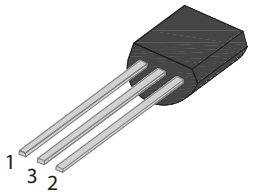
FEATURES

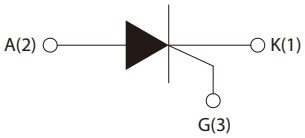
- Glass-passivated mesa chip for reliability and uniform
- High current output up to 1.0 A
- RoHS (2002/95/EC) compliant packages



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℃)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j=25℃)	V_{RRM}	800	
RMS on-state current(T_C=50℃)	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (tp=10ms)	I_{TSM}	12	
I²t value for fusing (tp=10ms)	I²t	0.72	A²S
Critical rate of rise of on-state current (I_G=2*I_{GT})	d_I/d_t	50	A/μs
Peak gate current	I_{GM}	0.3	A
Average gate power dissipation	$P_{G(AV)}$	0.1	W
Storage junction temperature range	T_{STG}	-40~+150	℃
Operating junction temperature range	T_j	-40~+125	

ELECTRICAL CHARACTERISTICS (T_j=25℃ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		Min.	Typ.	Max.	
I_{GT}	V_D=12V,R_L=33Ω	-	40	200	uA
V_{GT}		-	0.6	0.8	V
V_{GD}	V_D=V_{DRM},R_L=3.3KΩ,T_j=150℃	0.2	-	-	
I_H	I_T=500mA	-	-	4	mA
I_L	I_G=1.2I_{GT}	-	-	5	
dV_D/dt	V_D=540V,R_{GK}=1KΩ,T_j=125℃	100	-	-	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value	Unit
V_{TM}	I_{TM}=2A,tp=380μs	T_j=25℃	≤1.4	V
I_{DRM}	V_D=V_{DRM}, V_R=V_{RRM}		≤5	uA
I_{RRM}		T_j=125℃	≤100	uA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case(AC)	70	℃/W

PARAMETER CHARACTERISTIC CURVE

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

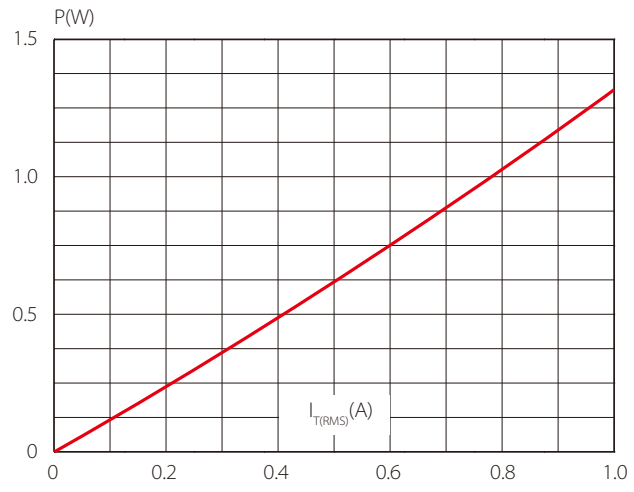


FIG.2: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness:35μm)(full cycle)

