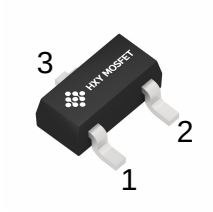
HGSOT24C-HE3-08
ESD PROTECTION DIODE

Discription

The HGSOT24C-HE3-08 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.

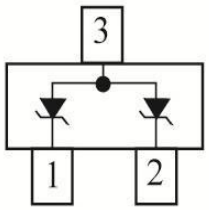
It gives designer the flexibility to protect 2 unidirectional lines in applications where arrays are not practical.



SOT-23

Features

- ★ Transient protection for high-speed data lines
  IEC 61000-4-2(ESD) ±30kV (Contact)
  ±30kV (Air)
  IEC 61000-4-4(EFT) 40A (5/50 ns)
- ★ Peak power dissipation: 450W (8/20us)
- ★ Working voltages : 24V
- ★ Protects one unidirectional line or two unidirectional lines
- ★ Low clamping voltage
- ★ Low leakage current



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
HGSOT24C-HE3-08	SOT-23	3000

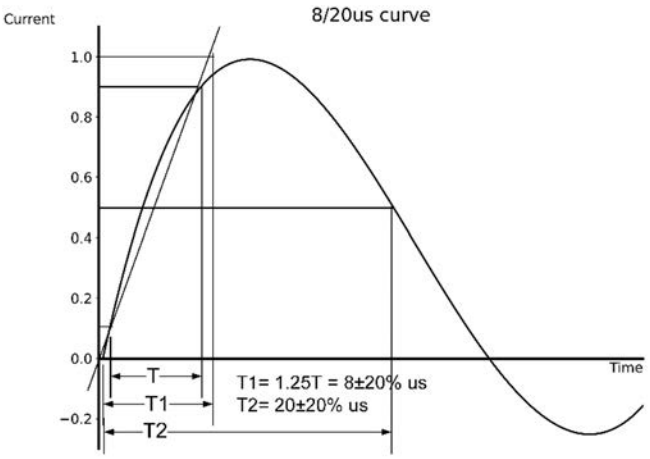
Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	450	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°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	±30 ±30	KV
	IEC61000-4-4 (EFT)	40	A

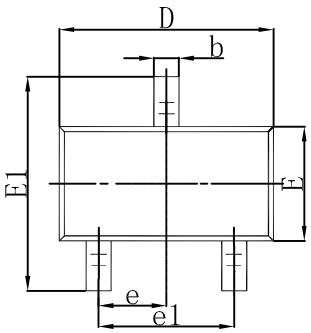
Electrical Characteristics

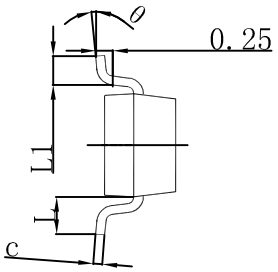
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				24	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	26.5			V
I_R	Reverse Leakage Current	V_{RWM} = 24V			1	μA
V_C	Clamping Voltage	I_{PP} = 1A, t_p = 8/20μs			33	V
		I_{PP} = 6A, t_p = 8/20μs			48	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		60		pF

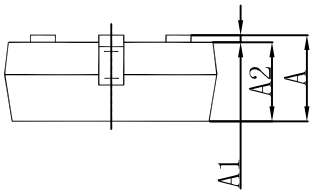
Typical Characteristics



SOT-23 Package Outline Dimensions

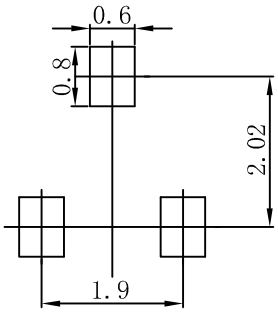






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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:

DSC06065 SGM3798YG/TR ISL28233FUZ-T7 Si2323DS-T1-E3-HXY S3D08065E SS5150
HBAS40-05LT1G IDL10G65C5XUMA2 MJD127G MSC040SMA120B4 TPS7A0533PDBZR-HXY
1SMB5930BT3G C6D06065Q-TR PTVSHC3D5VU TPD1E0B04DPYR 2N7002-HXY AOD403-HXY
DMPH6250SQ-13 SG3525-HXY IRLML2244TRPBF-HXY S4D15120H TLV74318PDBVR-HXY E4D10120A
1SMB5934B BD237STU MUR1040FCT CH440G ISL28133FHZ-T7 C3M0040120D C4D08120E-TR