

产品规格书

Product Specification

固体放电管

Transient Suppressor Protection Device (TSPD)

型 号 (Part Number) : TSPD-TA Series

内 容 CONTENT

- 1、简介 Introduction
- 2、特点 Features
- 3、主要应用 Main applications
- 4、电参数 Electrical information
- 5、电特性 Electrical characters
- 6、典型电特性曲线 Typical electrical characters applications
- 7、热特性 Thermal Considerations
- 8、外观尺寸 Shape and Dimensions
- 9、其他 Other

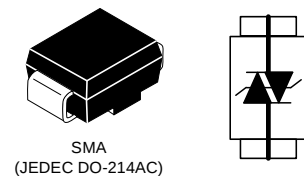
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V1.0	Teddy Lee	Jim Li	

一、简介 Introduction

Boarden TSPDs are designed to help protect sensitive telecommunication equipments from over voltage events as lightning strikes, power contact and power induction per as Telcordia GR-1089 and ITU-T K.20(K21). A TSPD appears as a very high impedance device under normal operating conditions, but will change its impedance to short to divert current to ground under over voltage events. TSPDs have a very high power energy absorb capability and very fast response time, which helps this product very suitable to be applied to Central Office Equipments (CO) and Customer Premise Equipments (CPE) in telecommunication field.

二、特点 Features

- High Power Capacity 50A (10/1000us voltage Waveform)
- Low Protection Voltage
- Low Leakage Current less than 2μA
- Bi-direction Protection Devices
- Response Time is < 1ns
- Solid-state silicon technology
- RoHS Compliant
- Meets MSL 1 Requirements

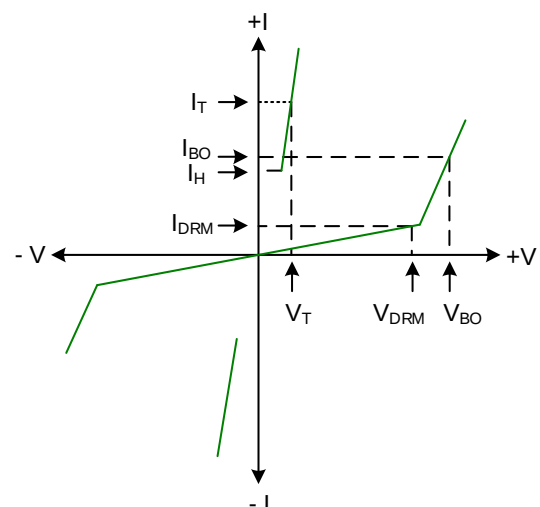


三、主要应用 Main applications

- Audio/Video Line
- RS-485
- Peripherals
- Networking and Telecom
- Serial and Parallel Ports

四、电参数 Electrical information (Tamb=25°C)

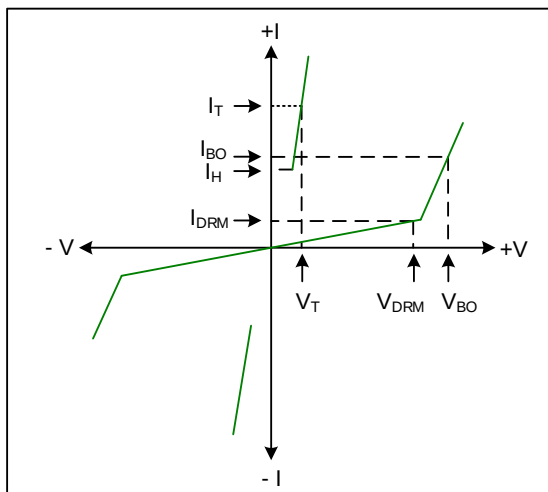
Parameter	Definition
C	Off-state Capacitance
I _{BO}	Switching Current
I _{DRM}	Leakage Current
I _H	Holding Current
I _{PP}	Peak Pulse Current
I _T	On-state Current
I _{TSM}	Peak One-cycle Surge Current
V _{BO}	Switching Voltage
V _{DRM}	Peak Off-state Voltage
V _T	On-state Voltage



