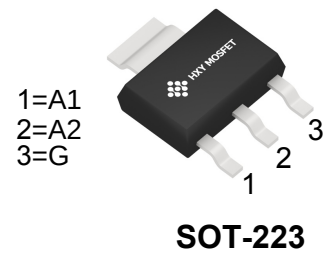




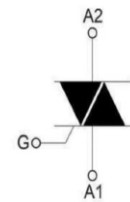
Description

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.



Main Features

symbol	value	unit
$I_{T(RMS)}$	1.0	A
I_{GT}	5	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	$t = 20ms$ $T_j = 25^\circ C$	10	A
		$t = 16.7ms$ $T_j = 25^\circ C$	8	
I_2t	$I^2 t$ for fusing	$t = 10 ms$	1	$A^2 s$
di/dt	Critical-rate of rise of commutation current	$I_G = 2I_{GT}$ $t_r \leq 100ns$ $F = 120Hz$	50 10	$A/\mu s$
I_{GM}	Peak Gate Current	$T_j = 125^\circ C$ $t_p = 20\mu s$	0.3	A
V_{GM}	Peak gate voltage	$T_j = 125^\circ C$	1	V
P_{GM}	Peak gate power	$T_j = 125^\circ C$	0.8	W
$P_{G(AV)}$	Average Gate Power Dissipation	$T_j = 125^\circ C$	0.4	W
T_j	Junction Temperature	-	125	$^\circ C$
T_{stg}	Storage Temperature	-	-40 ~ 150	$^\circ C$

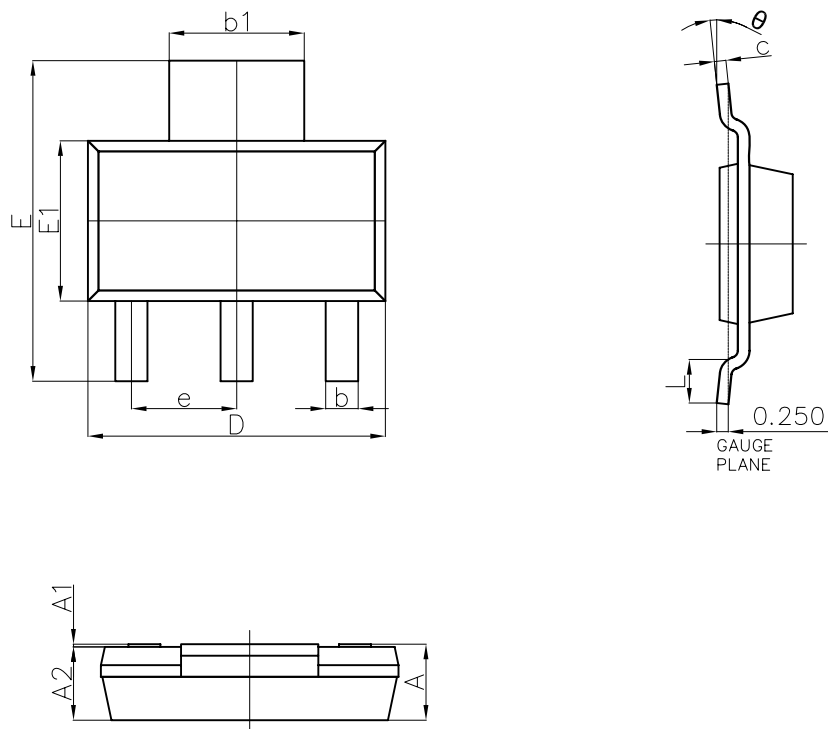


Electrical Characteristics ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

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				5	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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