ESD5B5.0ST1G
ESD PROTECTION DIODE

Discription

The ESD5B5.0ST1G protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.
It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.



SOD-523

Features

★ We declare that the material of product compliance with RoHS requirements and Halogen Free.
★ Peak power up to 174 Watts @ 8 x 20 us Pulse
★ ESD rating of Class 3 per Human Body Model
★ Small body outline dimensions
★ Low leakage
★ Response time is typically < 1.0 ns
★ IEC61000−4−2 level 4 ESD protection
★ IEC61000−4−4 Level 4 EFT protection



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
ESD5B5.0ST1G	SOD-523	3000

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20μs)	100	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±15 ±8	KV

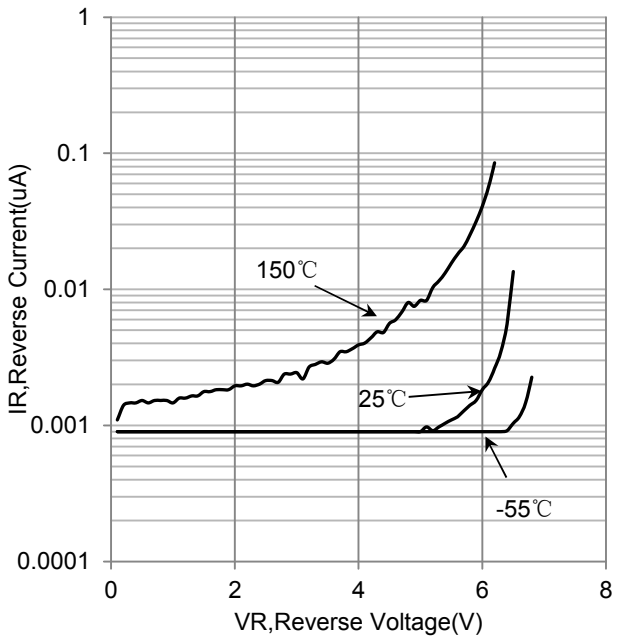
Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

Device	VRWM (V)	IR (μA) @VRWM	VBR (V) @IT (Note 1)	IT (mA)	VC (V) @Max.IPP	IPP(A)	PPK(W)	C (pF)
	Max.	Max.	Min. Max.		Max.	Max.	Max.	Typ.
ESD5B5.0ST1G	5	1	5.6 7.8	1	9	11	100	20

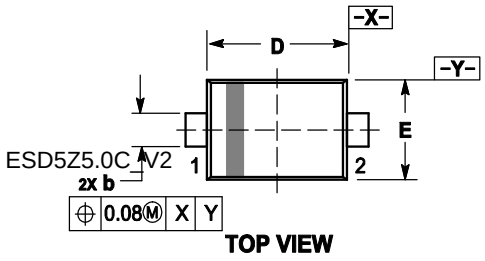
1. VBR is measured with a pluse test current IT at an ambient temperature of 25℃.

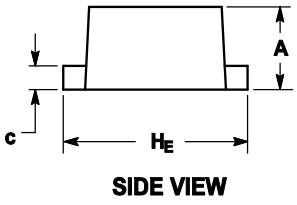
Typical Characteristics

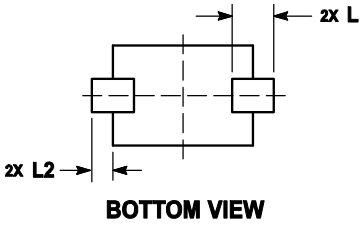


IR vs. VR

Outline and Dimensions





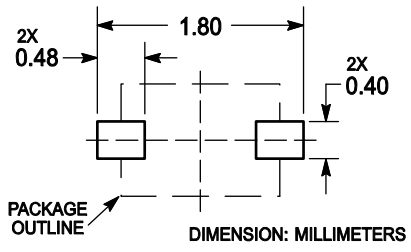


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
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.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.50	0.60	0.70	0.020	0.024	0.028
b	0.25	0.30	0.35	0.010	0.012	0.014
c	0.07	0.14	0.20	0.003	0.006	0.008
D	1.10	1.20	1.30	0.043	0.047	0.051
E	0.70	0.80	0.90	0.028	0.031	0.035
H_E	1.50	1.60	1.70	0.059	0.063	0.067
L	0.30 REF			0.012 REF		
L_2	0.15	0.20	0.25	0.006	0.008	0.010

Soldering Footprint



Attention

■ Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.

■ HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.

■ Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could
give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of HUA XUAN YANG ELECTRONICS CO.,LTD.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

HXY MOSFET:

PESD5V0S1BB HXY2300MI SS10100 TPSMB100CA-VR HC4D20120A MAX487ESA SD15C
SQJA04EP-T1_BE3 SS5150B HAD8542ARZ HOPA2340UA SS510C BZT52C3V3S P6SMB36CA
HC3D10170A HESDNC5VB1AF-B HXY2101EI HXY8205ES IRLML6246PBF DTC143ZE HMCP602-I/SN
HT7540-1 P6SMB200A BZT52C13 P6SMB33CA SS1045 TPSMB28A-VR US2M HT7150 MMBT3904T