

# ESD5Z Series

## Transient Voltage Suppressors

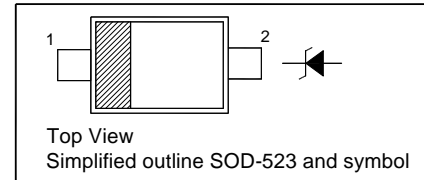
for ESD Protection

### Features

- Excellent clamping capability
- Low leakage
- Fast response time

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
IEC61000-4-2 (ESD) Air Contact	$V_{\text{ESD}}$	$\pm 30$	KV
ESD Voltage Per Human Body Model Per Machine Model	$V_{\text{ESD}}$	16	KV
		400	V
Power Dissipation on FR-5 Board	$P_{\text{tot}}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$ ( $V_F = 1.1\text{ V Max. at } I_F = 10\text{ mA}$ )

Type	Marking Code	Reverse Stand-off Voltage	Reverse Current	Breakdown Voltage		Clamping Voltage			Reverse Peak Pulse Current	Peak Power Dissipation	Capacitance
		$V_{\text{RWM}}$	$I_{\text{R}}$ at $V_{\text{RWM}}$	$V_{\text{BR}}$	at $I_{\text{T}}$	$V_{\text{C}}$	at $I_{\text{PP}}$	$V_{\text{C}}$ at Max. $I_{\text{PP}}$	$I_{\text{PP}}$	$P_{\text{pk}}$	$C_j$
		Max. (V)	Max. ( $\mu\text{A}$ )	Min. (V)	(mA)	Typ. (V)	(A)	Max. (V)	Max. (A)	Max. (W)	Typ. (pF)
ESD5Z2V5	02	2.5	6	4	1	6.5	5	10.9	11	120	145
ESD5Z3V3	ZE	3.3	0.05	5	1	8.4	5	14.1	11.2	158	105
ESD5Z5V0	05	5	0.05	6.2	1	11.6	5	18.6	9.4	174	80
ESD5Z6V0	06	6	0.01	6.8	1	12.4	5	20.5	8.8	181	70
ESD5Z7V0	07	7	0.01	7.5	1	13.5	5	22.7	8.8	200	65
ESD5Z9V0	09	9	0.5	9	1	11.5	5	15	13.3	200	92
ESD5Z12	12	12	0.01	14.1	1	17	5	25	9.6	240	55

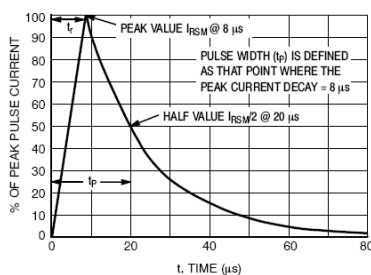
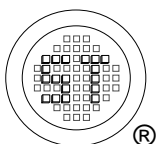
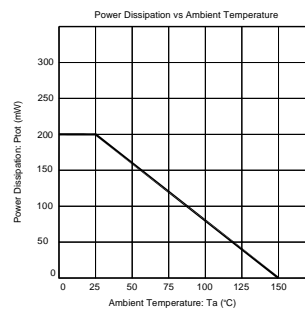


Figure 1. 8 x 20  $\mu\text{s}$  Pulse Waveform



**SEMTECH ELECTRONICS LTD.**

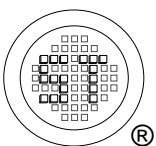
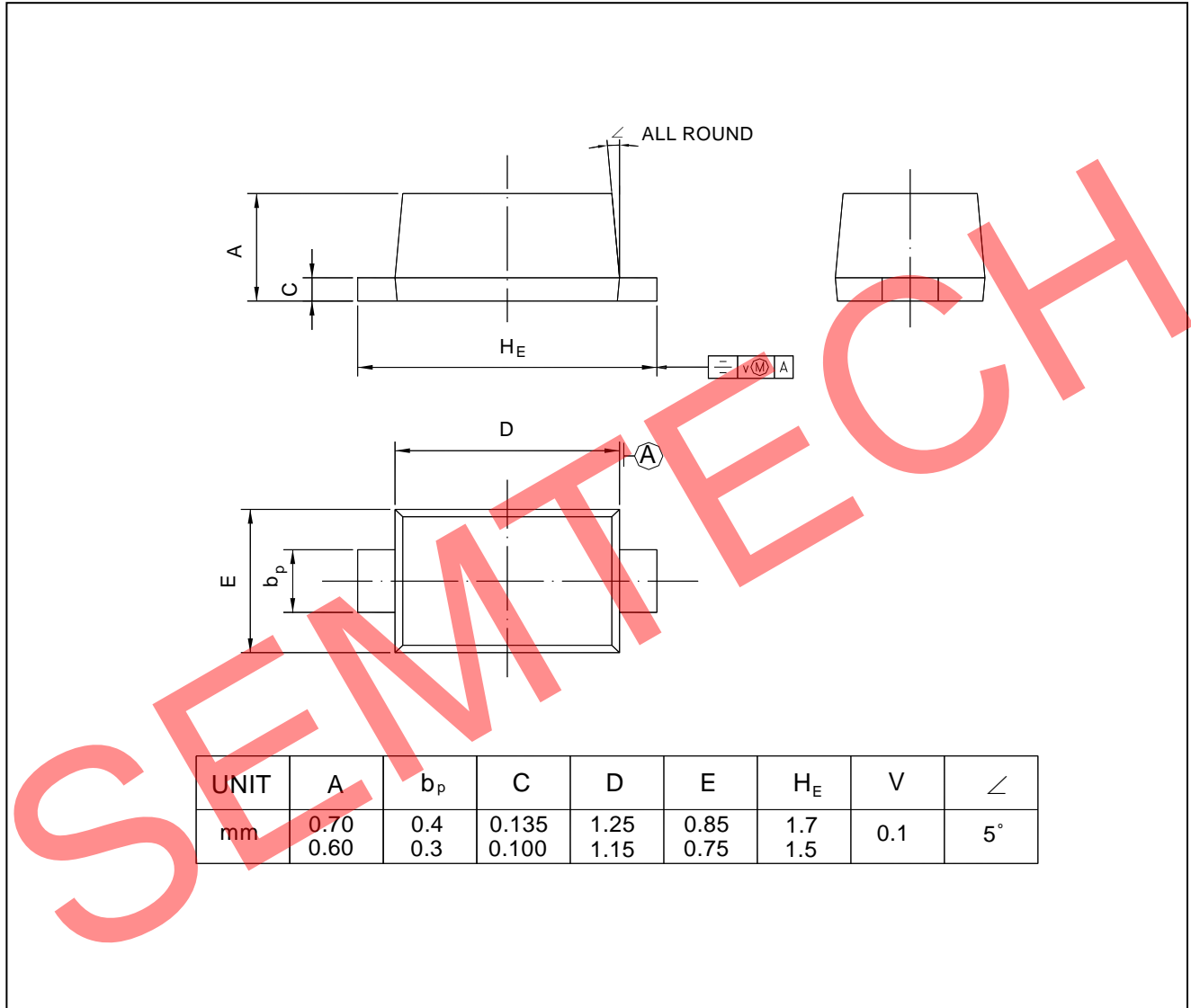


# ESD5Z Series

## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



**SEMTECH ELECTRONICS LTD.**



ISO/TS 16949 : 2009  
Certificate No. 160713000



ISO14001 : 2004  
Certificate No. 7116



ISO 9001 : 2008  
Certificate No. 50719410



BS-OHSAS 18001 : 2007  
Certificate No. 7116



IECQ QC 080000  
Certificate No. PRC-HSPM-1483