

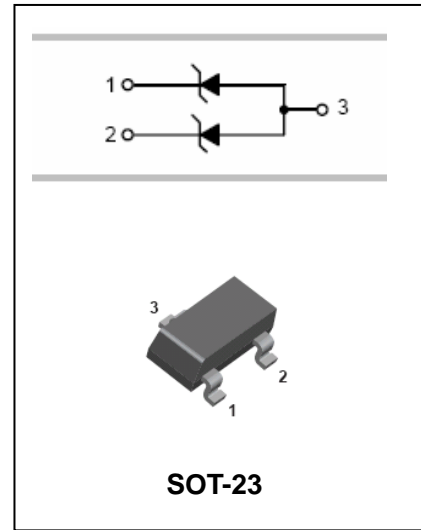


TVS DIODE ARRAY

SM12

FEATURES

- 300 watts peak pulse power.(tp=8/20us)
- Transient protection for data&power lines to
IEC 61000-4-2(ESD)15Kv(air),8kV(contact)
IEC 61000-4-4(EFT)40A(tp=5/50ns)
IEC 61000-4-5(Lighting)12A(tp=1.2/50us)
- Protects one bidirectional line or two unidirectional lines.
- Working Voltage: 12V.
- Low clamping voltage.
- Solid-state silicon avalanche technology.



APPLICATIONS

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

ORDERING INFORMATION

Type No.	Marking	Package Code
SM12	M12	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Ratings	Units
P _{PK}	Peak Pulse Power(tp=8/20us)	300	Watts
θ _{JA}	Thermal Resistance, Junction to Ambient	556	°C/W
T _L	Lead Soldering Temperature	260(10sec.)	°C
T _J	Operating Temperature	-55 to +125	°C
T _{STG}	Storage Temperature	-55 to +150	°C



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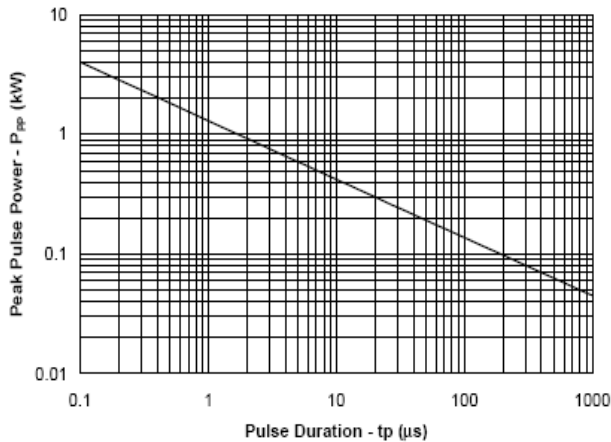
SM12

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

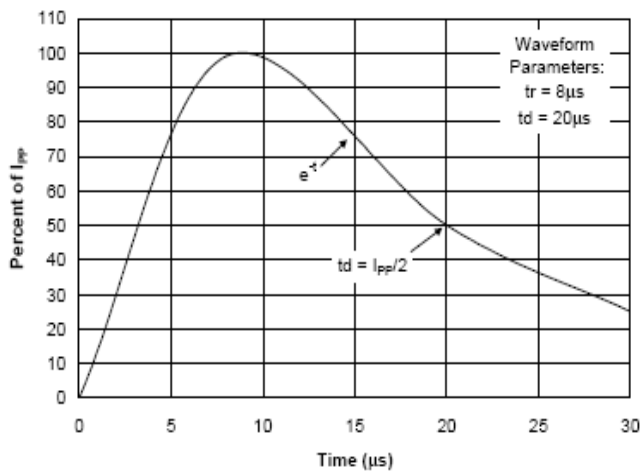
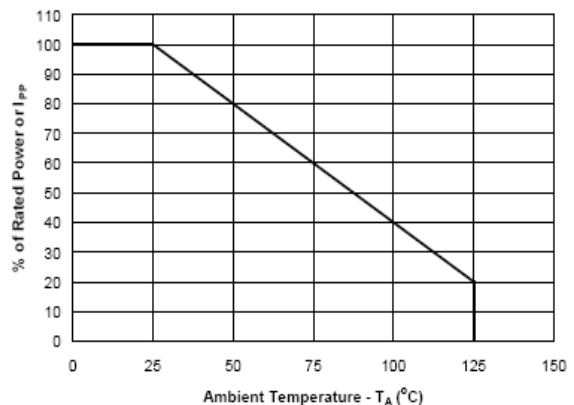
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_t=1mA$	13.3			V
Reverse Leakage Current	I_R	$V_{RWM}=12V, T=25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{pp}=1A, t_p=8/20\mu s$			19	V
Maximum Peak Pulse Current	I_{pp}	$t_p=8/20\mu s$			12	A
Junction Capacitance	C_j	Pin 1 to 2 $V_R=0V, f=1MHz$			120	μF
Junction Capacitance	C_j	Pin 1 to 3 and Pin 2 to 3 $V_R=0V, f=1MHz$			150	μF