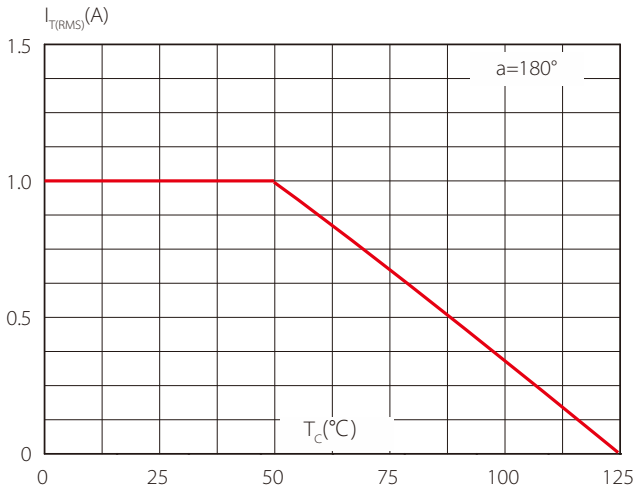


FIG.3: Surge peak on-state current versusnumber of cycles

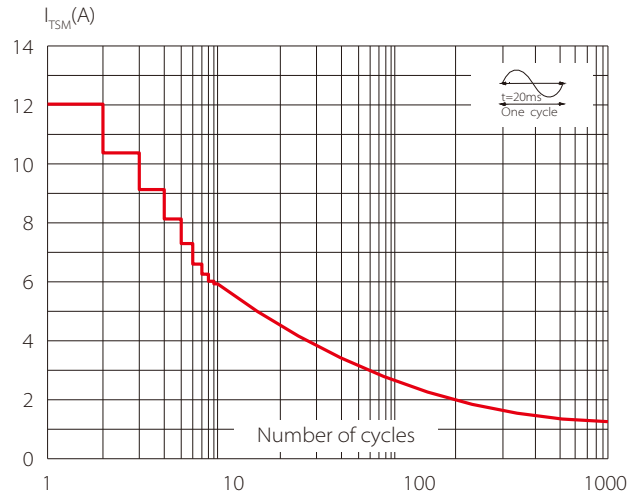


FIG.4 On-state characteristics (maximum values)

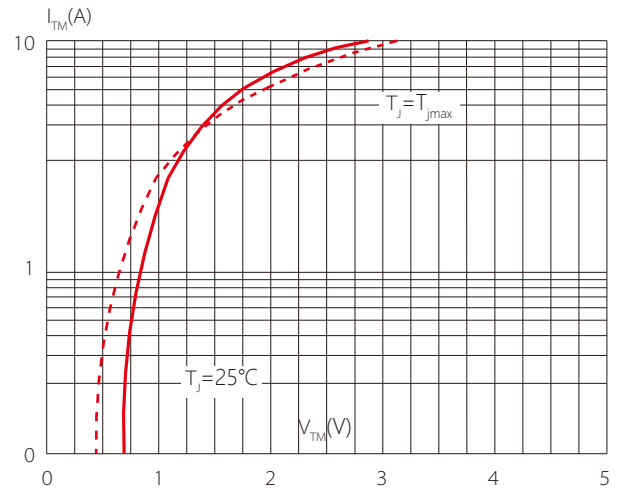


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<10ms and corresponding value of I²t (dI/dt < 50A/μs)

