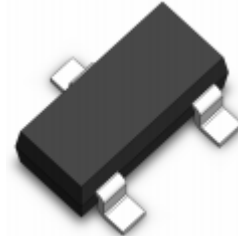


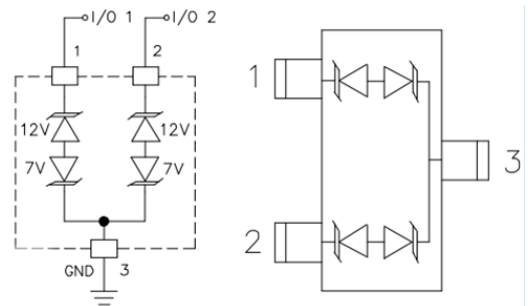
Features

- 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: $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 12A (8/20 μs)
- RoHS Compliant

Dimensions SOT-23



Pin Configuration



Applications

- Protection of RS-485 transceivers with extended common-mode range
- Security systems
- Automatic Teller Machines
- HFC systems
- Networks

Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch
- Device Marking: 712

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	340	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)

Parameter	Symbol	Conditions	Pins 1 to 3 and 2 to 3 (12V TVS)			Pins 3 to 1 and 3 to 2 (7V TVS)			Units
			Min	Typical	Max	Min	Typical	Max	
Reverse Stand-Off Voltage	V _{RWM}				12			7	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	13.3			7.5			V
Reverse Leakage Current	I _R	V _R =V _{RWM}			1			1	μA
Clamping Voltage	V _C	I _{PP} =12A, t _p =8/20μs		28					V
Clamping Voltage	V _C	I _{PP} =20A, t _p =8/20μs					20		V
Junction Capacitance	C _j	V _R = 0V, f = 1MHz		30			30		pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

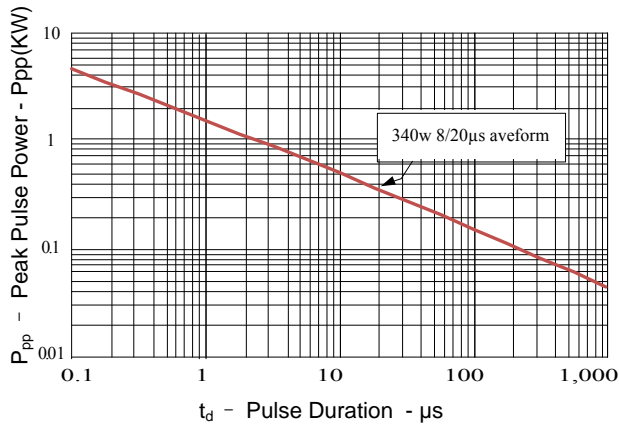


Figure 2: Power Derating Curve

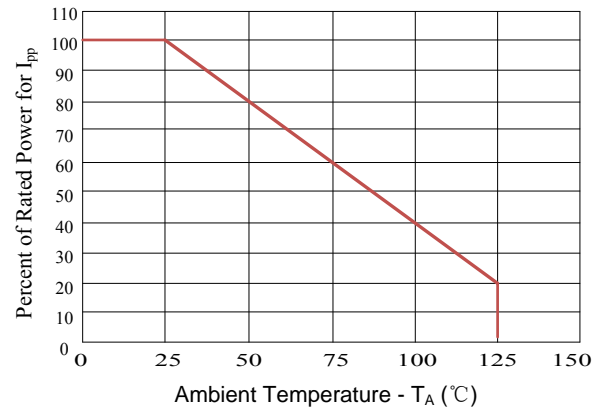


Figure 3: Pulse Waveform

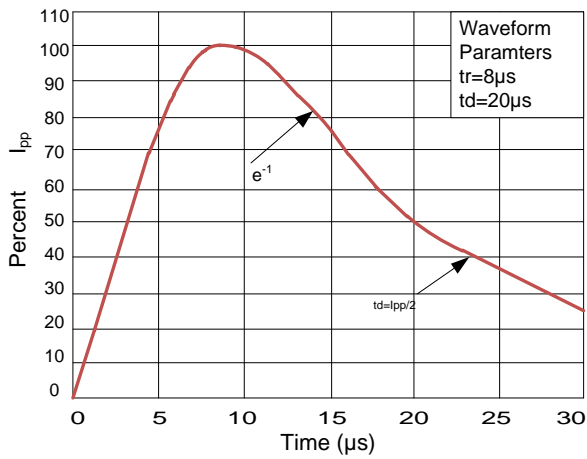
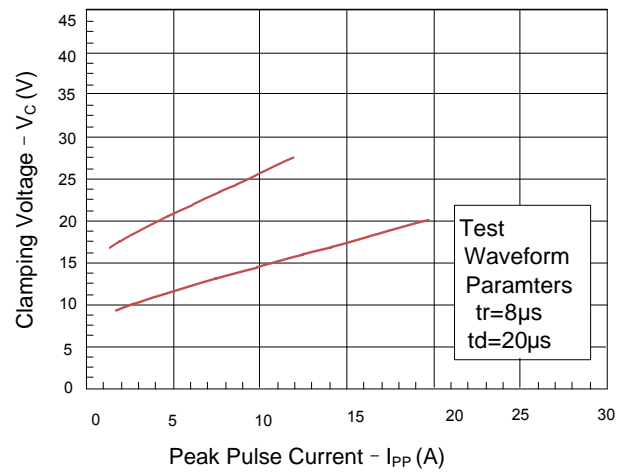
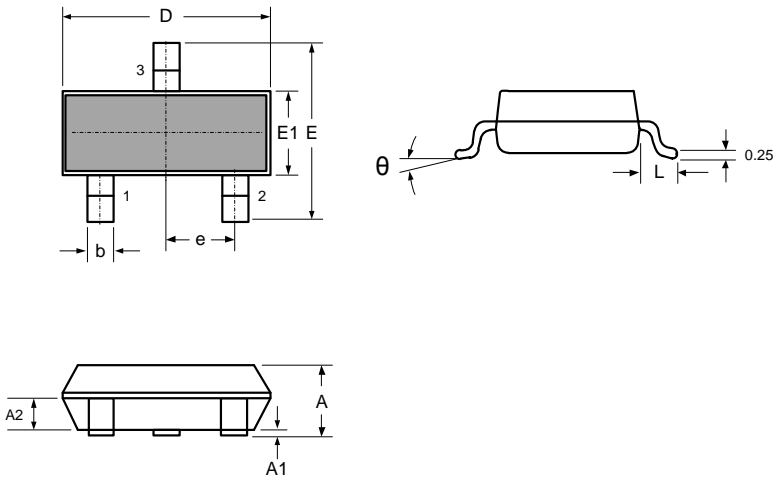


Figure 4: Clamping Voltage vs. I_pp



SOT-23 Package Outline & Dimensions



SYMBOL	DIMENSIONS			
	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°