

## **TPSM712** Asymmetrical TVS Diode

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## **Features**

- 400W peak pulse power (8/20µs)
- 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: ±30kV
    Contact discharge: ±30kV
    - IEC61000-4-4 (EFT) 40A (5/50ns)
    - IEC61000-4-5 (Lightning) 17A (8/20μs)
- RoHS Compliant

# **Mechanical Characteristics**

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

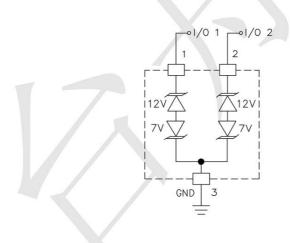
# Applications

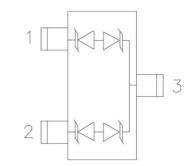
- Wireless System
- Networks
- Portable Instrumentation
- RS485 Ports

## **Ordering Information**

Part Number	Qty per Reel	Reel Size	
TPSM712	3000	7″	

### **Dimensions and Pin Configuration**





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### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	400	W
Peak Pulse Current (8/20µs)	lpp	17	А
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

		Pin 1 to 3 and 2 to 3 (12V TVS)			Pin 3 to 1 and 3 to 2			7	
	<del></del>				(7V TVS)				
Parameter	Symbol	Min	Тур	Max	Min	Тур	Max	Unit	Test Condition
Reverse Working Voltage	VRWM	/		12	r.		7	V	
Breakdown Voltage	VBR	13.3			7.5			V	IT = 1mA
Reverse Leakage Current	I <sub>R</sub>			0.05			2.0	uA	VR = VRWM
Clamping Voltage	Vc			20			10	V	IPP = 5A (8 x 20µs pulse)
Clamping Voltage	Vc			26			12	v	IPP = 17A (8 x 20µs pulse)
Junction Capacitance	Сл			75			75	pF	VR = 0V, f = 1MHz
Junction Capacitance	CJ		45			45		pF	VR = VRWM, f = 1MHz
			1	1	1		<u>1</u>	1	1

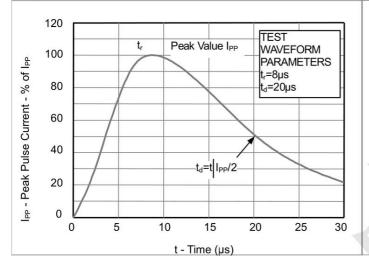


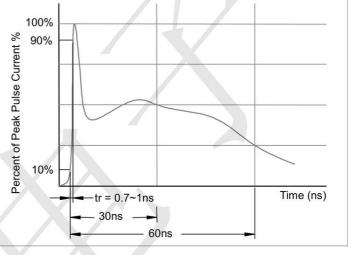
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### PROTECTION PRODUCTS Typical charateristics

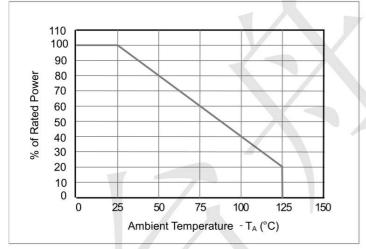
#### Fig1. 8/20µs Pulse Waveform

#### Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)





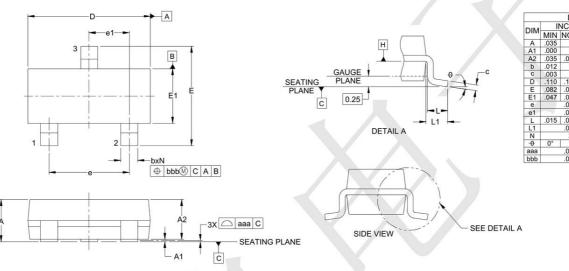
#### Fig3. Power Derating Curve





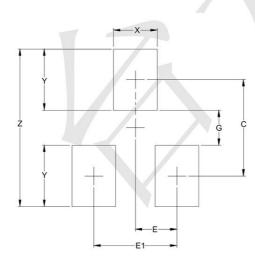
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# **Outline Drawing - SOT23**



		DIM	IENSI	ONS		
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
Α	.035	-	.044	0.89	-	1.12
A1	.000	-	.004	0.01		0.10
A2	.035	.037	.040	0.88	0.95	1.02
b	.012	-	.020	0.30	-	0.51
С	.003		.007	0.08	-	0.18
D	.110	.114	.120	2.80	2.90	3.04
E	.082	.093	.104	2.10	2.37	2.64
E1	.047	.051	.055	1.20	1.30	1.40
e .075			1.90 BSC			
e1 .037			0.95 BSC			
L	.015	.020	.024	0.40	0.50	0.60
L1 .022				(0.55)		
N 3				3	-	
0	0°	-	8°	0°	-	8°
aaa		.004			0.10	
bbb		.008			0.20	

## Land Pattern - SOT23



DIMENSIONS				
DIM	INCHES	MILLIMETERS		
С	(.087)	(2.20)		
E	.037	0.95		
E1	.075	1.90		
G	.031	0.80		
X	.039	1.00		
Y	.055	1.40		
Z	.141	3.60		

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单击下面可查看定价,库存,交付和生命周期等信息

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