

Features

- Ultra low leakage: nA level
- Operating voltage: 7V or 12V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ±15kV
 - Contact discharge: ±8kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 12A (8/20μs)
- RoHS Compliant
- Compliant to Halogen - free
- Suffix "-Q1" for AEC-Q101

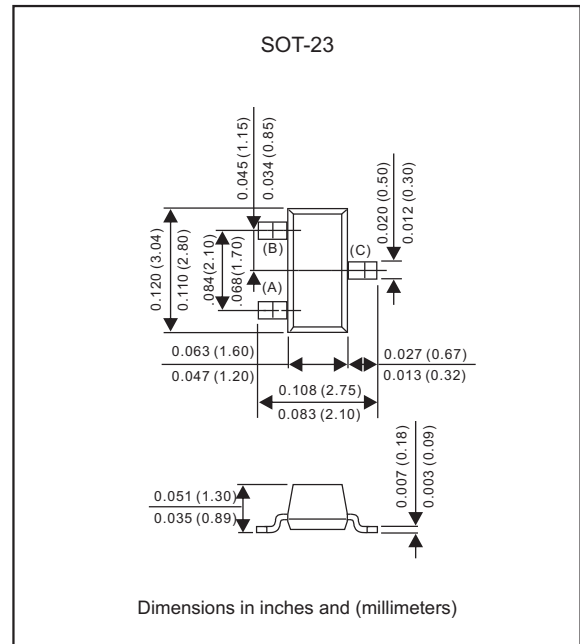
Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

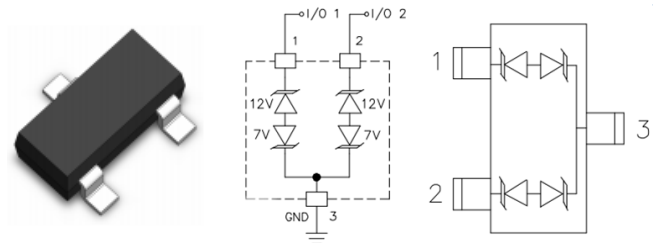
Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0

Package outline



Pin Configuration



Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	400	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 15	Kv
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking		V _{RWM} (V)	V _{BR} (V)	I _T (mA)	V _C @5A	V _C		I _R (μA) (Max)	C (Pf) (Typ.)
							(Max)	(@A)		
SM712-Q1	7AM	Pin 3 to Pin 1/Pin 2	7	7.5	1	12	18	12	1	45
		Pin 1 / Pin 2 to Pin 3	12	13.3	1	20	26	12	1	45

Characteristic Curves

FIG.1: V- I curve characteristics (Bi-directional)

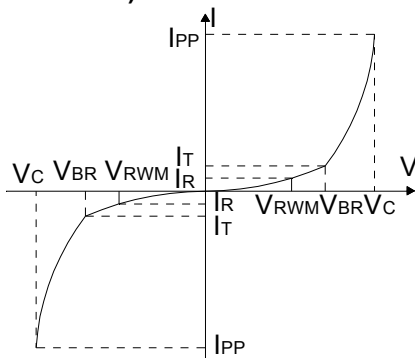


FIG.2: Pulse waveform (8/20μs)

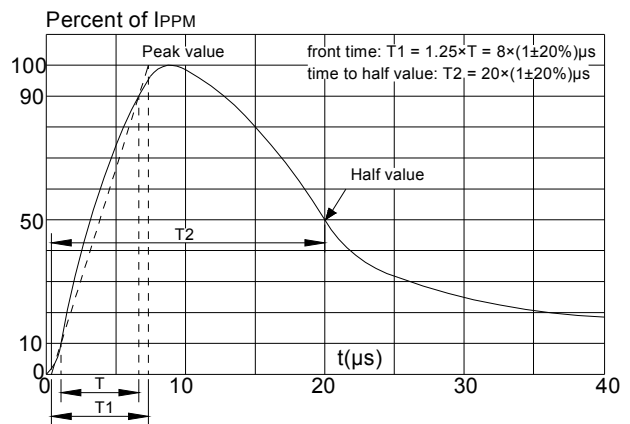


FIG.3: Pulse derating curve

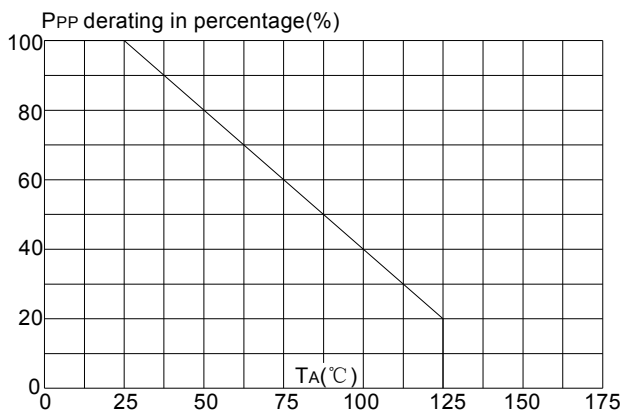


FIG.4: ESD clamping (8KV contact)