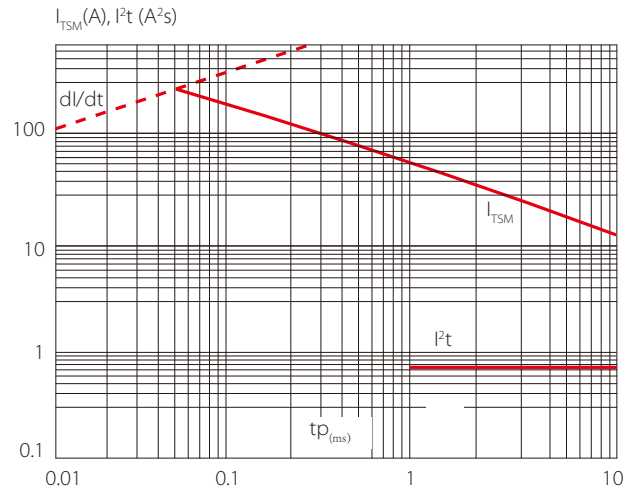


FIG.6 Relative variations of gate trigger current versus junction temperature

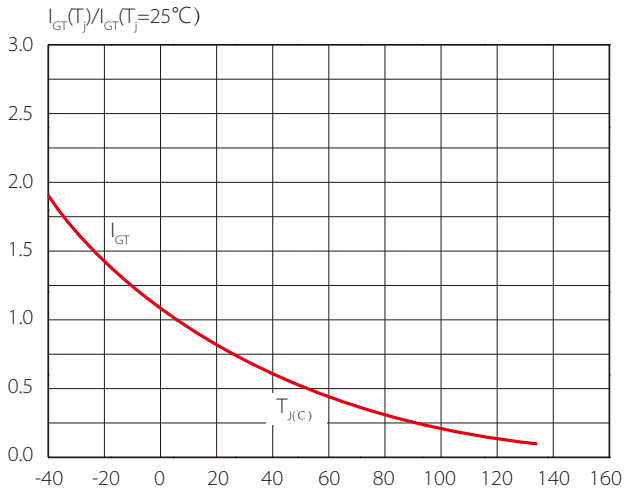


FIG.7 Relative variations of holding current versus junction temperature

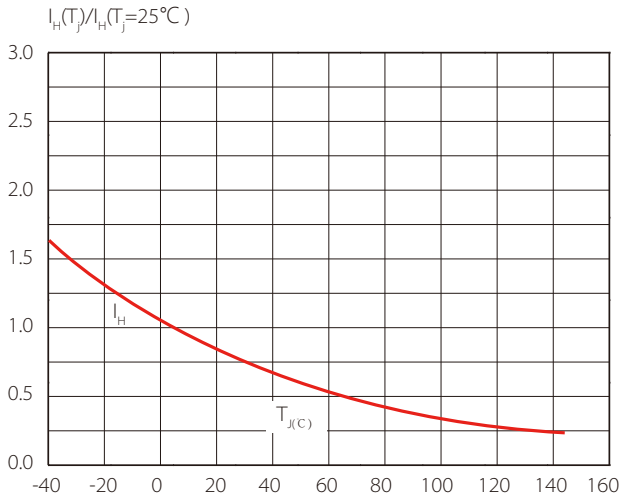
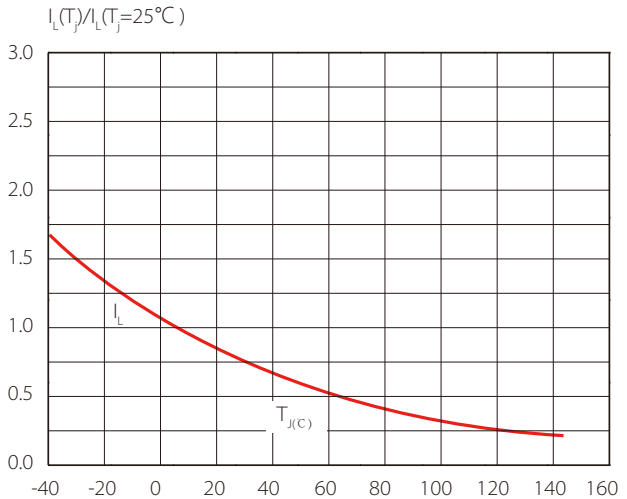
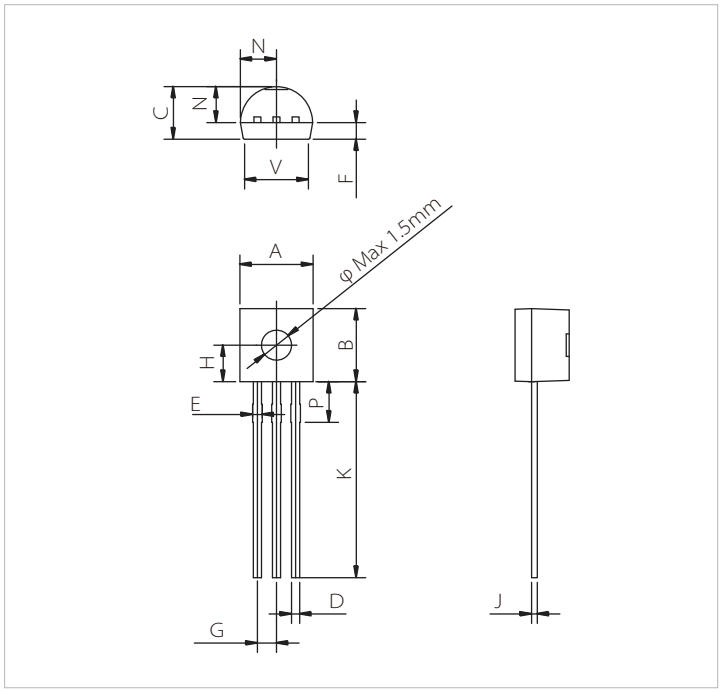


FIG.8 Relative variations of atching current versus junction temperature



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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