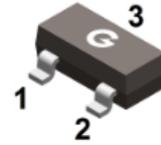


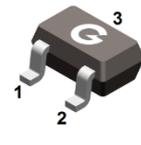
Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 30 kV (air), ± 30 kV (contact)
- Working voltage: $V_{RWM} = 24V$
- Low reverse clamping voltage
- RoHS compliant with Halogen-free

HF



SM24
SOT-23



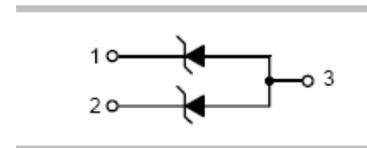
SM24W
SOT-323

Typical Applications

- Computers and peripherals
- Portable electronics
- Industrial controls
- Set-Top Box
- Servers, Notebook, and Desktop PC

Mechanical Data

- Case: SOT-23, SOT-323
- 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
SM24	SOT-23	3000 pcs / Tape & Reel	M24
SM24W	SOT-323	3000 pcs / Tape & Reel	M24

Maximum Ratings (@ $T_A = 25^\circ C$ 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}	300	W
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	6	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Lead Solder Temperature (10 Seconds Duration)	T_L	260	$^\circ C$
Junction Temperature	T_J	-55 ~ +125	$^\circ C$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ C$

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}		-	-	24	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$	26.7	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 24\text{V}$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	36	43	V
		$I_{PP} = 6\text{A}, t_p = 8/20\mu\text{s}$	-	53	55	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$ (Pin 1 to 2)	-	-	50	pF
		$V_R = 0\text{V}, f = 1\text{MHz}$ (Pin 1 to 3 and Pin 2 to 3)	-	-	60	pF

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

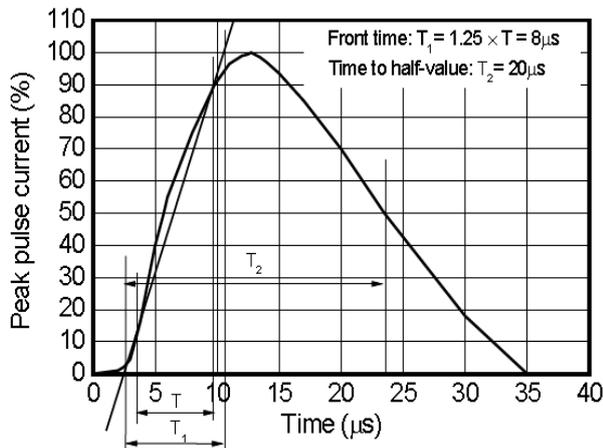


Fig 1 8/20 μs waveform per IEC61000-4-5

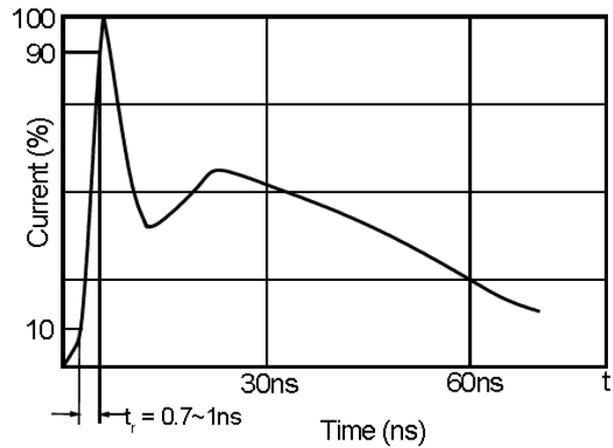


Fig 2 ESD pulse waveform according to IEC61000-4-2

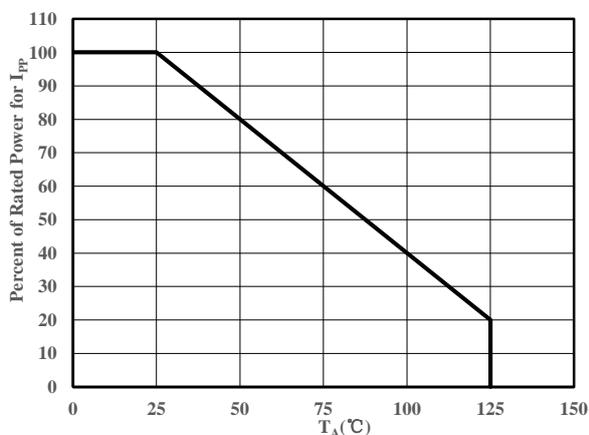
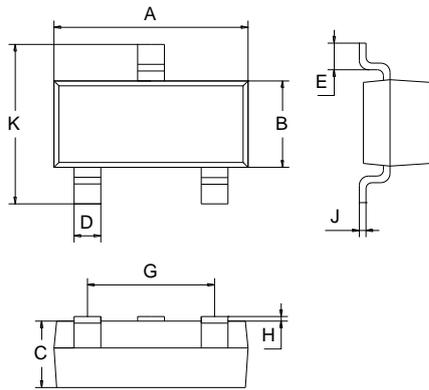
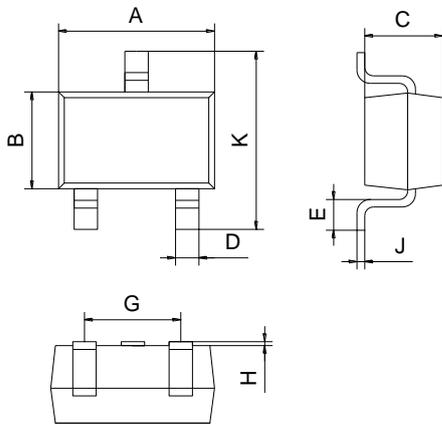


Fig 3 Power Derating Curve

Package Outline Dimensions (Unit: mm)



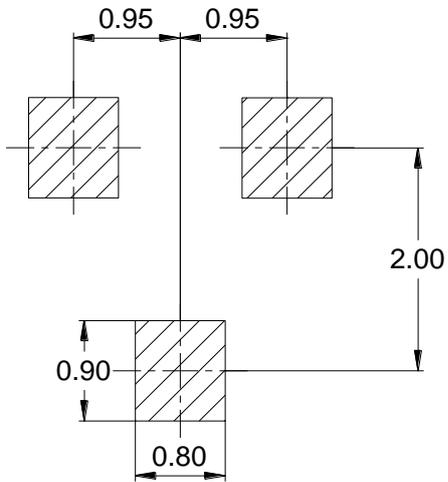
SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60



SOT-323		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Package Outline Dimensions (Unit: mm)

SOT-23



SOT-323

