HAQ12C-01FTG
ESD PROTECTION DIODE

Discription

The HAQ12C-01FTG 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-323

Features

- ★ Small Body Outline Dimensions
- ★ Low Body Height
- ★ Peak Power up to 350 Watts @ 8 x 20 _s Pulse
- ★ Low Leakage current
- ★ Response Time is Typically < 1 ns
- ★ IEC61000−4−2 Level 4 ESD Protection
- ★ IEC61000−4−4 Level 4 EFT Protection



Circuit Diagram

Orderingin formation

Product ID	Pack	Qty(PCS)
HAQ12C-01FTG	SOD-323	3000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	350	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
	ESD Voltage Per Human Body Model	16	KV

Electrical Characteristics

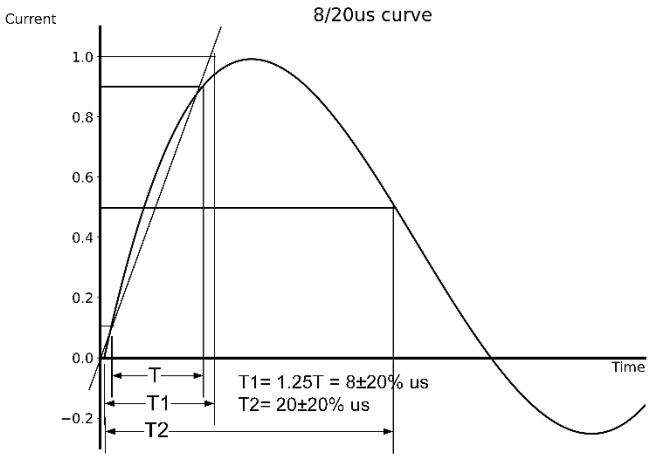
Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ I_{PP}=1 A*	V_C (V) @ Max I_{PP}*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
Max	Max	Min	mA	Typ	Max	Max	Max	Max
12	1.0	13.3	1	20	37	12	350	50

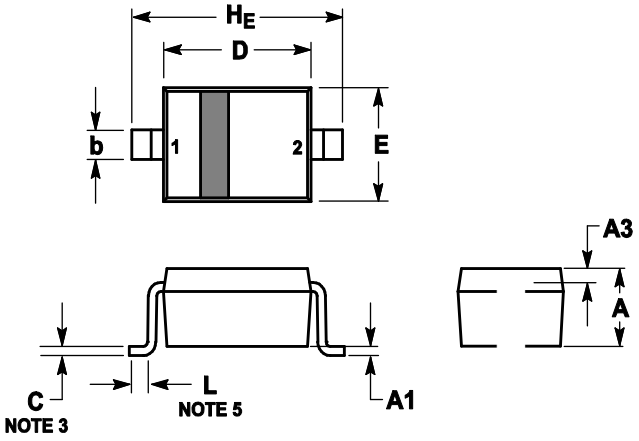
*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25℃.

Typical Characteristics



Outline And Dimensions

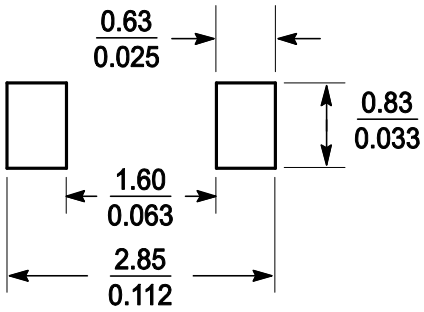


Notes:

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.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.8	0.9	1	0.031	0.035	0.04
A1	0	0.05	0.1	0	0.002	0.004
A3	0.15REF			0.006REF		
b	0.25	0.32	0.4	0.01	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.6	1.7	1.8	0.062	0.066	0.07
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.3	2.5	2.7	0.09	0.098	0.105

Soledering Footprint



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HXY MOSFET:

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