

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



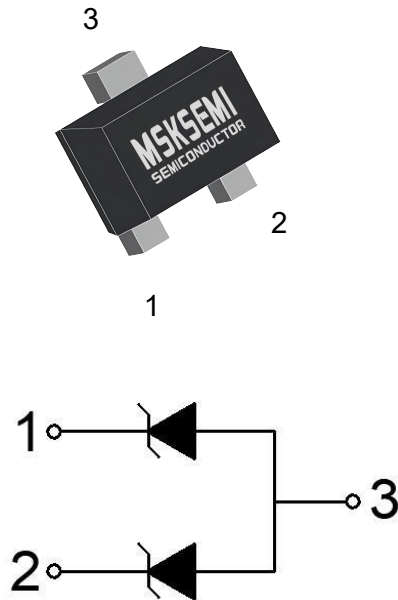
GDT



PLED

Product data sheet

## Appearance & Symbol



Package: SOT-723

- 1: Cathode
- 2: Cathode
- 3: Anode

## Mechanical Characteristics

- Package: SOT-723
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

## Applications

- Automotive Applications
- CAN Bus
- Electronic Control Units
- Body Control Units
- ADAS Control Units
- PowerTrain Control Units

## Features

- Up to 2 lines protects
- Peak Pulse Current (8/20us): 1.5A
- IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- Low leakage current
- Working voltages: 3.3-5V
- Qualified to AEC-Q101 Standards for High Reliability
- RoHS Compliant

Absolute Maximum Ratings (T=25°C, RH=45%-75%, unless otherwise noted)

Parameters	Symbol	Value	Unit
Peak Pulse Current(8/20μs)	I <sub>pp</sub>	1.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	±15 ±8	KV
Thermal Resistance Junction-to-Ambient	R <sub>θJA</sub>	525	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T <sub>L</sub>	260	°C

Electrical Characteristics (T=25°C, RH=45%-75%, unless otherwise noted, V<sub>F</sub>=1.1V Max.@I<sub>F</sub>=10mA)

P/N	MARK	VR <sub>wm</sub>	V <sub>BR</sub> @I <sub>T</sub>	IR@VR	I <sub>T</sub>	C <sub>J</sub>	
		max(V)	min(V)	max (uA)	(mA)	Typ(pF)	Max(pF)
ESD7C3.3DT5G-MS	L5	3.3	5.0	1	1.0	12	13
ESD7C5.0DT5G-MS	L4	5.0	6.0	0.5	1.0	6.0	6.2

FIG1: V-I cure characteristics

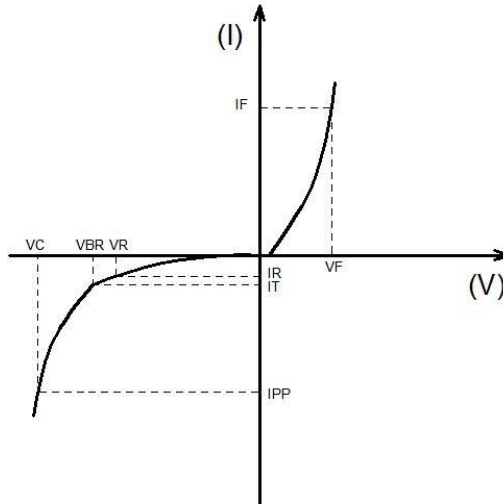


FIG2: Pulse Derating Curve

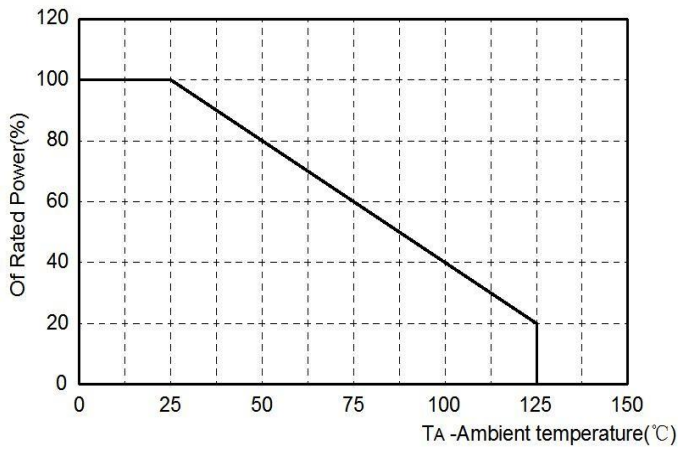
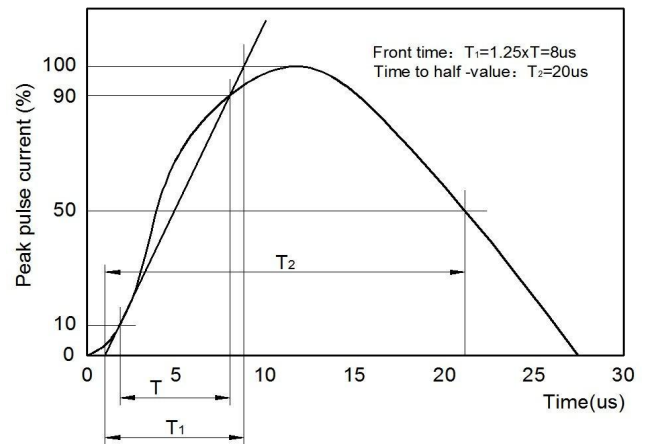
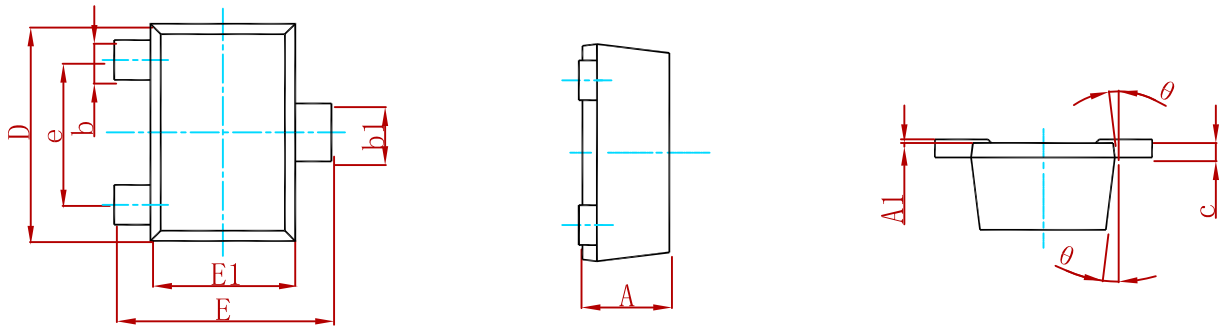


FIG3: Pulse Waveform



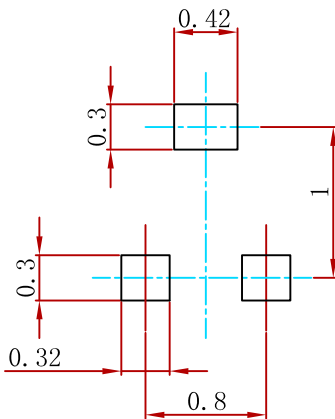
Symbol	Parameter
$I_F$	Mean Forward Current
$V_F$	Maximum Forward Voltage @ $I_F$
$V_R$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_R$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$

**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

**Suggested Pad Layout**



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance: ± 0.05mm.
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
ESD7CXXDT5G-MS	SOT-723	8000

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