

ESD Protection Diode : TExSD92

SOD-923 package



■ Features

1. RoHS compliant and halogen-free
2. Low clamping voltage
3. Low leakage current
4. IEC 61000-4-2 (ESD) 15~25KV (air), 8~25KV (contact)



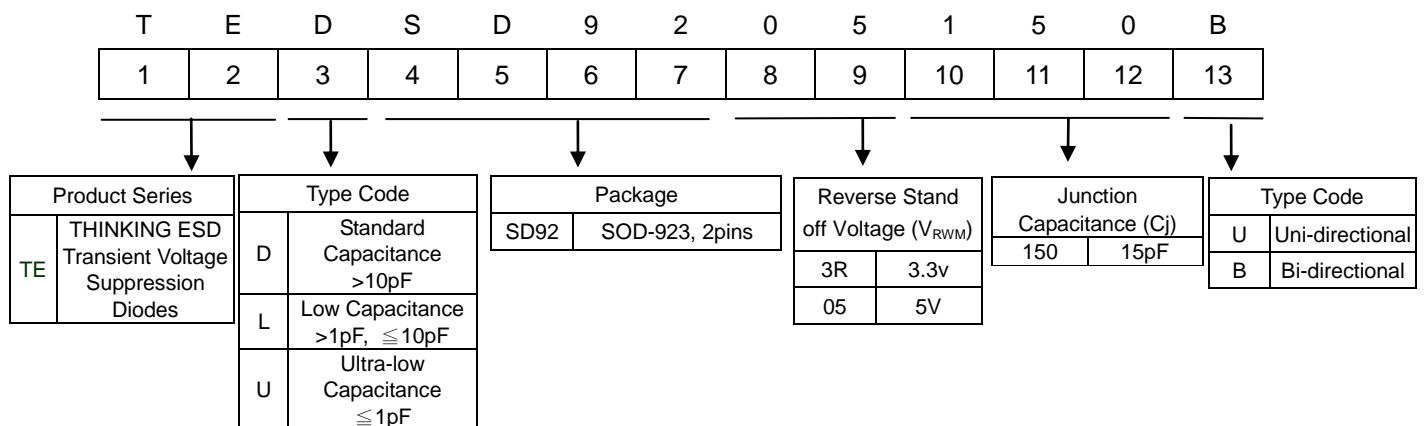
■ Recommended Applications

1. Notebooks, desktops, servers
2. USB Interface
3. Personal Digital Assistant (PDA)
4. Networking and telecom (Ethernet 10/100/1000 Base T)

■ Mechanical Data

1. Case: SOD-923, molded plastic meets UL flammability rating 94V-0
2. Meets MSL level 1, per J-STD-020

■ Part Number Code

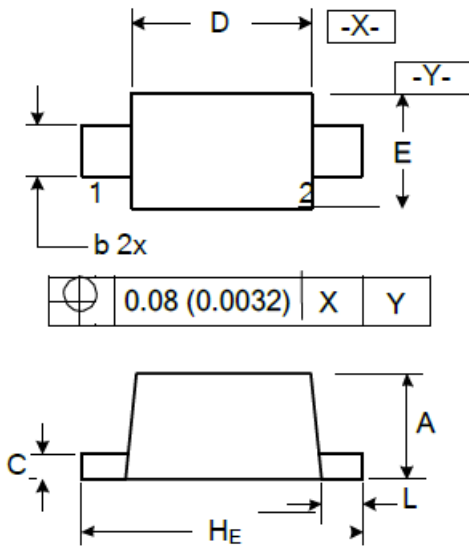


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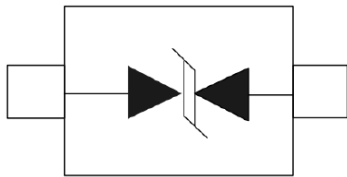
Structures and Dimensions



Unit: mm

Symbol	SOD-923	
	Min.	Max.
A	0.36	0.43
b	0.15	0.25
C	0.07	0.17
D	0.75	0.85
E	0.55	0.65
H _E	0.95	1.05
L	0.05	0.15

