

General Description

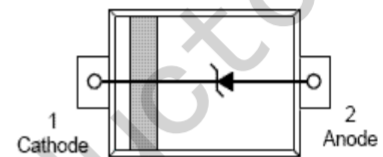
The ESD5Z24 Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Applications

- ◆ Cellular phones
- ◆ Portable devices
- ◆ Digital cameras
- ◆ Power supplies

Features

- ◆ Small Body Outline Dimensions
- ◆ Low Body Height
- ◆ Stand-off Voltage: 24V
- ◆ Peak Power up to 150 Watts @ 8 x 20 μ s Pulse
- ◆ Low Leakage
- ◆ Response Time is Typically < 1 ns
- ◆ ESD Rating of Class 3 (> 15 kV) per Human Body Model
- ◆ IEC61000-4-2 Level 4 ESD Protection
- ◆ IEC61000-4-4 Level 4 EFT Protection
- ◆ We declare that the material of product compliance with RoHS requirements.
- ◆ S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



SOD-523

ORDERING INFORMATION

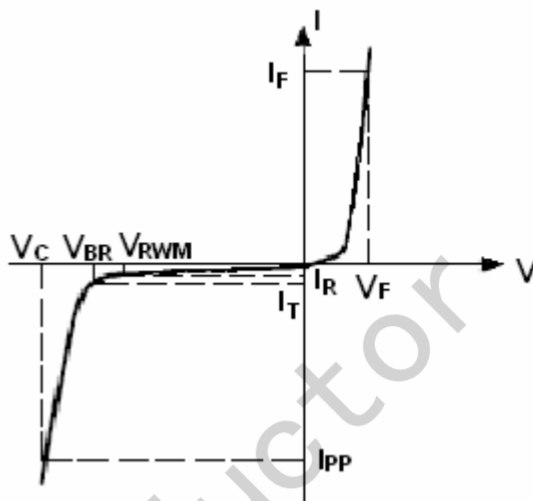
Device	Package	Shipping
ESD5Z24	SOD-523	3000/Tape & Reel

Absolute Ratings ($T_{amb}=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Units
PPP	Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	150	W
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
T_{op}	Operating Temperature Range	-40 to +125	$^{\circ}\text{C}$
T_j	Maximum junction temperature	150	$^{\circ}\text{C}$
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 15 ± 8
	IEC61000-4-4 (EFT)		40
	ESD Voltage	Per Human Body Model	16
			KV

Electrical Parameter

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



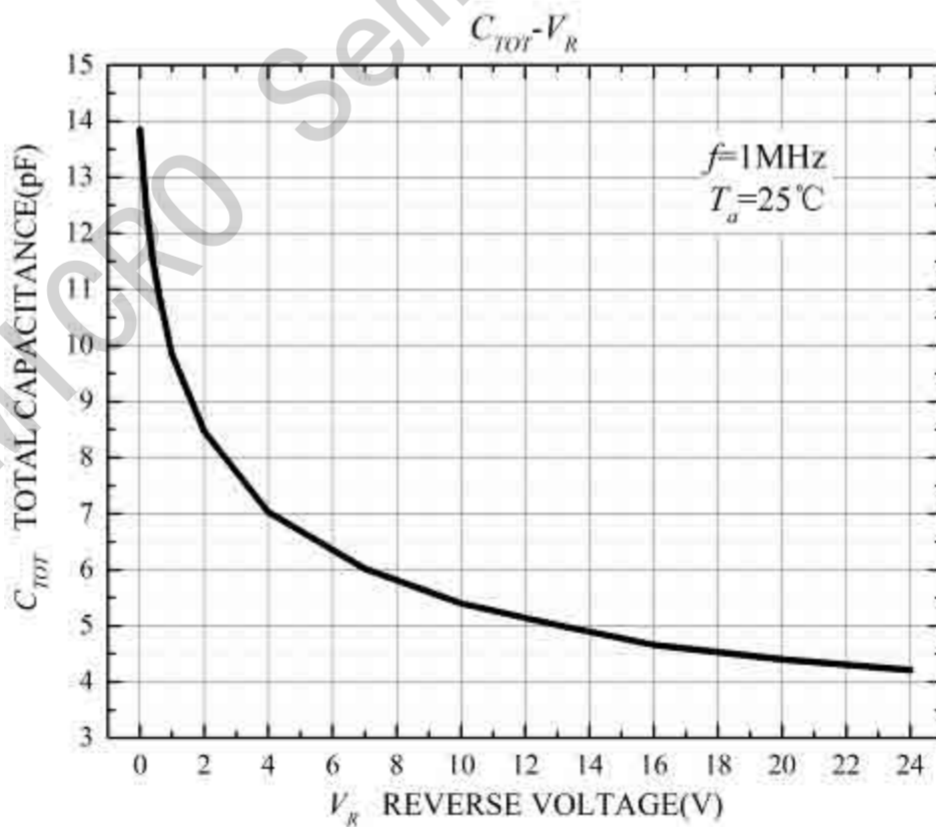
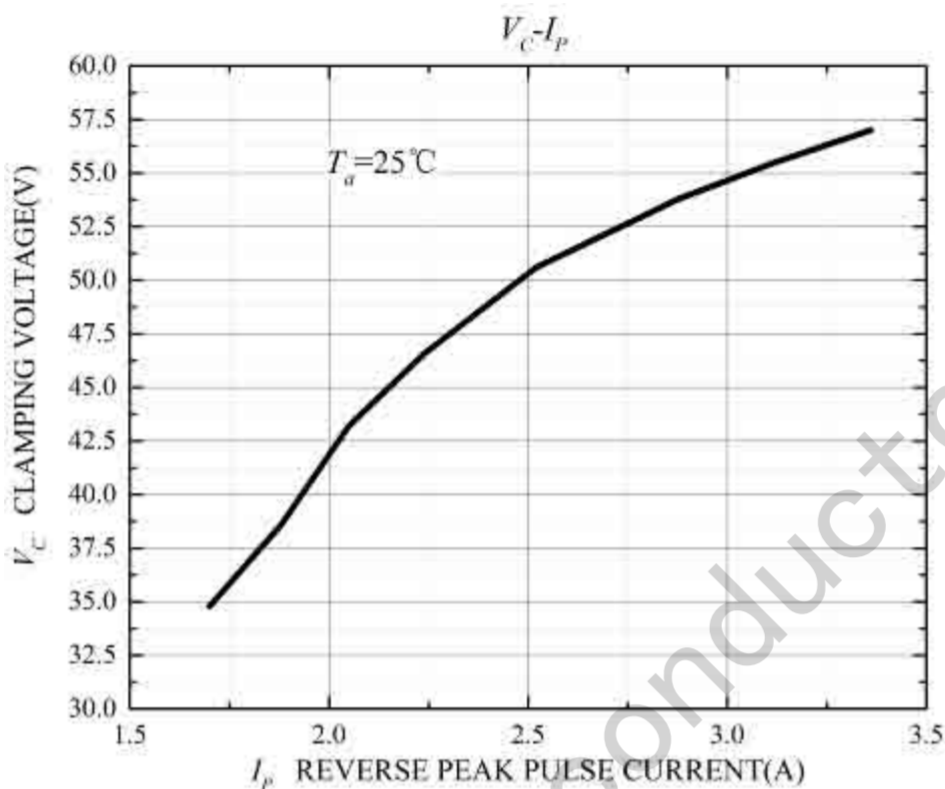
Electrical Characteristics

