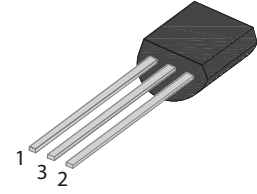


FEATURES

- | Glass-passivated mesa chip for reliability and uniform
- | High current output up to 1.0 A
- | RoHS (2002/95/EC) compliant packages



TO-92

APPLICATIONS

- | Flash lamp
- | Electronic ballast
- | Igniter



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	800	
RMS on-state current ($T_c=50^\circ\text{C}$)	$I_{\text{T(RMS)}}$	1	A
Non repetitive surge peak on-state current ($t_p=10\text{ms}$)	I_{TSM}	12	
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	0.72	A^2S
Critical rate of rise of on-state current ($I_G=2*I_{GT}$)	d/d_t	50	$\text{A}/\mu\text{s}$
Peak gate current	I_{GM}	0.3	A
Average gate power dissipation	$P_{\text{G(AV)}}$	0.1	W
Storage junction temperature range	T_{STG}	-40~+150	$^\circ\text{C}$
Operating junction temperature range	T_j	-40~+125	

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

Symbol	Test Condition	Value			Unit
		Min.	Typ.	Max.	
I_{GT}	$V_D=12\text{V}, R_L=33\Omega$	-	40	200	μA
V_{GT}		-	0.6	0.8	V
V_{GD}	$V_D=V_{DRM}, R_L=3.3\text{K}\Omega, T_j=150^{\circ}\text{C}$	0.2	-	-	
I_H	$I_T=500\text{mA}$	-	-	4	mA
I_L	$I_G=1.2I_{GT}$	-	-	5	
dV_D/dt	$V_D=540\text{V}, R_{GK}=1\text{K}\Omega, T_j=125^{\circ}\text{C}$	100	-	-	$\text{V}/\mu\text{s}$

STATIC CHARACTERISTICS

Symbol	Parameter	Value	Unit	
V_{TM}	$I_{TM}=2\text{A}, t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	≤ 1.4	V
I_{DRM}	$V_D=V_{DRM}, V_R=V_{RRM}$		≤ 5	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	≤ 100	μA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case(AC)	70	$^{\circ}\text{C}/\text{W}$

PARAMETER CHARACTERISTIC CURVE

FIG.1 Maximum power dissipation versus RMS on-state current

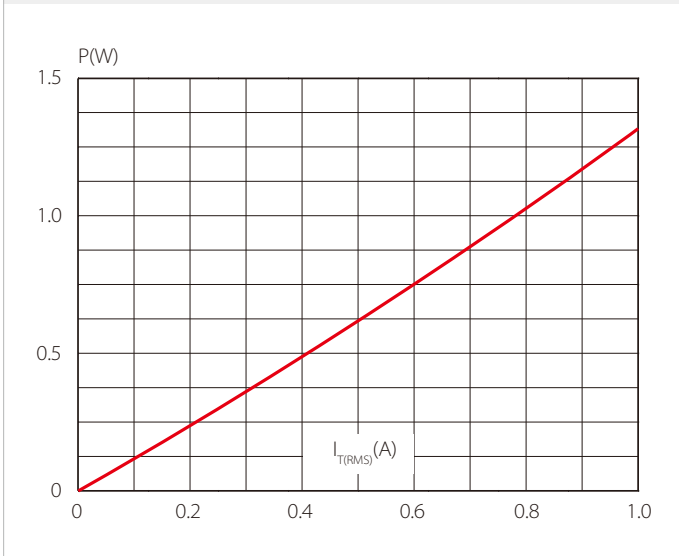


FIG.2: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness:35μm)(full cycle)

