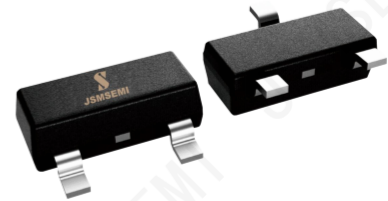


Description

The PESD2ETH1G-TR-JSM are ultra-low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available bidirectional configurations and is rated at 300 Watts for an 8/20 μ s wave shape. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers a ultra low capacitance and low leakage current in a miniature SOT-23 package.



SOT-23

Features

- IEC 61000-4-2 Level 4 ESD Protection
 - ± 25 kV Contact Discharge
 - ± 25 kV Air Discharge
- 300W Peak pulse Power (8/20 μ s)
- Low clamping voltage
- Protects two bidirectional or two Unidirectional lines
- Low leakage current
- RoHS compliant

Applications

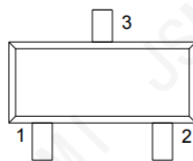
- Ethernet 10/100/1000 Base T
- Handheld - Wireless Systems
- Servers, notebooks, and desktop PCs
- SMART Phones
- USB Interface
- Cellular handsets and accessories

Absolute Maximum rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu s$)@25°C	P_{pk}	-	300	W
Peak pulse current ($t_p=8/20\mu s$)@25°C	I_{PP}		Refer to Table-5	A
ESD (IEC61000-4-2 air discharge) @25°C	V_{ESD}	-	± 25	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V_{ESD}	-	± 25	kV
Junction temperature	T_J	-	150	°C
Operating temperature	T_{OP}	-40	125	°C
Storage temperature	T_{STG}	-55	150	°C
Lead temperature	T_L	-	260	°C

Pin Configuration and Functions



Pin	Name	Description
1	IO	Connect to IO
2	IO	Connect to IO
3	GND	Connect to GND

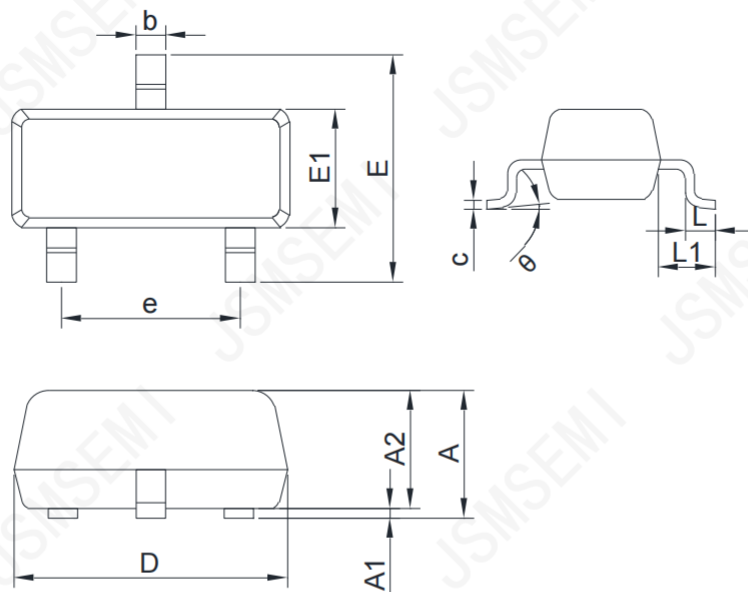
Electrical Characteristics

Symbol	Description
V_{RWM}	Rated reverse stand-off voltage
V_{BR}	Minimum breakdown voltage @ $I_T = 1mA$
V_{CL}	Typical Clamping voltage
I_{PP}	Maximum peak pulse current
I_R	Reverse leakage current @ V_{RWM}
C_O	Typical line capacitance ($V_{IO}=0V$, $V_{P-P} = 30mV$, $f = 1MHz$)

At $T_A = 25^{\circ}C$ unless otherwise noted

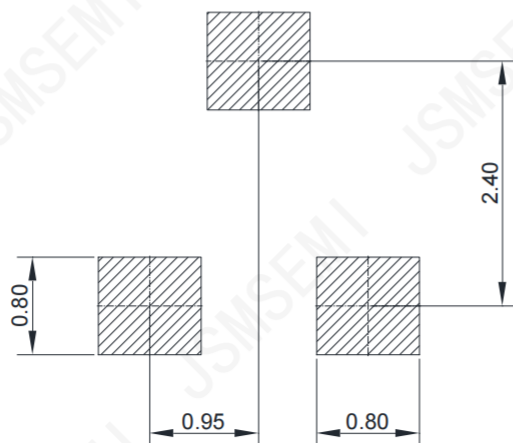
Part Number	V_{RWM} (Max.)	$V_{BR}(\text{Min.})$	$V_{CL}@I=1A$ (Typ.)	I_{PP} (Max.)	$V_{CL}@I=I_{PP}$ (Typ.)	$I_R(\text{Max.})$	$C_O(\text{Typ.})$
	(V)	(V)	(V)	(A)	(V)	(uA)	(pF)
PESD2ETH1G-TR-JSM	24.0	26.0	34.0	4.0	42.0	1.0	0.8

Dimension (SOT-23)



COMMON DIMENSIONS CUNITS MEASURE=MILLIMETER					
SYMBOL	MIN	MAX	SYMBOL	MIN	MAX
A	0.90	1.20	E	2.25	2.55
A1	0.00	0.10	E1	1.20	1.40
A2	0.90	1.10	e	1.80	2.00
b	0.30	0.50	L	0.30	0.50
c	0.07	0.18	L1	0.475	0.625
D	2.80	3.04	θ	0°	8°

Recommended Soldering Footprint



Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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