

## TVS Diode Array

### DESCRIPTION

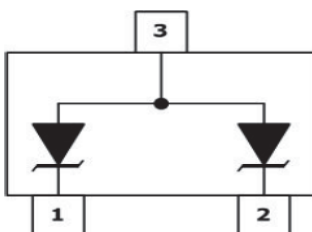
The TEPMxx Series is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

This series has been specifically designed to protect sensitive components which are connected to power, data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

### ORDERING INFORMATION

- ✧ Device: TEPMxx
- ✧ Package: SOT-23
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

### PIN CONFIGURATION



### FEATURES

- ✧ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ 350 Watts Peak Pulse Power per (tp=8/20 $\mu$ s)
- ✧ Protects one bidirectional line or two unidirectional lines
- ✧ Low clamping voltage
- ✧ Working voltages : 3.3V to 36V
- ✧ Low leakage current

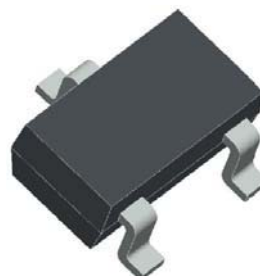
### MACHANICAL DATA

- ✧ SOT-23 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Reel size: 7 inch
- ✧ MSL 1

### APPLICATIONS

- ✧ Cell Phone Handsets and Accessories
- ✧ Microprocessor based equipment
- ✧ Personal Digital Assistants (PDA's)
- ✧ Notebooks, Desktops, and Servers
- ✧ Portable Instrumentation
- ✧ Networking and Telecom
- ✧ Serial and Parallel Ports.
- ✧ Peripherals

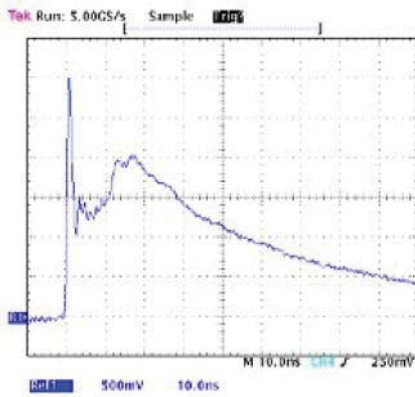
### PACKAGE OUTLINE



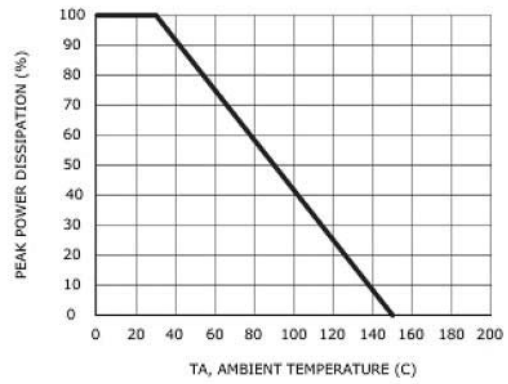
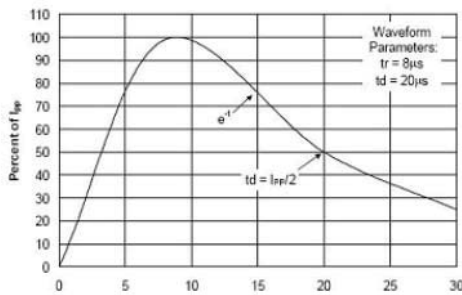
<b>ABSOLUTE MAXIMUM RATING</b>			
<b>Symbol</b>	<b>Parameter</b>	<b>Value</b>	<b>Units</b>
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	350	W
$T_{OPT}$	Operating Temperature	-55/+150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C
$T_L$	Lead Soldering Temperature	260 (10 sec.)	$^{\circ}$ C

<b>ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25<math>^{\circ}</math>C)</b>									
PART NUMBER	DEVICE MARKING	$V_{RWM}$	$V_B$	$I_T$	$V_C@1A$	$V_C$		$I_R$	$C_J$
		(V) (max.)	(V) (min.)	(mA)	(V) (max.)	(V) (max.)	(@A)	( $\mu$ A) (max.)	(pF) (max.)
TEPM03	M03	3.3	4	1	7.0	10.5	20	40	450
TEPM05	M05	5	6	1	9.8	18	17	10	300
TEPM08	M08	8	8.5	1	13.4	24	15	2	240
TEPM12	M12	12	13.3	1	19	32	11	1	130
TEPM15	M15	15	16.7	1	24	38	10	1	120
TEPM18	M18	18	20	1	29	45	9	1	100
TEPM24	M24	24	26.7	1	43	52	7	1	80
TEPM36	M36	36	40	1	60	75	5	1	60

## RATING AND CHARACTERISTICS CURVES (TEPMxx SERIES)

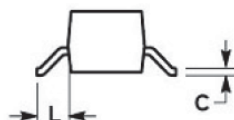
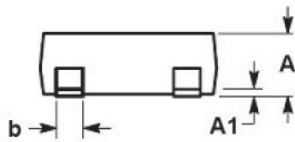
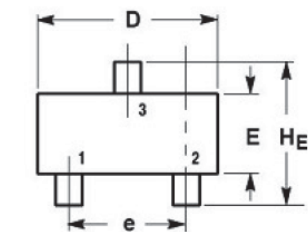


Pulse Waveform



Power Derating Curve

## SOT-23 PACKAGE OUTLINE DIMENSIONS



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104

# PACKAGING OF DIODE

## REEL PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOT-23/-3L	-T	3,000	---	---	178	438*438*220	180,000	---

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