Schematic & PIN Configuration



Maximum Rating (Rating at 25°C ambient temperature unless otherwise noted)

P/N	Reverse Stand-off Voltage	Reverse Leakage Current	Product Polarity	Marking	Peak Pulse Power (8/20μs)	Peak Pulse Current (8/20μs)	ESD (contact)	ESD (air)	Operating Temp.	Storage Temp.
	V _{RWM} (V)	I _R (uA)	Uni/Bi		P _{PK} (W)	I _{PP} (A)	KV	KV	T _J (°C)	T _{stg} (°C)
	Max	Max								
TEDSD923R150B	3.3	0.1	Bi	I C<:H	100	8	25	25	-55 to +150	-55 to +150
TEDSD9205150B	5	1	Bi		100	6.5	±8	±15	-55 to +125	-55 to +150

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■ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

TEDSD923R150B						
Parameter	Symbol	Min	Typ.	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			3.3	V	
Breakdown Voltage	V_{BR}	5.0		7.0	V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			0.1	μA	$V_R = V_{RWM}$
Clamping Voltage	V_C			11.5	V	$I_{PP} = 2\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		15		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

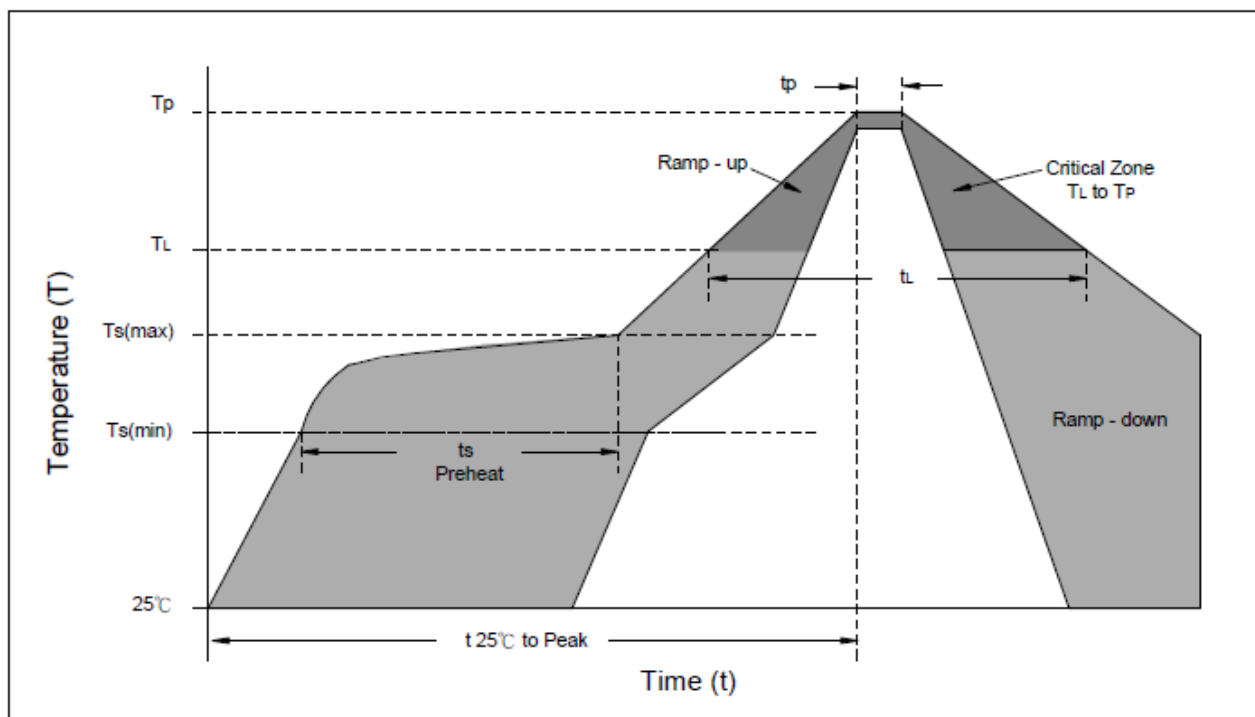
TEDSD9205150B						
Parameter	Symbol	Min	Typ.	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	6.0			V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R			1	μA	$V_R = V_{RWM}$
Clamping Voltage	V_C			9.5	V	$I_{PP} = 1\text{A}$ (8/20 μs pulse)
			13.5	15	V	$I_{PP} = 6.5\text{A}$ (8/20 μs pulse)
Junction Capacitance	C_J		15		pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$

