

TEPB0R15V09B1X

POLYMER ESD SUPPRESSORS



1. Generals

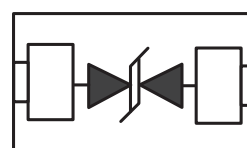
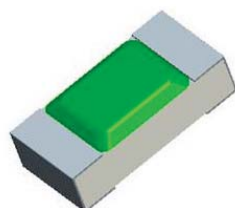
- This device is an ultra low capacitance PESD Product designed to protect very high speed data interfaces
TEPB0R15V09B1X has a typical capacitance of only 0.15pf(I/O to GND), and it can be used to meet the ESD immunity requirements of IEC61000-4-2(15KV air,8KV contact discharge)

2. Feature

- ESD protection for high speed data lines to IEC61000-4-2
- ESD contact discharge typical 8KV, max 15KV
- ESD air discharge typical 15KV, max 25KV
- Multilayer structure
- Surface mount
- Extremely low capacitance
- Very low leakage current
- Fast response time
- Bi-directional ESD protection
- Lead free solder termination
- The best ESD protection for high frequency, low voltage applications

3. Application

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Port Interface (DP)
- Unified Display Interface (UDI)
- Mobile Display Digital Interface (MDDI)
- Gigabit Ethernet
- USB2.0 and USB3.0
- IEEE1394 interface



Bidirectional

4. Part Number System

T E P B 0R15 V09 B 1X
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① Company Name: TOP-EMC
- ② Product Function: ESD
- ③ Material Type: Polymer
- ④ Chip Size (EIA): B(0402),C(0603)
- ⑤ Capacitance: 0R15=0.15PF, 1R0=1.0PF, 5R0=5.0PF
- ⑥ Working Voltage: V05=5V, V09=9V, V12=12V, V24=24V
- ⑦ Direction Type: Bidirectional
- ⑧ Lines Protected: 1X=1 line

5. Absolute Maximum Ratings

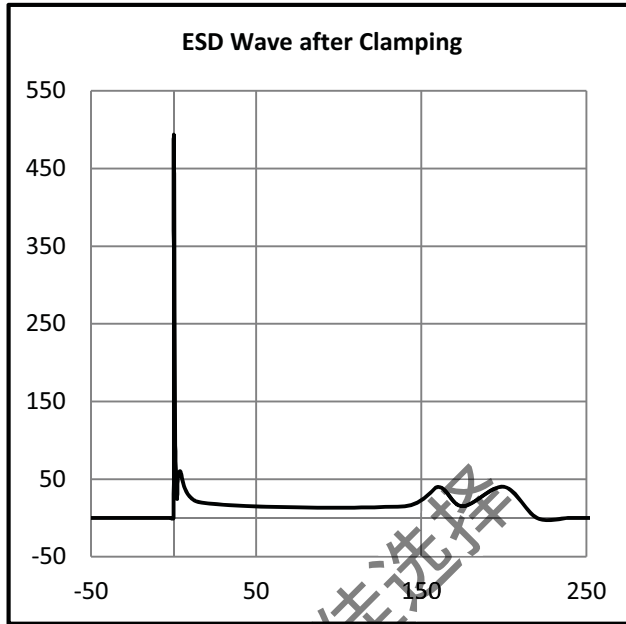
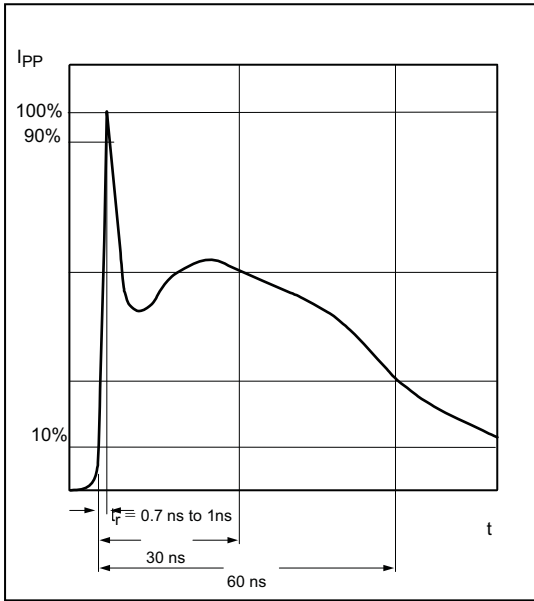
Parameter	Symbol	Value	Unit
Maximum Contact discharge voltage Per IEC61000-4-2	---	15KV	V
Maximum Air discharge voltage Per IEC61000-4-2	---	25KV	V
Maximum Operating temperature	T _{OPER}	-40 to +90	°C
Maximum Storage temperature	T _{STG}	-55 to +125	°C
Maximum lead temperature for soldering during 10s	T _L	260	°C