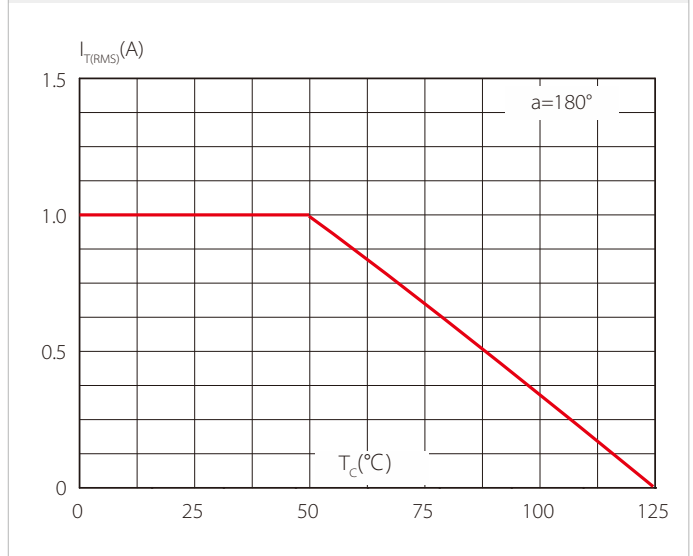


FIG.3: Surge peak on-state current versus number of cycles

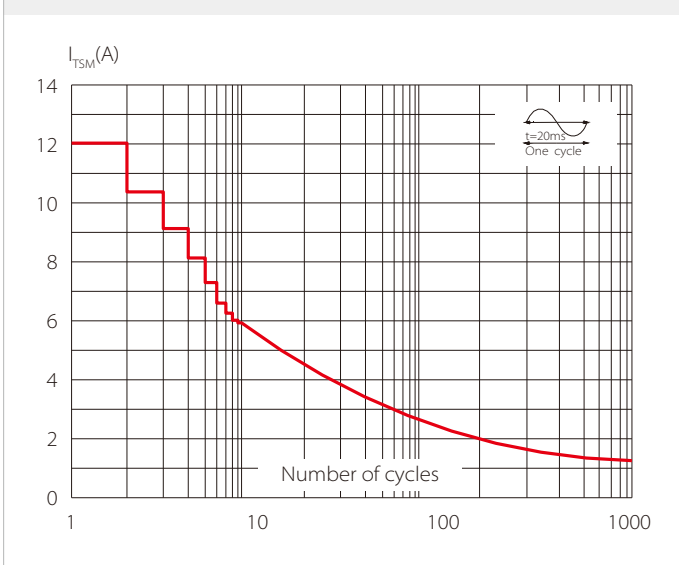


FIG.4 On-state characteristics (maximum values)

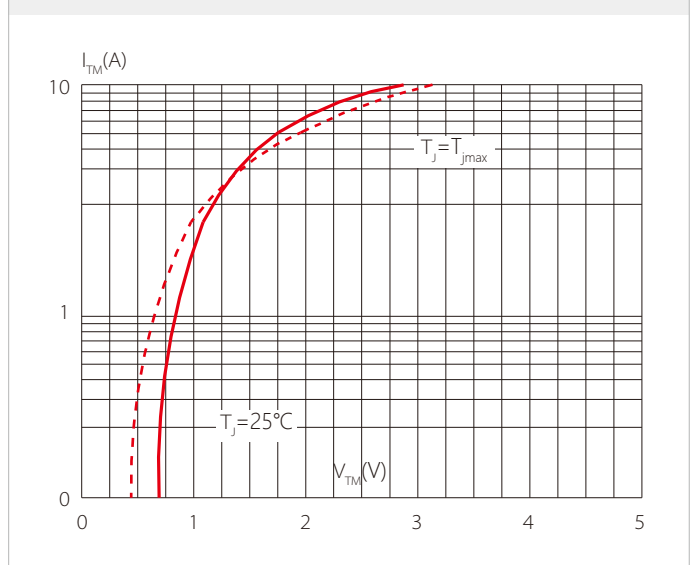


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$ and corresponding value of I^2t ($dI/dt < 50\text{A}/\mu\text{s}$)