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■ Soldering Recommendation



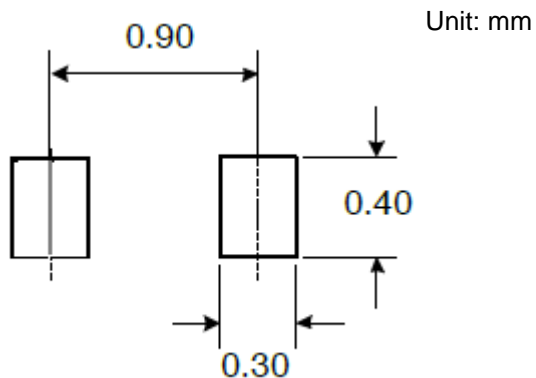
Reflow Condition	Lead-free assembly
Preheat -Temperature Min(Ts min) -Temperature Min(Ts max) -Time (min to max) (ts)	150°C 200°C 60 – 180 seconds
Average ramp up rate -Temperature Liquidus (TL) to peak	3°C/second max
Ts(max) to TL -Ramp-up Rate	3°C/second max.
Reflow -Temperature Liquidus (TL) -Time (tL)	217°C 60 – 150 seconds
Peak Temperature (TP)	260°C
Time within 5°C of actual peak Temperature(TP)	20 – 40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to peak Temperature(TP)	8 minutes max.
Do not exceed	260°C

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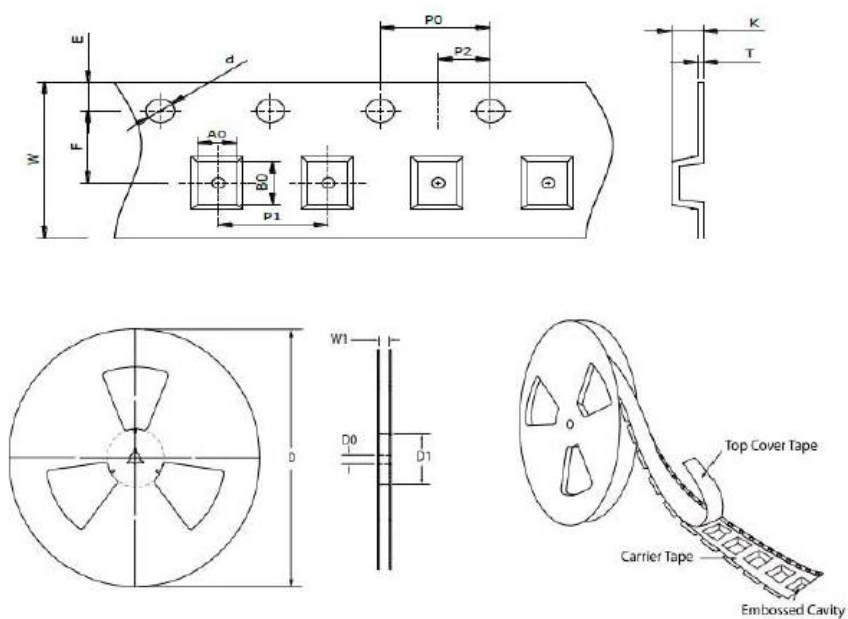
SOD-923 package



■ Recommended Soldering Pad Dimensions



■ Packaging



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■ Quantity

MPQ: 8,000pcs

Package Type	Reel Size (inch)	Reel (Kpcs)
SOD-923	7	8

■ Warehouse Storage Conditions of Product

- Storage condition:
 1. Storage Temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
 2. Relative Humidity: $\leq 75\% \text{RH}$
 3. Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 1 year.