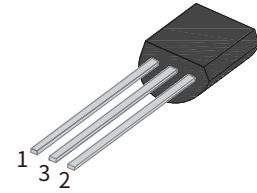


FEATURES

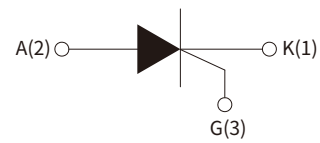
- | Glass-passivated mesa chip for reliability and uniform
- | High current output up to 0.8A
- | RoHS (2002/95/EC) compliant packages



APPLICATIONS

- | Flash lamp
- | Electronic ballast
- | Igniter

TO-92



APPROVALS

Schematic Symbol

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 ($f=25^{\circ}\text{C}$)	V_{DRM}	600	V
Repetitive peak reverse voltage ($f=25^{\circ}\text{C}$)	V_{RRM}	600	
RMS on-state current ($T_c=65^{\circ}\text{C}$)	$I_{\text{T(RMS)}}$	0.8	A
Non repetitive surge peak on-state current ($t_p=10\text{ms}$)	I_{TSM}	8	
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	0.32	A ² S
Critical rate of rise of on-state current ($I_G=2 \cdot I_{GT}$)	dI/dt	50	A/ μs
Peak gate current	I_{GM}	0.2	A
Average gate power dissipation	$P_{G(AV)}$	0.1	W
Storage junction temperature range	T_{STG}	-40~+150	°C
Operating junction temperature range	T_j	-40~+125	

ELECTRICAL CHARACTERISTICS (T_j=25°C unless otherwise specified)

Symbol	Test Condition	Value			Unit
		Min.	Typ.	Max.	
I _{GT}	V _D =12V, R _L =33Ω	20	50	200	uA
V _{GT}		-	0.6	0.8	V
V _{GD}	V _D =V _{DRM} , R _L =3.3KΩ, T _j =150°C	0.2	-	-	
I _H	I _T =500mA	-	-	3	mA
I _L	I _G =1.2I _{GT}	-	-	4	
dV _D /dt	V _D =400V, R _{GK} =1KΩ, T _j =125°C	600	-	-	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter	Value	Unit
V _{TM}	I _{TM} =1.1A, tp=380μs	≤1.5	V
I _{DRM}	V _D =V _{DRM} , V _R =V _{RRM}	≤5	uA
I _{RRM}		≤100	uA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	Junction to case(AC)	75	°C/W

