

Features

- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 5V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ±30kV
 - Contact discharge: ±30kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ ROHS Compliant

Ordering Information

Part Number	Qty per Reel	Reel Size
TPSMS05CT1G	3000	7"

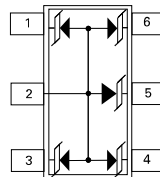
Mechanical Characteristics

- ◆ Package: SOT23-6
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020

Applications

- ◆ Cell phone Handsets and Accessories
- ◆ Microprocessor Based Equipment
- ◆ Personal Digital Assistants (PDA's) and Pagers
- ◆ Desktops PC and Servers
- ◆ Notebook, Laptop, and Palmtop Computers
- ◆ Portable Instrumentation
- ◆ Peripherals

Dimensions and Pin Configuration



Absolute Maximum Ratings ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC61000 2 (Air) ESD per IEC61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	6		9	V	$I_T=1\text{mA}$
Leakage Current	I_{Leak}			100	nA	$V_{RWM}=5\text{V}$
Clamping Voltage	V_C			11	V	$I_{PP}=4.5\text{A}, T_p=8/20\mu\text{s}$
Clamping Voltage	V_C			14	V	$I_{PP}=10\text{A}, T_p=8/20\mu\text{s}$
Junction Capacitance (I/O to GND)	C_J		60	90	pF	$V_R=0\text{V}, f=1\text{MHz}$,
Junction Capacitance (I/O to I/O)	C_J		30		pF	$V_R=0\text{V}, f=1\text{MHz}$,

