勤昇科技股份有限公 司
Extensive Technology
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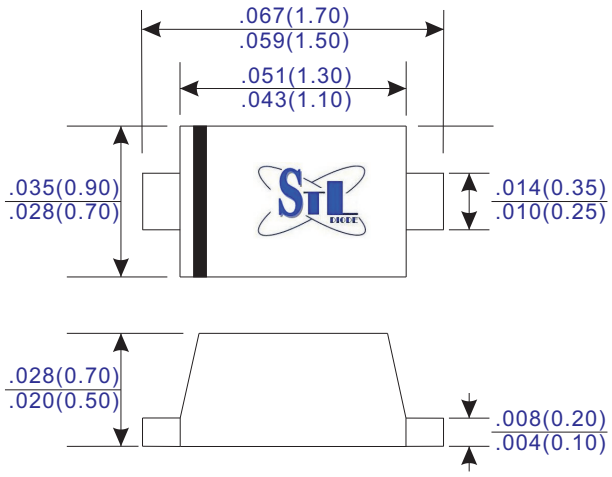
ESD5Z Series

1-Line SMD Tranisent Voltage Suppressor - *2.5V to 7.0V*

FEATURES & MACHANICAL DATA

- Stand-off voltage 2.5V - 7.0V
- Peak power up to 200W @ 8x20μS pulse
- Low leakage current
- Response time typically less than 1nS
- Transient portection for data lines to
  IEC 61000-4-2 (ESD) ±30KV(air) & ±30KV(contact)
  IEC 61000-4-4 (EFT) 40A (tp=5/50nS)
  ESD rating of class 3 (>16KV) per human body model
- Designed to protect voltage sensitive components from ESD & transient voltage events.
- Small size package suitable for use in cellular phone, portable devices, digital camera, power supplies and many other portable applications.
- Case: Molded plastic SOD-523
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.002 grams (approximate)

SOD-523



Unit :inch(mm)

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	ESD5Z 2.5	ESD5Z 3.3	ESD5Z 5.0	ESD5Z 6.0	ESD5Z 7.0	Units
Maximum Working Peak Reverse Voltage	V_{RWM}	2.5	3.3	5.0	6.0	7.0	Volts
Maximum Reverse Leakage Current @ V_{RWM}	I_R	6.0	0.05	0.05	0.01	0.01	μA
Minimum Breakdwon Voltage @I_T=1.0mA, Note 1	V_{BR}	4.0	5.0	6.2	6.8	7.5	Volts
Maximum Reverse Peak Pulse Current, per Fig. 1	I_{PP}	11.0	11.2	9.4	8.8	8.8	A
Clamping Voltage @ I_{PP}=5.0A @ Max. I_{PP}	V_C	6.5 10.9	8.4 14.1	11.6 18.6	12.4 20.5	13.5 22.7	Volts
Peak Power Dissipation	P_{PK}	120	158	174	181	200	Watts
Maximum Capacitance @V_R=0V, f=1 MHz	C	145	105	80	70	65	pF
IEC 61000-4-2, ESD (Air) IEC 61000-4-2, ESD (Contact) IEC 61000-4-4, FET	–	±30 ±30 40					KV KV A
ESD Voltage, Per Human Body Model Per Machine Model	–	16 400					KV V
Total Power Dissipation @T_A=25°C, Note 2	P_D	100					mW
Operating Temperature Range	T_J	-55 ~ +150					°C
Storage Temperature Range	T_{STG}	-55 ~ +150					°C

Note 1. V_{BR} is measure with a pulse test current I_T at an ambient temperature 25°C
2. Mounted on FR-5=1.0"x0.75"x0.62"
3. V_F=0.9V Maximum @I_F=10mA for all types.

Fig.1 - Pulse Waveform