

Features

- Uni-directional ESD protection of two lines
- 180W Peak pulse Power (8/20us)
- Working voltage: 5V
- Junction Capacitance: 120pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30\text{kV}$ contact $\pm 30\text{kV}$ air
- IEC 61000-4-5 (Lightning) 12A (8/20 μs)

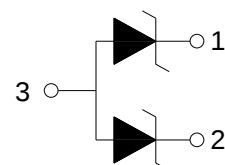
Applications

- Portable electronics
- Control & monitoring systems
- Servers, notebooks, and desktop PCs
- Set-top box
- Communication systems

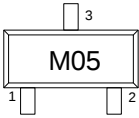
Mechanical Data

- Package: SOT-23
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
SM05T1G	SOT-23		3000 Tape & Reel	7 inches

Absolute Maximum Rating($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

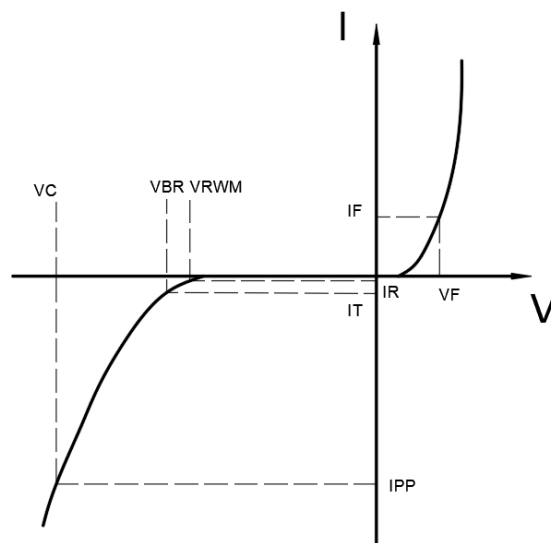
Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	Ppk	-	180	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	IPP		12	A
ESD (IEC61000-4-2 air discharge) @ 25°C	VESD	-	30	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	VESD	-	30	kV
Junction temperature	TJ	-	150	$^{\circ}\text{C}$
Operating temperature	TOP	-40	125	$^{\circ}\text{C}$
Storage temperature	TSTG	-55	150	$^{\circ}\text{C}$
Lead temperature	TL	-	260	$^{\circ}\text{C}$

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

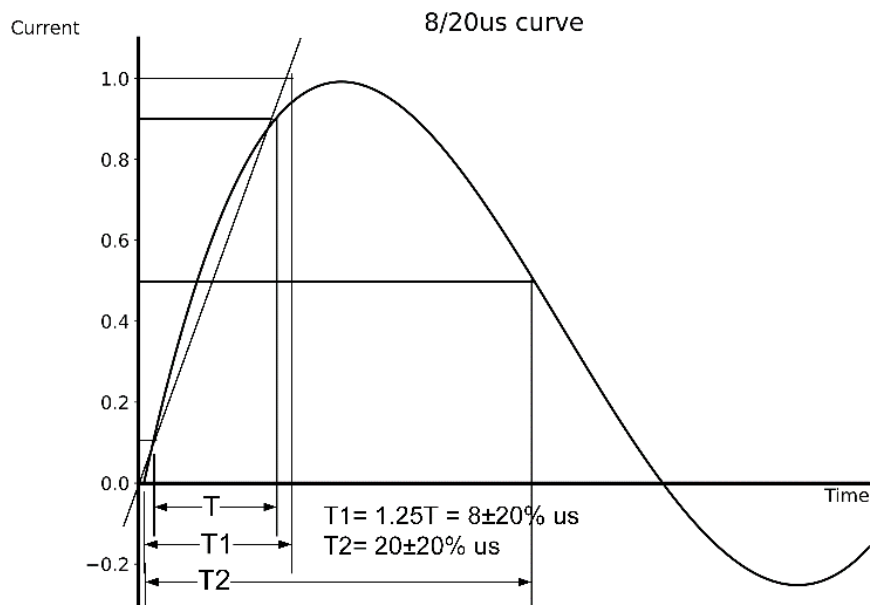
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	VRWM				5.0	V
Breakdown Voltage	VBR	$I_T = 1\text{mA}$	6.0		9.5	V
Reverse Leakage Current	IR	VRWM = 5V			1.0	μA
Holding Voltage	VC	IPP=1A; $t_p=8/20\mu\text{s}$		8.5	11	V
Clamping Voltage	VC	IPP=12A; $t_p=8/20\mu\text{s}$		12	15	V
Junction Capacitance	CJ	I/O to GND; VR=0V; f=1MHz		120	150	pF



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

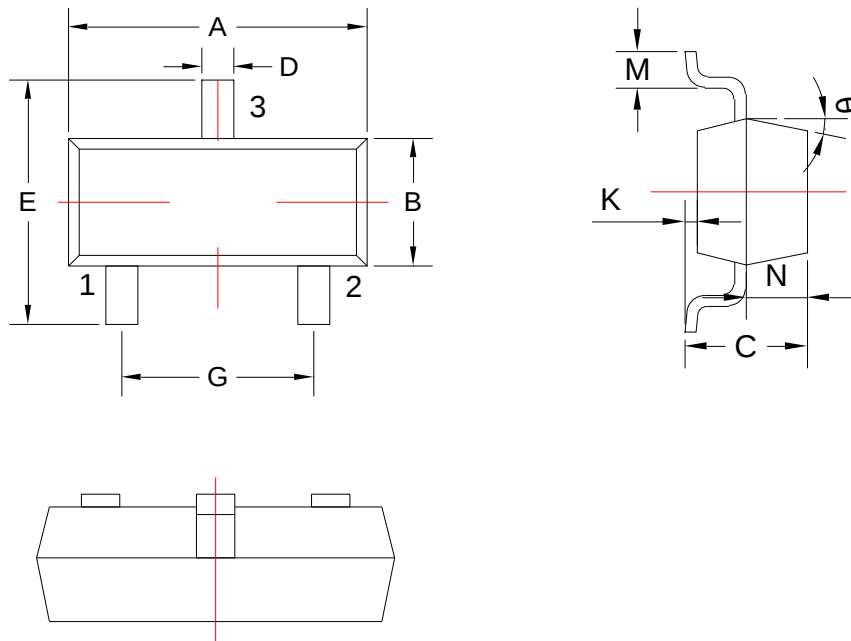


Typical Characteristics($T_A=25^\circ\text{C}$ unless otherwise Specified)





Outline Drawing – SOT-23



COMMON DIMENSIONS CUNITS MEASURE=MILLIMETER					
SYMBOL	MIN	MAX	SYMBOL	MIN	MAX
A	2.85	3.04	G	1.80	2.00
B	1.20	1.40	K	0	0.10
C	0.90	1.10	M	0.20	-
D	0.40	0.50	N	0.50	0.70
E	2.25	2.55	θ	5°	9°