6. Electrical Characteristics (T_A=25°C)

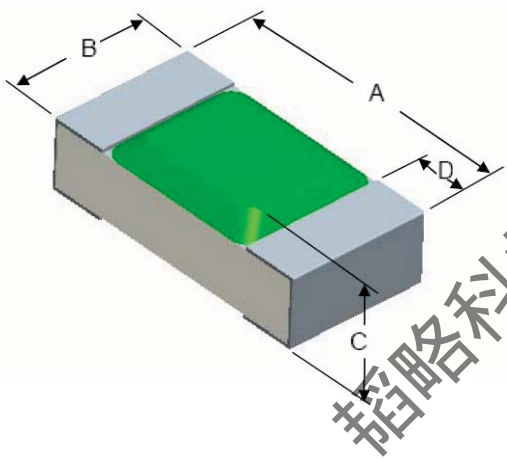
Parameter	Symbol	Typ	Max	Units
Rated Voltage	V _R	---	9	V
Trigger voltage	V _T	350	---	V
Clamping voltage	V _C	35	---	V
Leakage current	I _L	0.1		uA
Capacitance	C _P	0.15	0.25	pF

- Note:**
1. Trigger and clamping voltage are measured per IEC 61000-4-2, 8KV contact discharge method.
 2. After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA.

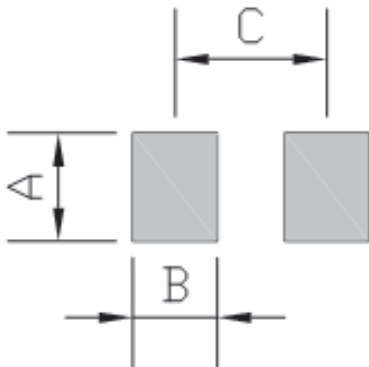
7. ESD Clamping Test Waveforms



8. Product Dimension



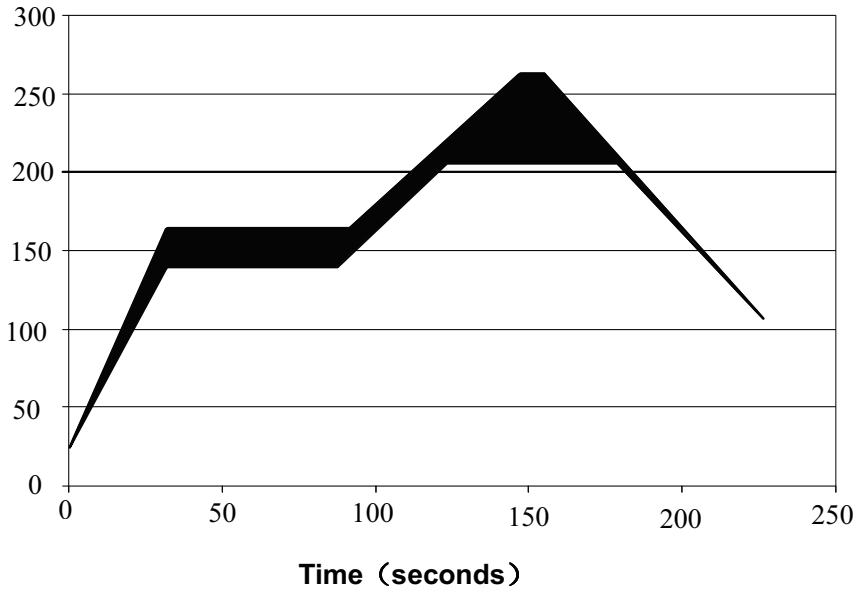
Parameter	Symbol	Dimension			Unit
		Min	Typ	Max	
Length	A	0.90	1.05	1.20	mm
Width	B	0.45	0.55	0.65	
Height	C	0.26	0.36	0.46	
**Terminal width	D	0.15	0.25	0.35	