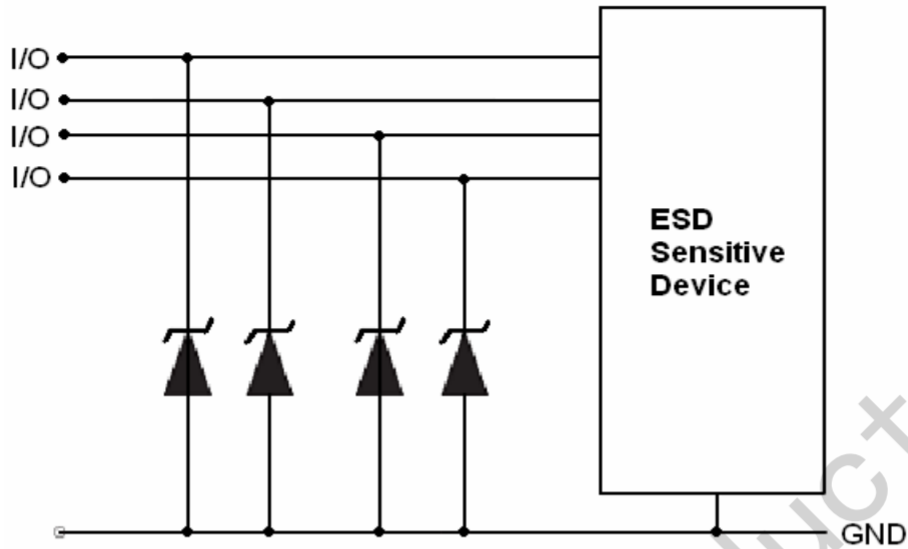
Ratings at 25°C ambient temperature unless otherwise specified. $V_F = 0.9V$ at $I_F = 10mA$

Device	V_{RWM} (V)	$I_R(\mu A)$ @ V_{RWM}	V_{BR} (V) @ I_T (Note 1)	I_T	V_C (V) @ $I_{PP}=3A^*$	V_C (V) @ Max I_{PP}^*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
	Max	Max	Min	mA	Typ	Max	Max	Max	Typ
ESD5Z24	24	1.0	26.7	1.0	45	55	3	150	15

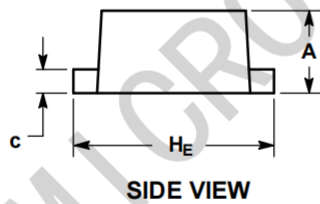
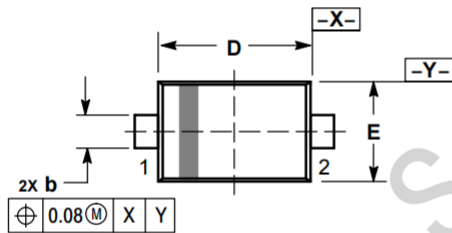
*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

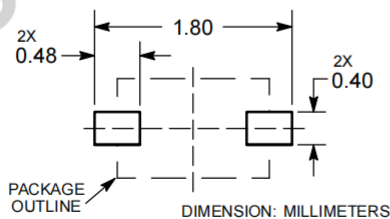




SC-79/SOD-523



RECOMMENDED
SOLDERING FOOTPRINT*



NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	MILLIMETERS		
	MIN	NOM	MAX
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.07	0.14	0.20
D	1.10	1.20	1.30
E	0.70	0.80	0.90
H _E	1.50	1.60	1.70
L	0.30 REF		
L2	0.15	0.20	0.25