

**UNIDIRECTIONAL ESD PROTECTION DIODE**

STAND-OFF VOLTAGE - **5.0** Volts  
POWER DISSIPATION - **25** WATTS

**GENERAL DESCRIPTION**

- The L02ESD5V0F6-5 is a low capacitance 5-fold ESD array in the ultra small SOT666 plastic package designed to protect up to five transmission or data lines from the damage caused by Electrostatic Discharge(ESD).

**FEATURES**

- Uni-directional ESD protection of up to five lines.
- Bi-directional ESD protection of up to four lines.
- Max.peak pulse power : Ppp = 25W at tp = 8/20 us
- ESD protection > 20 KV
- IEC 61000-4-2, level 4 ( ESD ), > 15KV ( air ) ; > 8KV ( contact ).
- IEC 61000-4-5 ( surge ); Ipp = 2.5A at tp = 8/20 us.
- Low clamping voltage; Vcl < 12V at Ipp = 2.5A
- Low capacitance device.

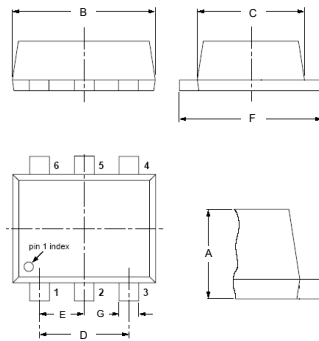
**APPLICATION**

- Computers and peripherals.
- Communication system.
- Cellular handsets and accessories.
- Audio & video equipment.
- Portable electronics.

**MECHANICAL DATA**

- Case Material: "Green" molding compound UL flammability classification 94V-0 (No Br,Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish)
- Component in accordance to RoHs 2002/95/EC

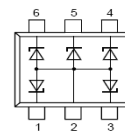
**SOT563**



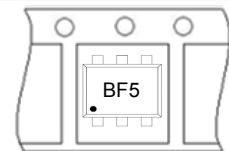
SOT563		
DIM.	MIN.	MAX.
A	0.50	0.60
B	1.50	1.70
C	1.10	1.30
D	1.00 (Typ.)	
E	0.50 (Typ.)	
F	1.50	1.70
G	0.17	0.27

All Dimensions in millimeter

PIN ASSIGNMENT	
1	Cathode 1
2	Common Anode
3	Cathode 2
4	Cathode 3
5	Cathode 4
6	Cathode 5



**Marking & Orientation**



**MAXIMUM RATINGS (Tj= 25°C unless otherwise noticed)**

Rating	Symbol	Value	Unit
Peak pulse Power ( 8/20us Waveform ) notes 1 and 2	PPPM	25	W
Operating Junction Temperature Range	TJ	-55 to + 150	°C
Storage Temperature Range	Tstg	-55 to + 150	°C
Soldering Temperature, t max = 10s	TL	260	°C

**NOTE;1.**Non-repetitive current pulse 8/20 us exponentially decaying waveform.

**2.**Measured from any of pins 1,3,4,5 or 6 to pin2.

**ELECTRICAL CHARACTERISTICS (Tj= 25°C unless otherwise noticed)**

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse standoff voltage	VDRM	---	---	5.0	V
Reverse leakage current	IRM	VDRM = 5 V	---	25	nA
Breakdown voltage	VBR	IR = 1 mA	6.4	7.2	V
Diode capacitance	CJ	VR = 0 V , f = 1MHz	---	19	pF
Clamping voltage	VCL	Ipp = 1A	---	10	V
Clamping voltage	VCL	Ipp = 2.5A	---	12	V