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



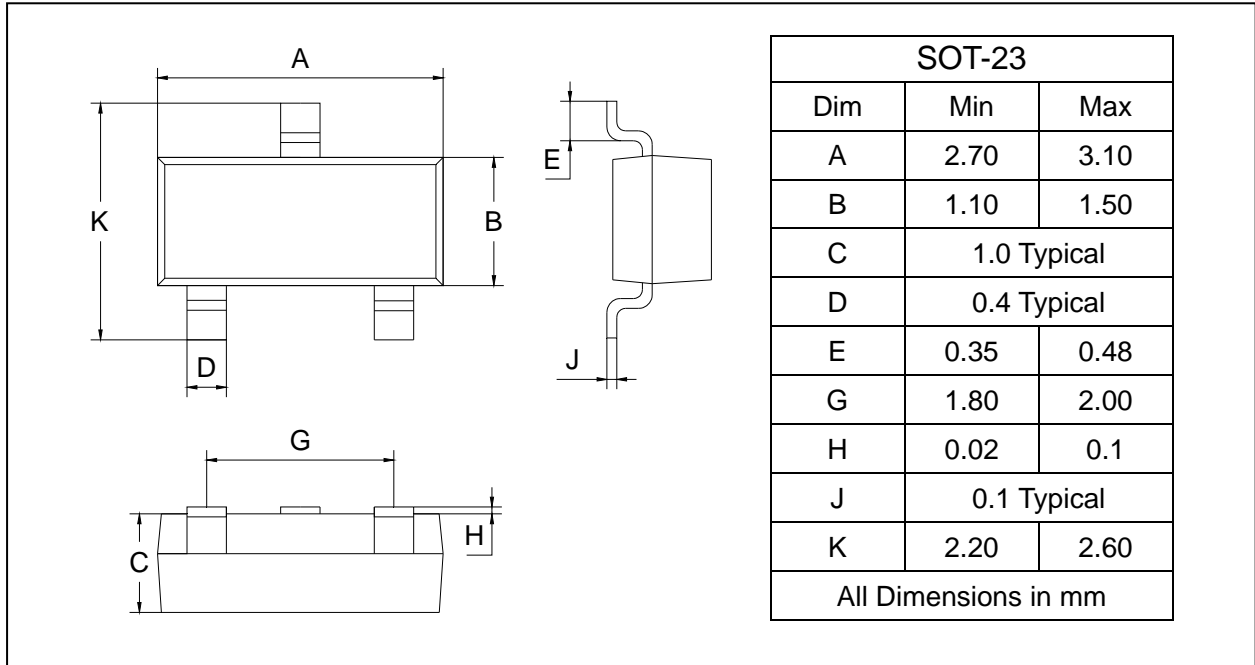
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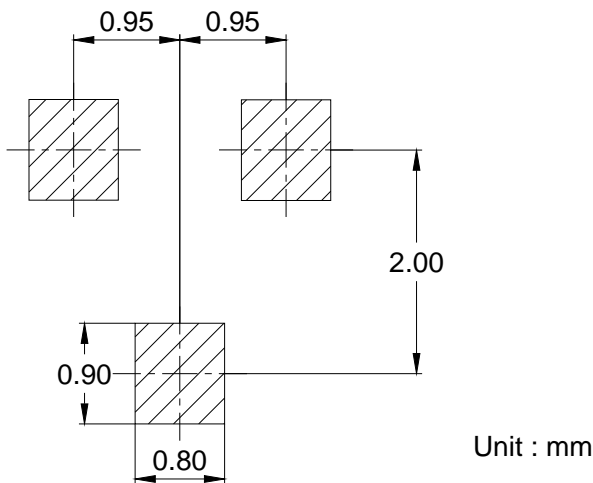
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
SM12	SOT-23	3000/Tape&Reel