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

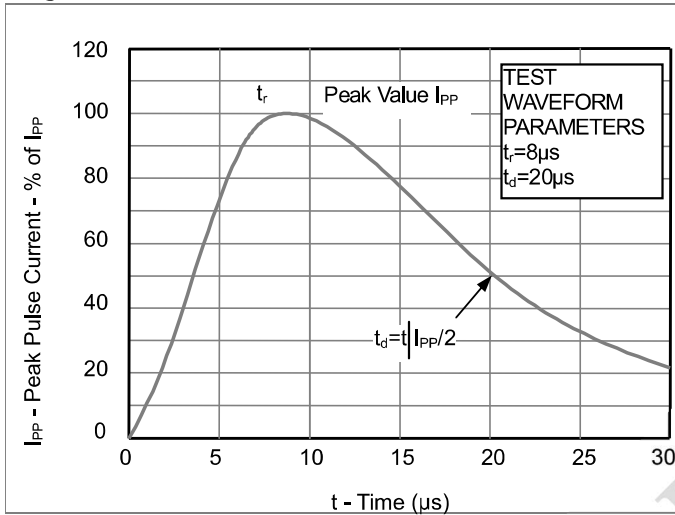


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

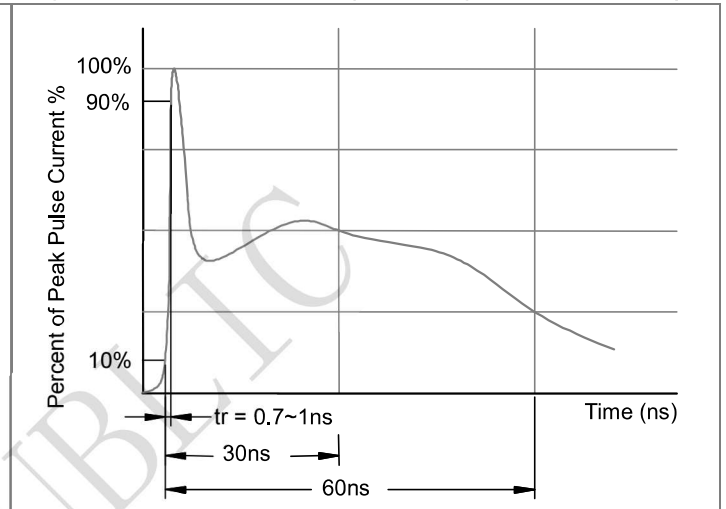
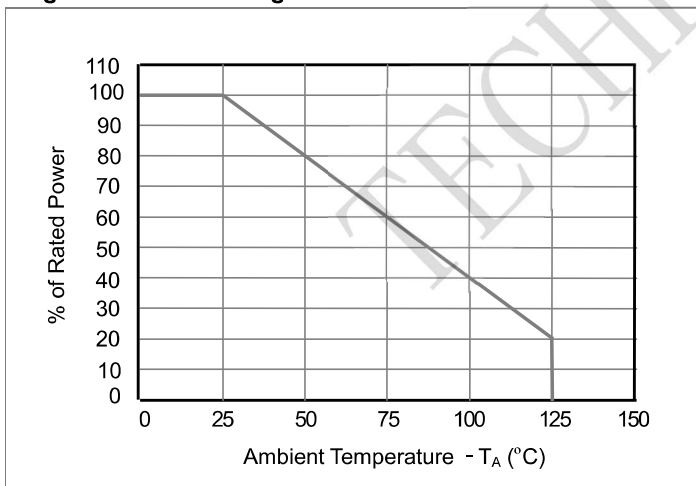
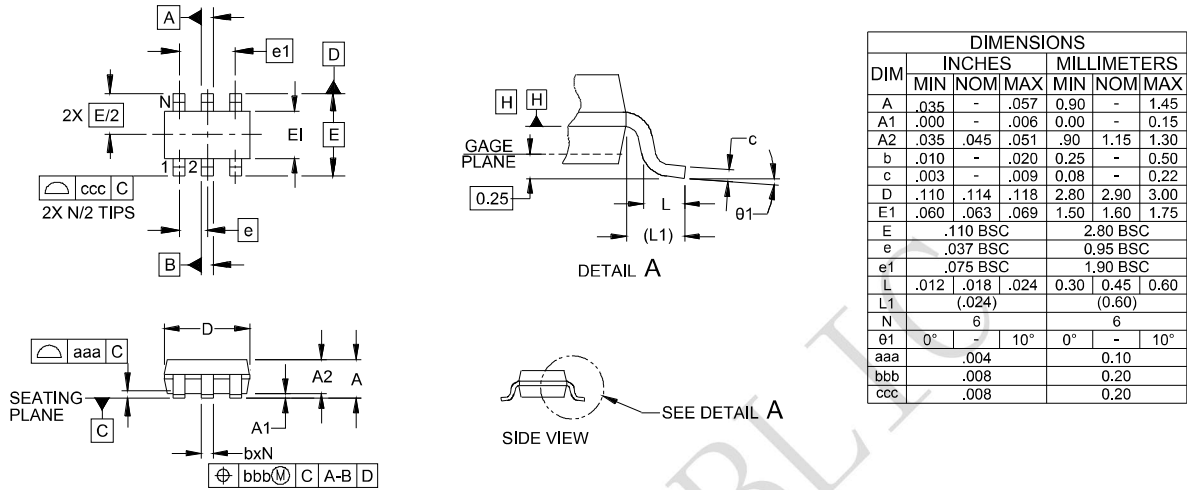


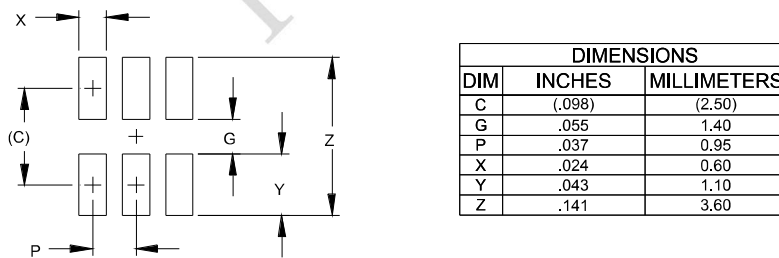
Fig3. Power Derating Curve



Outline Drawing - SOT23-6



Land Pattern - SOT23-6



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