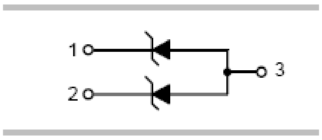
Features

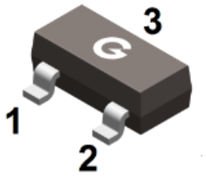
HF

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD): ±15kV (air), ±8kV (contact)
- Protects one bidirectional line or two unidirectional lines
- 300 watts peak pulse power (t_p = 8/20μs)
- Working voltage: V_{RWM} = 36V
- Low reverse clamping voltage
- RoHS compliant with Halogen-free



Typical Applications

- Computers and peripherals
- 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
SM36	SOT-23	3000 pcs / Tape & Reel	M36

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	±15	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	±8	kV
Peak Pulse Power (t_p = 8/20μs)	P_{PP}	300	W
Peak Pulse Current (t_p = 8/20μs)	I_{PP}	4	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Lead Solder Temperature (10 Seconds Duration)	T_L	260	°C
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

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	36	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	40	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 36V	-	-	1	μA
Clamping Voltage	V_C	I_{PP} = 1A, tp = 8/20μs	-	-	60	V
		I_{PP} = 4A, tp = 8/20μs	-	-	75	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ(Pin 1 to 2)	-	-	40	pF
		V_R = 0V, f = 1MHZ (Pin 1 to 3 or Pin 2 to 3)	-	-	45	pF

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

Ratings and Characteristic Curves (@ TA = 25°C unless otherwise specified)

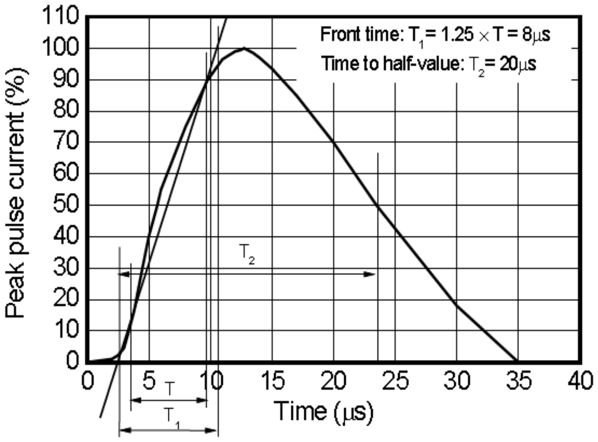


Fig 1 8/2 0µs waveform per IEC61000-4-5

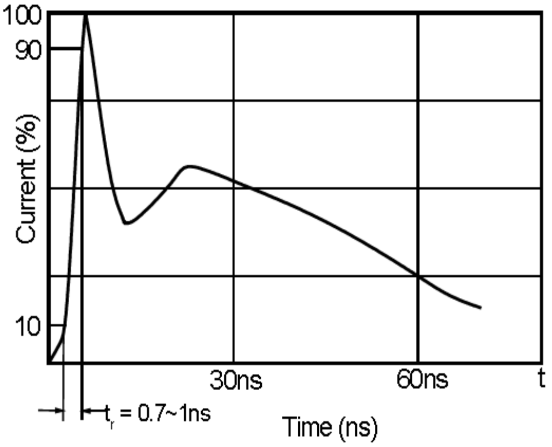


Fig 2 ESD pulse waveform according to IEC61000-4-2

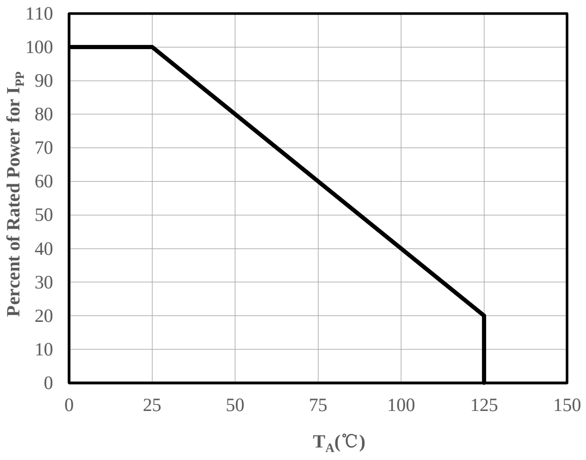


Fig 3 Power Derating Curve

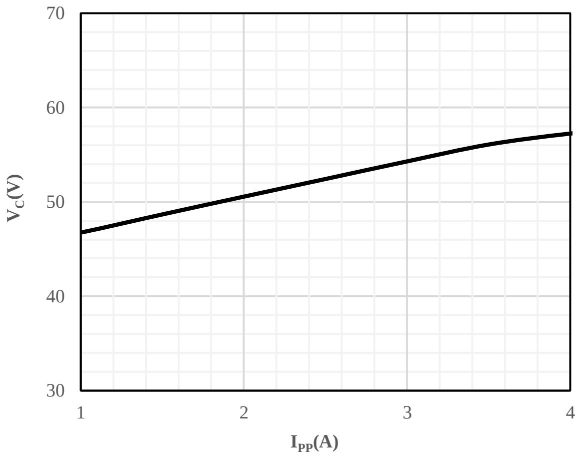


Fig 4 Clamping Voltage vs. Peak Pulse Current

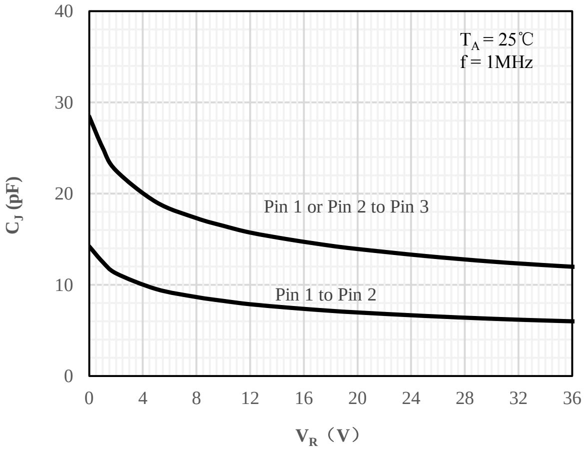
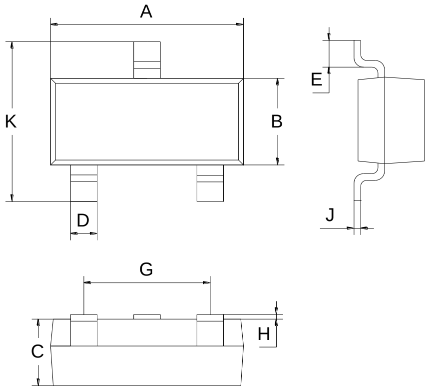


Fig 5 Junction Capacitance vs. Reverse Voltage

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

Package Outline Dimensions (Unit: mm)

SOT-23