

# DSM12Z

## DSM12Z TVS Diode Array

### General description

TVS Diode Array in a SOT-23 Package

### FEATURES

- Low clamping voltage
- Low leakage current
- Working voltages: 12V
- Protects two bidirectional lines

### APPLICATIONS:

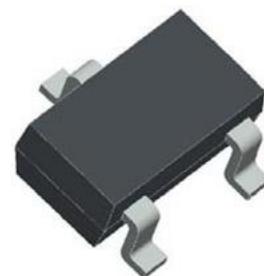
- Cellular Handsets and Accessories
- Portable Electronics
- Industrial Controls
- Servers, Notebook, and Desktop PC

### MACHANICAL DATA

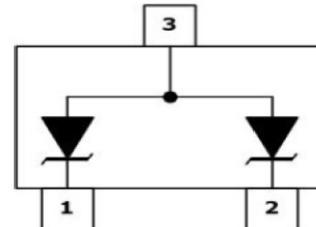
- Flammability Rating: UL 94V-0
- MSL1
- High temperature soldering guaranteed: 260°C/10s

### Marking:12C

### Package Outline



**SOT-23 Package**



### ABSOLUTE MAXIMUM RATING

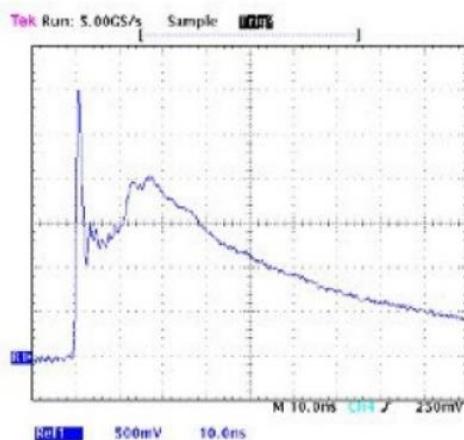
Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 30$ $\pm 30$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	550	W
$T_{OPT}$	Operating Temperature	-55/+150	°C
$T_{STG}$	Storage Temperature	-55/+150	°C
$T_L$	Lead Soldering Temperature	260 (10 sec.)	°C

### ELECTRICAL CHARACTERISTICS (Tamb=25 °C)

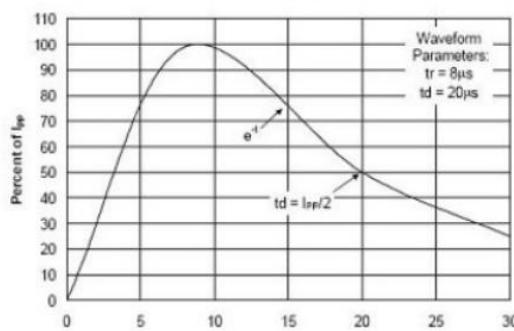
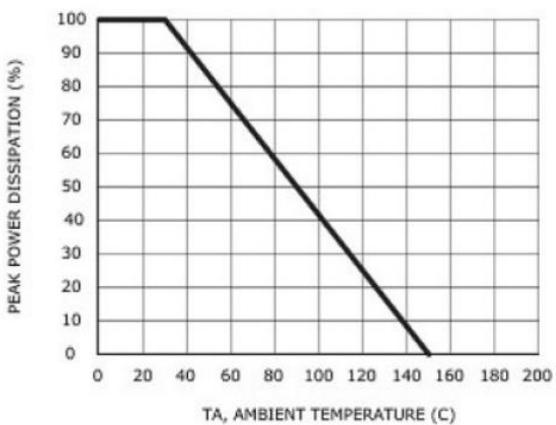
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				12	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	13.3			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 12\text{V}$			1.0	$\mu\text{A}$
$V_C$	Clamping Voltage	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			19	V
$V_C$	Clamping Voltage	$I_{PP} = 22\text{A}, t_p = 8/20\mu\text{s}$			25	V
$C_J$	Junction Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		110	150	pF

# DSM12Z

## Typical Characteristic:

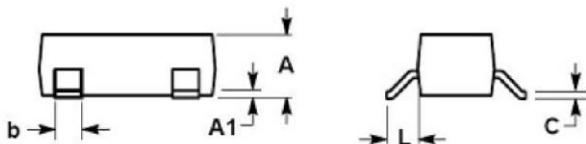
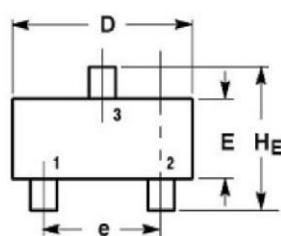


Pulse Waveform



## SOT-23 PACKAGE OUTLINE DIMENSIONS

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



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