REV. 2, Oct-2010, KSIR12

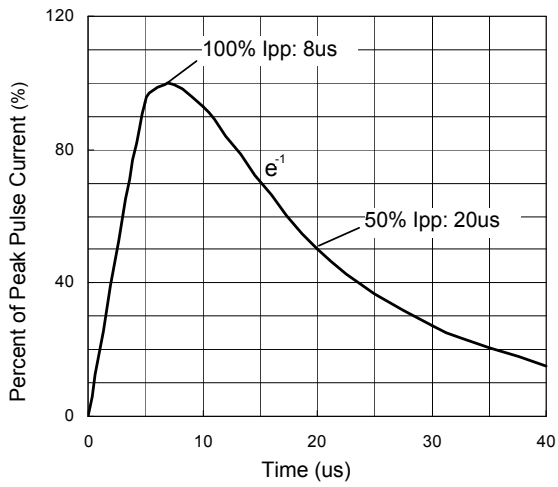


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

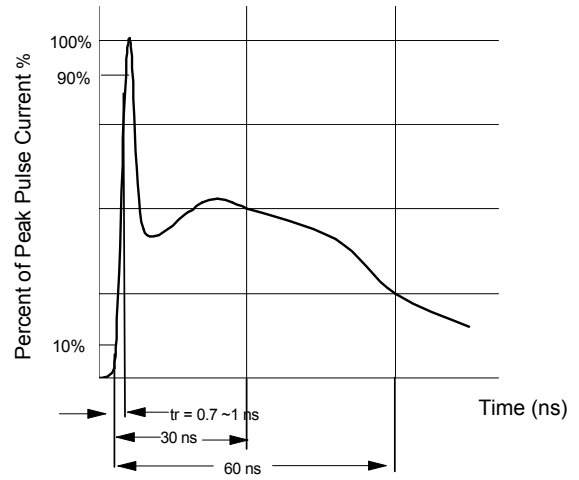


Figure 2. ESD pulse waveform according to IEC 61000-4-2

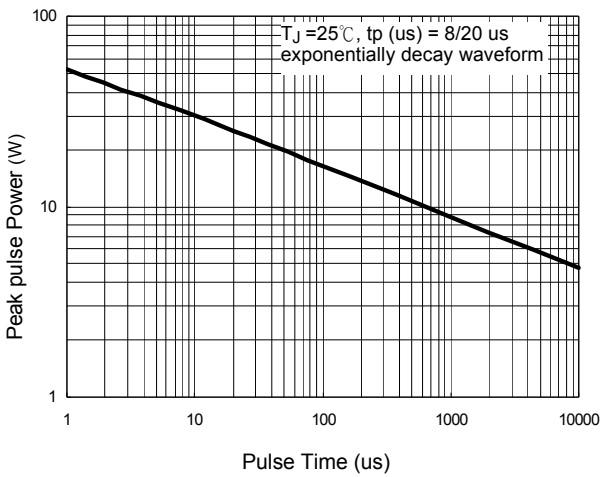


Figure 3. Power Dissipation versus Pulse Time

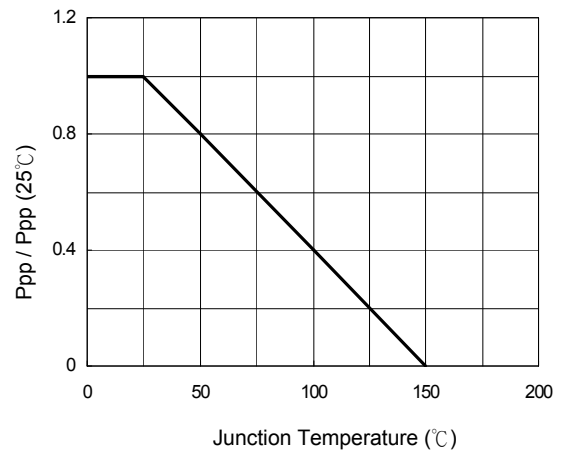


Figure 4. Peak power versus T<sub>J</sub>

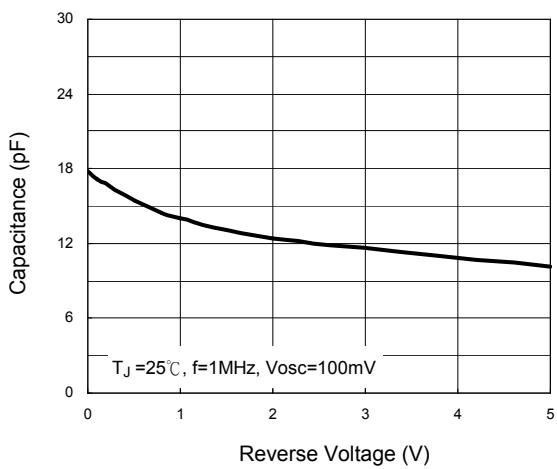