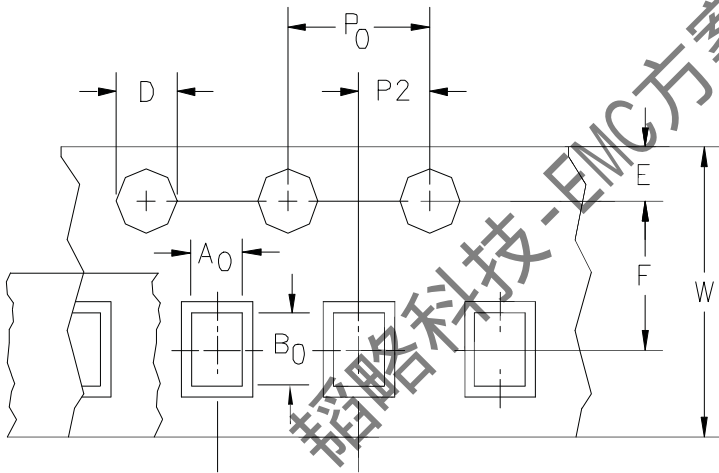
Symbol	Dimension	Unit
A	0.60	mm
B	0.50	
C	0.90	

9. Solder Reflow Recommendations

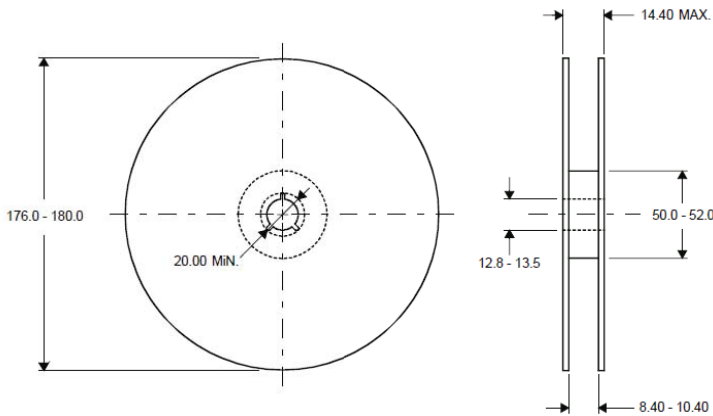
Temperatures (°C)



10. Package Information



Dimension	Typical	Unit
A0	0.75	mm
B0	1.22	
D	1.55	
P0	4.00	
P1	2.00	
P2	2.00	
E	1.75	
F	3.50	
W	8.00	



DIMENSIONS ARE: MILLIMETERS

11. Order Information

Device	Package	Quantity	HSF Status
TEPB0R15V09B1X	0402	10,000pcs/reel	RoHS compliant

12. Contact Information

SHENZHEN TOP-FLIGHT TECHNOLOGY CO.,LTD

4th Floor, C Building, Quansen Industrial Park , Bulong Road, Longhua New District, Shenzhen

Tel: 86-755-82908191 Fax: 86-755-82908701 Email:kang@topleve.com

Website: <http://www.topleve.com>

韬略科技-EMC方案的最佳选择