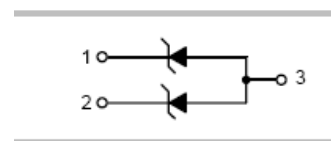


Features

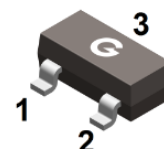
- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 30 kV (air), ± 30 kV (contact)
- 330 watts peak pulse power.($t_p=8/20\mu s$)
- Working Voltage: 3.3V
- Low clamping voltage
- Solid-state silicon avalanche technology
- RoHS compliant with Halogen-free

HF



Applications

- Cellular Handsets and Accessories
- Portable Electronics
- Industrial Controls
- Set-Top Box
- Servers, Notebook, and Desktop PC



SOT-23

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
SM03	SOT-23	3000 pcs / Tape & Reel	M03

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	± 30	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	± 30	kV
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	330	W
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	18	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	300	°C/W
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	200	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	240	°C/W
Junction Temperature	T_J	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 5\text{mA}$	5.2	-	6.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$	-	-	2	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	7	V
		$I_{PP} = 18\text{A}, t_p = 8/20\mu\text{s}$	-	-	20	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}, \text{Pin 1 or 2 to Pin3}$	-	-	300	pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

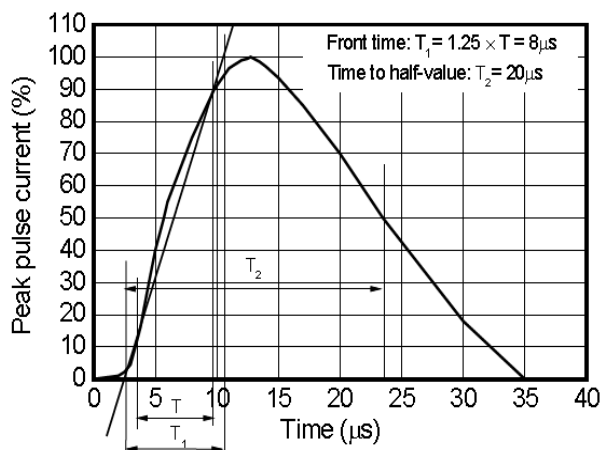


Fig 1 8/20 μs waveform per IEC61000-4-5

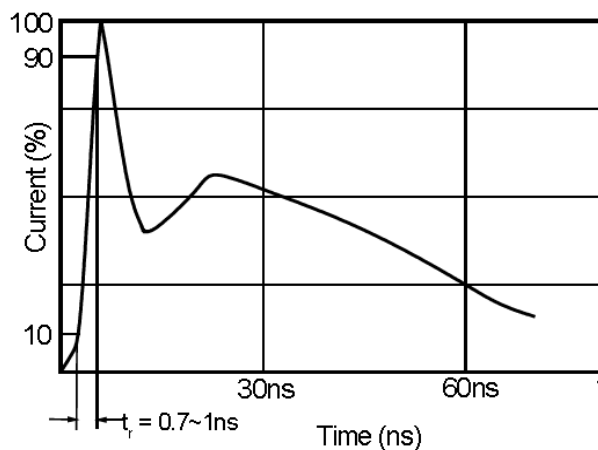


Fig 2 ESD pulse waveform according to IEC61000-4-2

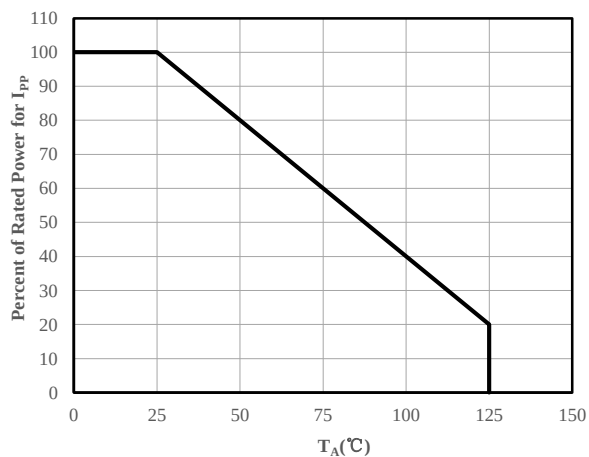


Fig 3 Power Derating Curve

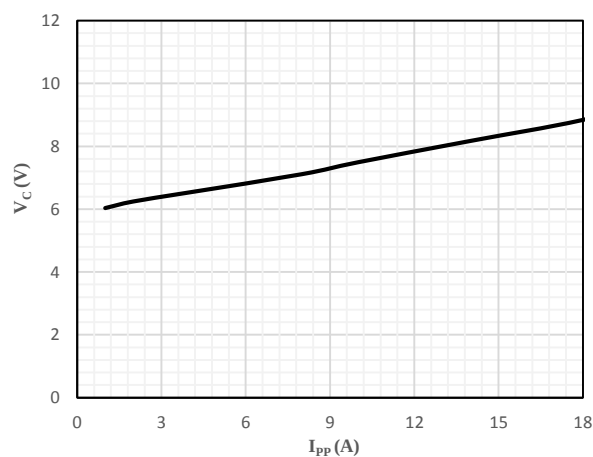


Fig 4 Clamping Voltage vs. Peak Pulse Current

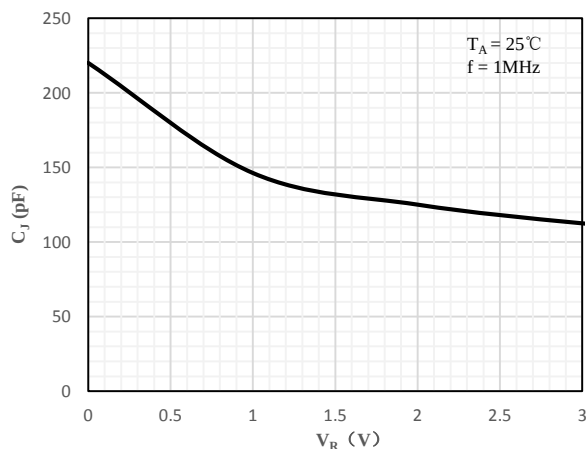
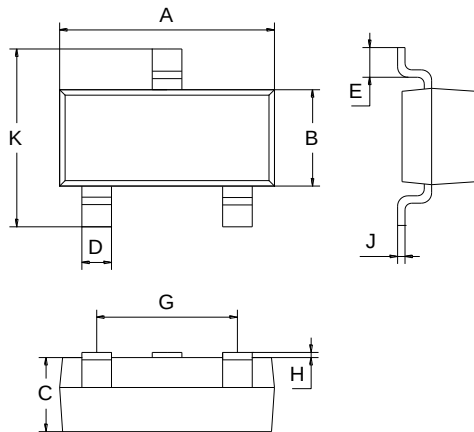


Fig 5 Junction Capacitance vs. Breakdown Voltage

Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23

