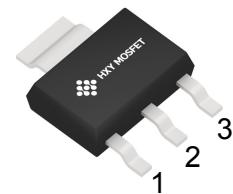




Description

The Z0110MN5AA4 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.

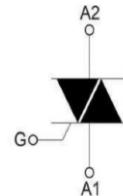
1=A1
2=A2
3=G



SOT-223

Main Features

symbol	value	unit
$I_{T(RMS)}$	1.0	A
I_{GT}	25	mA
V_{DRM}/V_{RRM}	600	V



Absolute Maximum Ratings

Symbol	Parameter	Conditions	Value	Unit
V_{DRM}/V_{RRM}	repetitive peak off-state voltage		600	V
$I_{T(RMS)}$	RMS on-state current		1	A
I_{TSM}	Non repetitive surge peak on-state current	$t = 20\text{ms}$ $T_j = 25^\circ\text{C}$	10	A
		$t = 16.7\text{ms}$ $T_j = 25^\circ\text{C}$	8	
I_{2t}	$I^2 t$ for fusing	$t = 10\text{ ms}$	1	A^2s
dl/dt	Critical-rate of rise of commutation current	$I_{G} = 2I_{GT}t_r \leq 100\text{ns}$ $F = 120\text{Hz}$	50 10	A/us
I_{GM}	Peak Gate Current	$T_j = 125^\circ\text{C}$ $t_p = 20\mu\text{s}$	0.3	A
V_{GM}	Peak gate voltage	$T_j = 125^\circ\text{C}$	1	V
P_{GM}	Peak gate power	$T_j = 125^\circ\text{C}$	0.8	W
$P_{G(AV)}$	Average Gate Power Dissipation	$T_j = 125^\circ\text{C}$	0.4	W
T_j	Junction Temperature	-	125	$^\circ\text{C}$
T_{stg}	Storage Temperature	-	-40 ~ 150	$^\circ\text{C}$

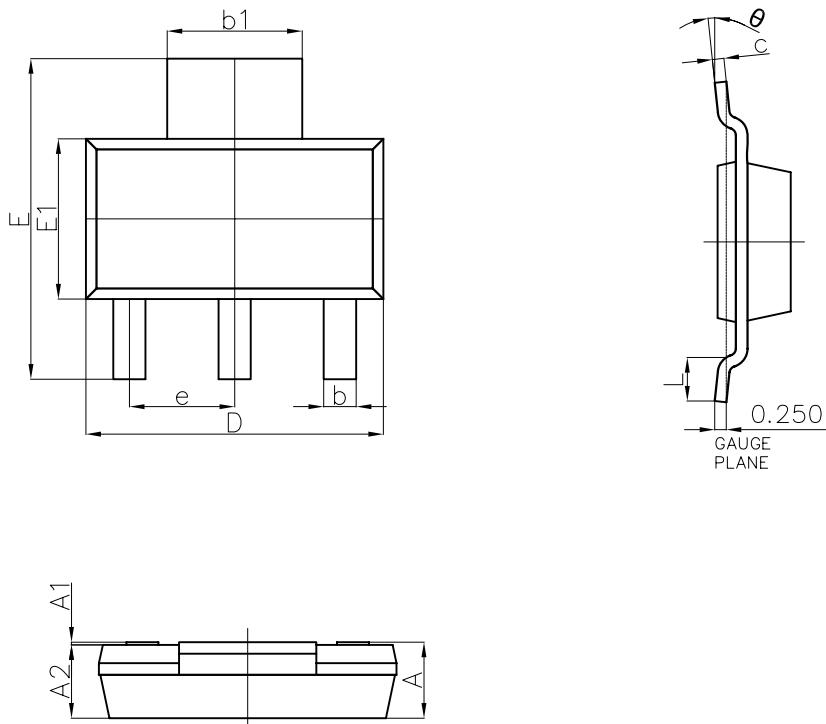


Electrical Characteristics (T_j=25°C unless otherwise specified)

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 _{GT}	V _D =12V, R _L =100Ω			25	mA
					25	
Gate trigger voltage	V _{GT}	T ₂ (+), G(+)		0.8	2	V
		T ₂ (+), G(-)		0.8	2	
		T ₂ (-), G(-)		0.8	2	
		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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