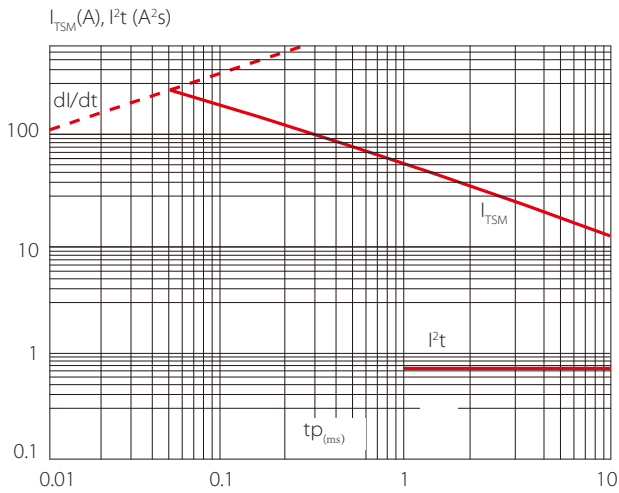


FIG.6 Relative variations of gate trigger current versus junction temperature

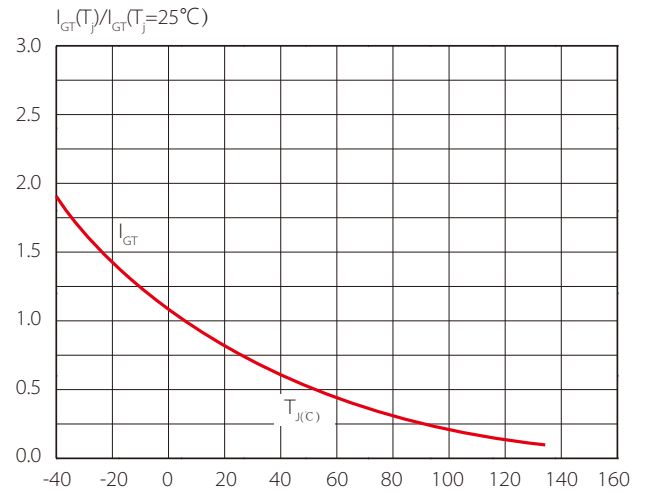


FIG.7 Relative variations of holding current versus junction temperature

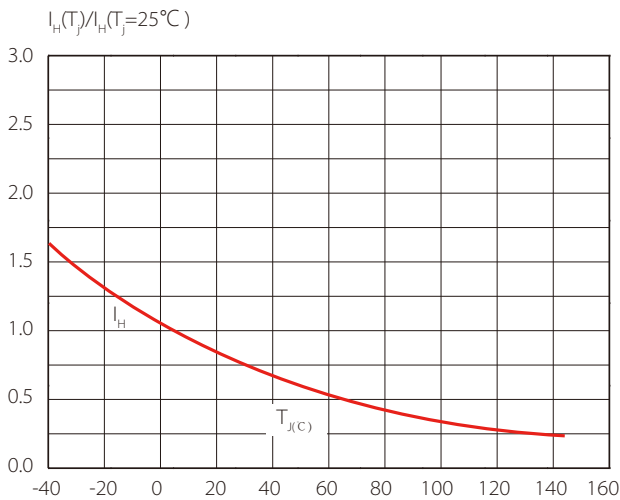
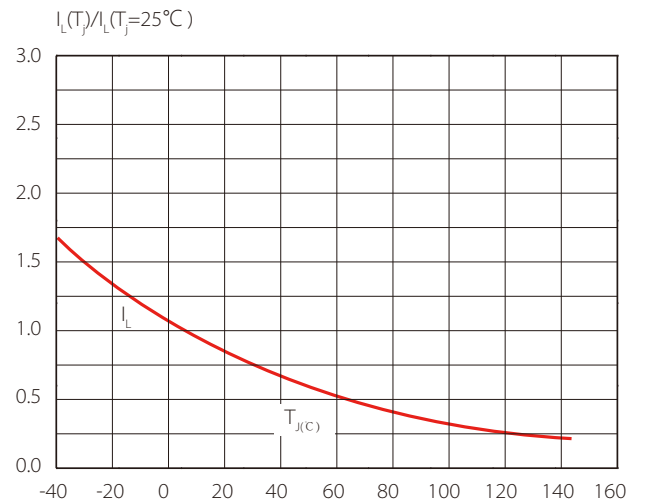
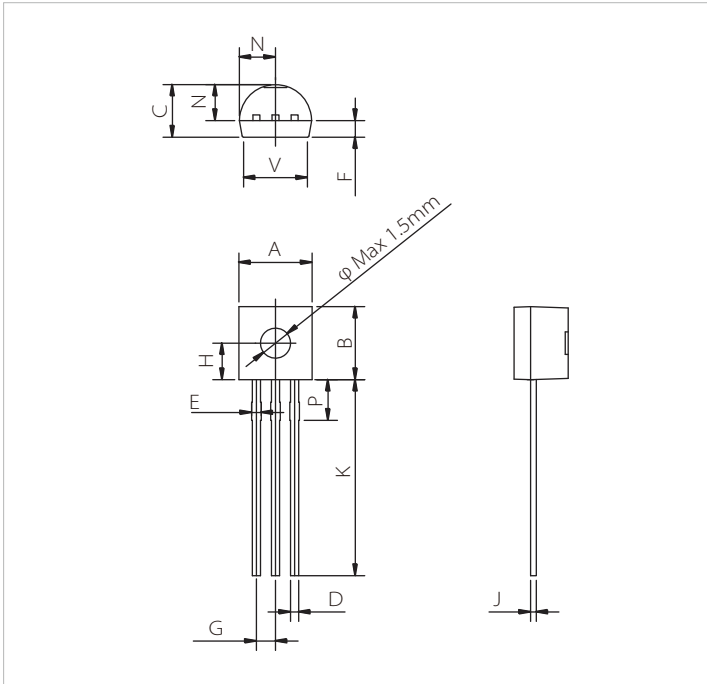


FIG.8 Relative variations of latching current versus junction temperature



TO-92 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.40		0.54	0.016		0.021
E	0.60		0.80	0.024		0.031
F		1.10			0.043	
G		1.27			0.050	
H		2.30			0.091	
J	0.36		0.50	0.014		0.020
K	12.7		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V			4.30			0.169

ORDERING INFORMATION

Part Number	Package	Qty/pcs		
		Shielding Bag	Inner Box	Carton
SCN1M80	TO-92	1000	10000	30000

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