Figure 5. Typical Junction Capacitance

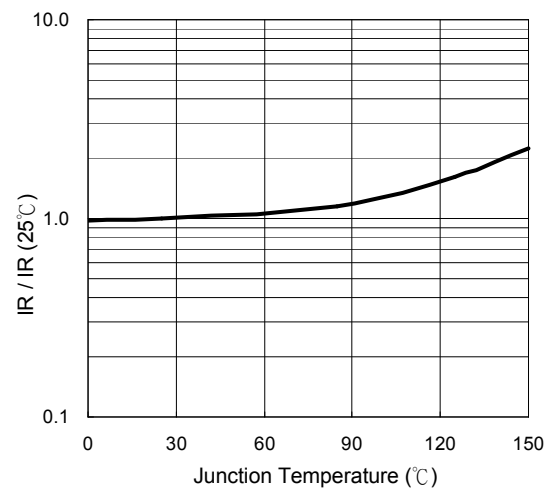


Figure 6. Reverse Leakage Current versus T<sub>J</sub>

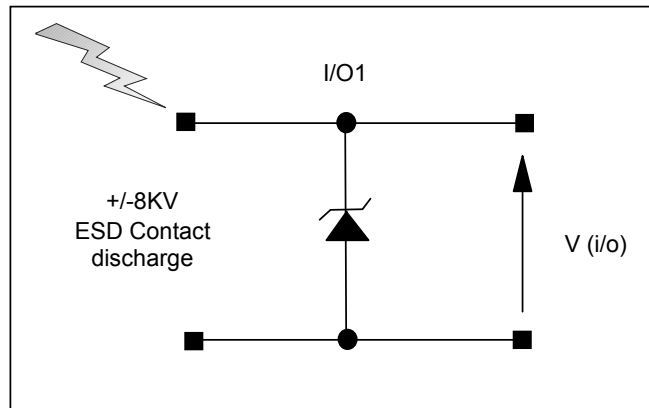


Figure 7. ESD Test Configuration

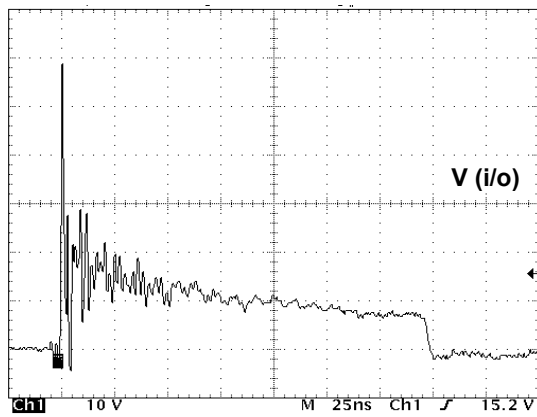


Figure 8. Clamped +8 kV ESD voltage waveform

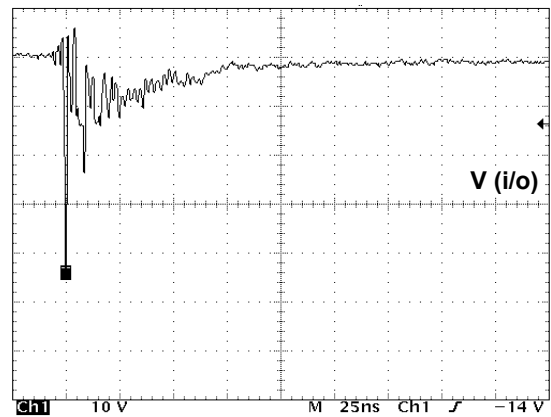


Figure 9. Clamped -8 kV ESD voltage waveform

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