.035		0.057
A1	0.00		0.15	0.000		0.006
A2	0.90	1.15	1.30	0.035	0.045	0.051
b	0.25		0.50	0.010		0.020
c	0.08		0.22	0.003		0.009
D	2.80	2.90	3.10	0.110	0.114	0.122
E1	1.50	1.60	1.75	0.060	0.063	0.069
E	2.80 BSC			0.110 BSC		
e	0.95 BSC			0.037 BSC		
e1	1.90 BSC			0.075 BSC		
N	6			6		
aaa	0.10			0.004		
ccc	0.20			0.008		

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	2.50	0.098
G	1.40	0.055
P	0.95	0.037
X	0.60	0.024
Y	1.10	0.043
Z	3.60	0.141

Order Information

Order code	Package	Packaging	Reel Size
MST236A054UA	SOT23-6	3000/Tape & Reel	7 inch