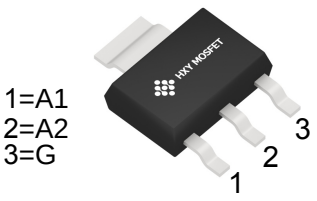
Z0107NN5AA4
Plastic-Encapsulate Thyristors

Description

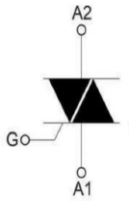
The Z0107NN5AA4 provide high dv/dt rate with strong resistance to electromagnetic interface. They are especially recommended for use on residual current circuit breaker, straight hair, igniter etc.



SOT-223

Main Features

symbol	value	unit
$I_{T(RMS)}$	1.0	A
I_{GT}	7	mA
V_{DRM}/V_{RRM}	800	V



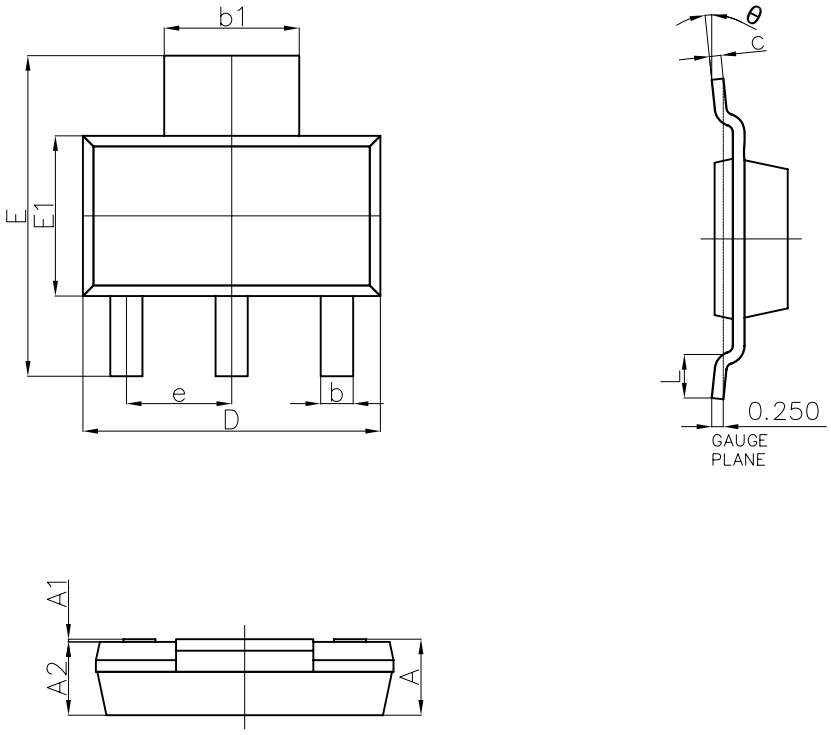
Absolute Maximum Ratings

Symbol	Parameter	Conditions	Value	Unit
V_{DRM} /V_{RRM}	repetitive peak off-state voltage		800	V
$I_{T(RMS)}$	RMS on-state current		1	A
I_{TSM}	Non repetitive surge peak on-state current	t = 20ms T_j =25°C	10	A
		t = 16.7ms T_j =25°C	8	
I^2t	I^2t for fusing	t = 10 ms	1	A^2s
dI/dt	Critical-rate of rise of commutation current I II III IV	I_G=2I_{GT} t_r≤100ns F=120Hz	50 10	A/us
I_{GM}	Peak Gate Current	T_j =125°C tp=20μs	0.3	A
V_{GM}	Peak gate voltage	T_j =125 °C	1	V
P_{GM}	Peak gate power	T_j =125 °C	0.8	W
$P_{G(AV)}$	Average Gate Power Dissipation	T_j =125 °C	0.4	W
T_j	Junction Temperature	-	125	°C
T_{stg}	Storage Temperature	-	-40 ~ 150	°C

Electrical Characteristics (T_j=25°C unless otherwise specified)

Parameter		Symbol	Test conditions		Min	Typ	Max	Unit
Repetitive Peak Off-State Current Repetitive Peak Reverse Current		I_{DRM},I_{RRM}	$V_{DRM}=V_{RRM}$ T_j =25 °C				5	μA
			$V_{DRM}=V_{RRM}$ T_j =125 °C				1	mA
Gate non-trigger voltage		V_{GD}	V_D= 1/2V_{DRM}		0.2			V
On-state voltage		V_{TM}	I_T= 1A,t_p=380us				1.65	V
Gate trigger current	I-II-III	I_{GT}	V_D=12V, R_L=100Ω				7	mA
	IV						7	
Gate trigger voltage	I	V_{GT}	T_2(+), G(+)	V_D=12V R_L=100Ω		0.8	2	V
	II		T_2(+), G(-)			0.8	2	
	III		T_2(-), G(-)			0.8	2	
	IV		T_2(-), G(+)			0.8	2.5	
Holding current		I_H	V_D=12V,I_{GT}=100mA				30	mA
Critical-rate of rise of commutation voltage		dV/dt	V_{DM}=67%V_{DRM} Gate open T_j =125 °C				50	V/us
Rate of change of commutating voltage		(dI/dt)c	V_{DM}=400V, T_j =125 °C (dI/dt)c=5.4A/ms Gate open				20	V/us
Turn-on time		t_{gt}	I_{TM}=16A,V_{DM}=$V_{DRM(MAX)}$ I_G=0.1A,dI_G dt=5A/uS				2	us

SOT-223 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	——	1.800	——	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	——	0.030	——
θ	0°	10°	0°	10°

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HXY MOSFET:

HESD36VD3B HSG3D15B3.3MA PESDLC2FD3V3BH PESDSC2FD5VU TPSMB28A-VR HSEN3611D3 LM393DR-HXY PESDNC2XD5VBL PJEC5V0M1FN2 HAZ4007-01H HRCLAMP3371ZCTFT HSEN2411D3 ESD5LM5.0C-HXY HACPDQC5V0-HF BV05C-H HCEZ36V,L3F HESDSLC3V3D3B HSTS521050B331 HPTVSUC3D5VB HSD15C.TCT RLSD32A121V TPSMB100CA-VR PJSD24CW_R1 AZ4007-01H AZ4836-01L ESD5L5.0C-HXY HLY323BC1524L PESDNC2XD5VBF 60N06 AQ15C-01FTG