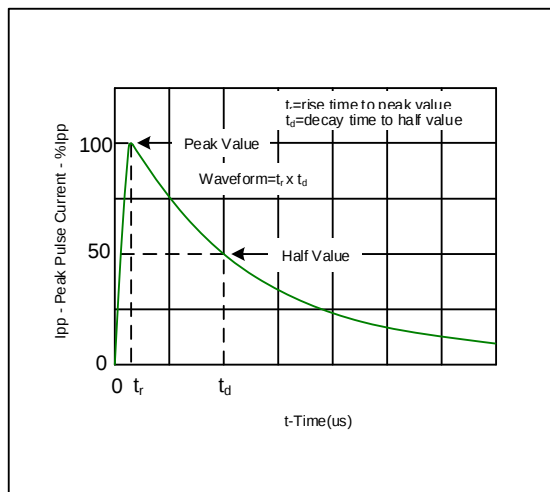
五、电特性 Electrical Characters

PART NUMBER	Maximum Stand-off Voltage	Maximum Leakage Current @ V_{DRM}	Maximum Breakover Voltage	Maximum Breakover Current	On-state Voltage @1A	Maximum Capacitance @ $V_R = 0V, f = 1MHz$	Minimum Holding Current
	V_{DRM} (V)	I_{DRM} (μA)	V_{BO} (V)	I_{BO} (mA)	V_T (V)	C Typ.(pF)	I_H (mA)
P0080TA	6	10	25	800	4	50	50
P0300TA	25	10	40	800	4	70	50
P0640TA	58	10	77	800	4	50	150
P0720TA	65	10	88	800	4	50	150
P0900TA	75	10	98	800	4	45	150
P1100TA	90	10	130	800	4	45	150
P1300TA	120	10	160	800	4	45	150
P1500TA	140	10	180	800	4	40	150
P1800TA	180	10	220	800	4	40	150
P2300TA	200	10	260	800	4	35	150
P2600TA	220	10	300	800	4	35	150
P2800TA	240	10	320	800	4	35	150
P3100TA	275	10	350	800	4	30	150
P3500TA	320	10	400	800	4	30	150
P4000TA	360	10	450	800	4	30	150

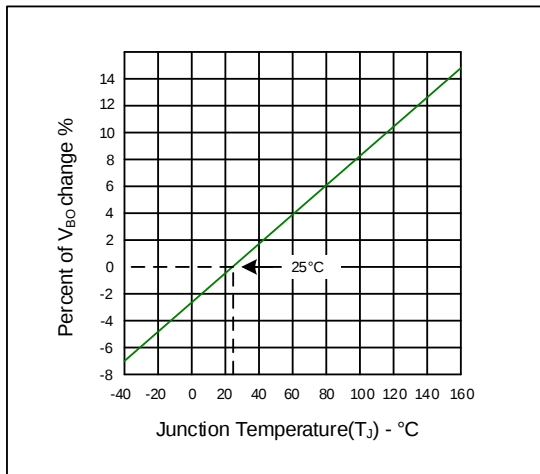
六、典型电特性曲线 Typical electrical characters applications



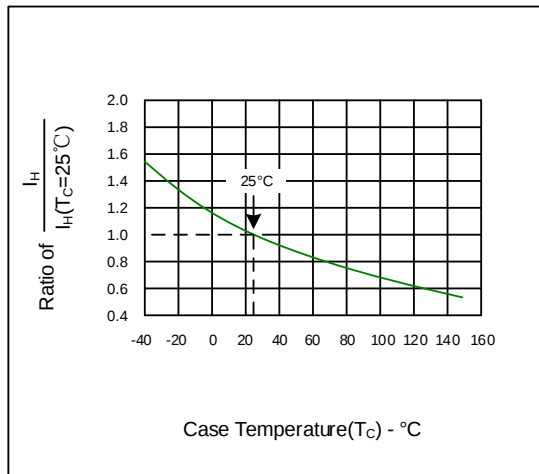
V - I Characteristics



$T_r \times t_d$ Pulse Waveform



Normalized V_{BO} Change versus Junction Temperature



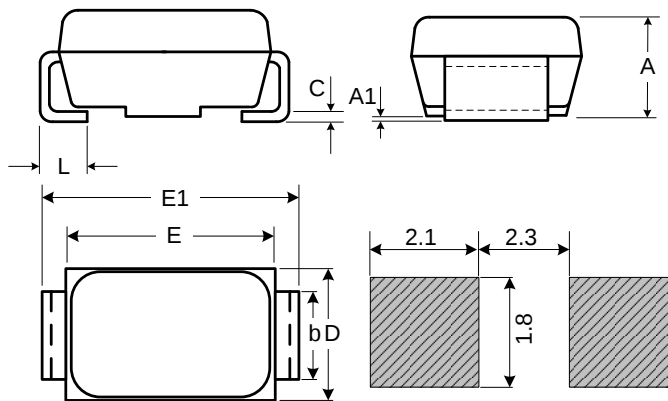
Normalized DC Holding current versus Case Temperature

七、热特性 Thermal Considerations

Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature	-40 to +150	°C
T_S	Storage Temperature Range	-40 to +150	°C
$R_{\theta JA}$	Junction to Ambient on printed circuit	90	°C/W

八、外观尺寸 Shape and Dimensions

Ref. (mm)	Min.	Max.
A	2.00	2.30
A1	0.008	0.203
b	1.20	1.65
C	0.152	0.305
E	4.00	4.50
E1	4.92	5.28
D	2.54	2.80
L	0.78	1.52



九、其他 Other

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