PARAMETER CHARACTERISTIC CURVE

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

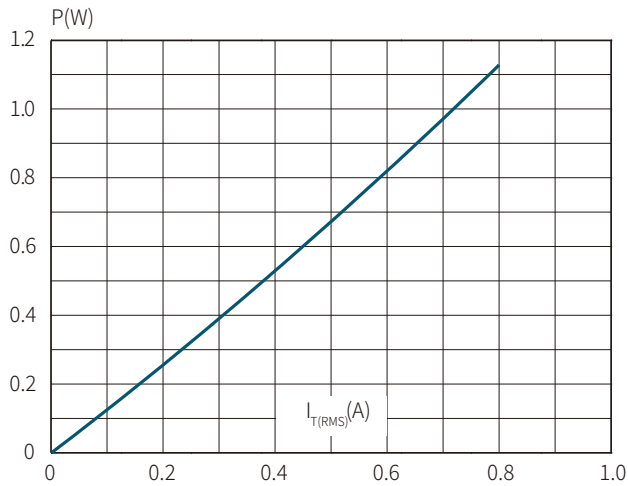


FIG.2: RMS on-state current versus case temperature

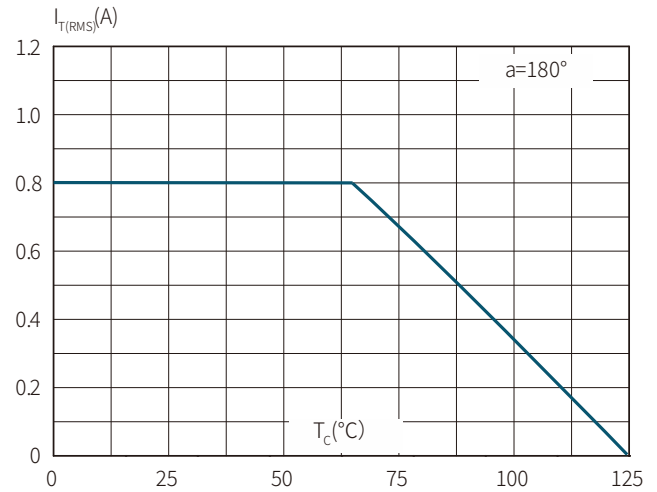


FIG.3: Surge peak on-state current versus number of cycles

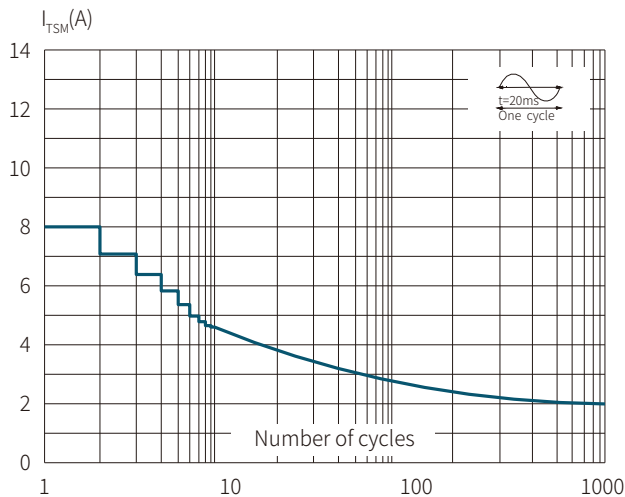


FIG.4 On-state characteristics (maximum values)

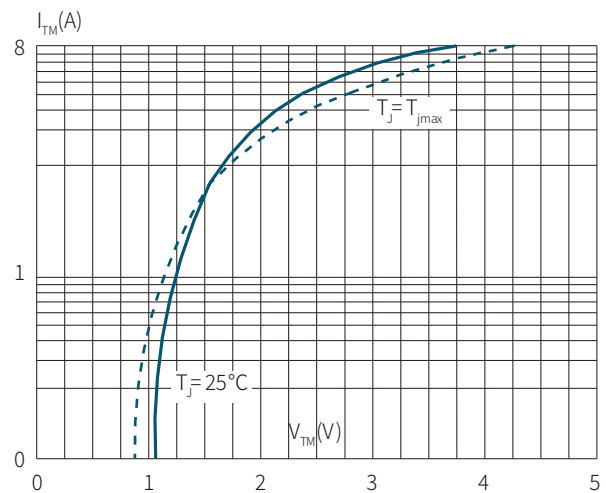


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$ and corresponding value of I^2t ($dI/dt < 50\text{A}/\mu\text{s}$)

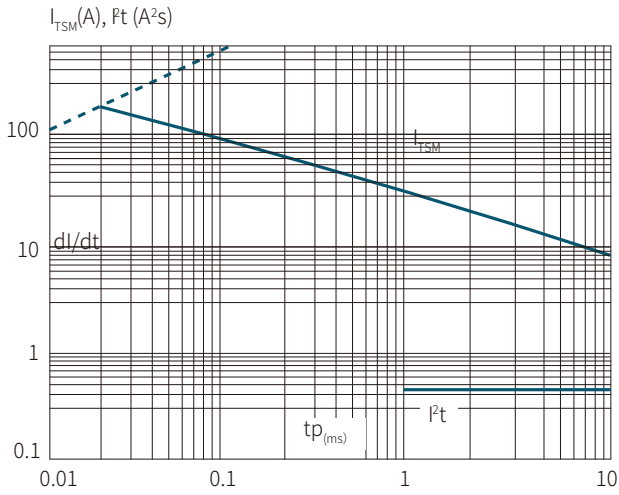


FIG.6 Relative variations of gate trigger current versus junction temperature

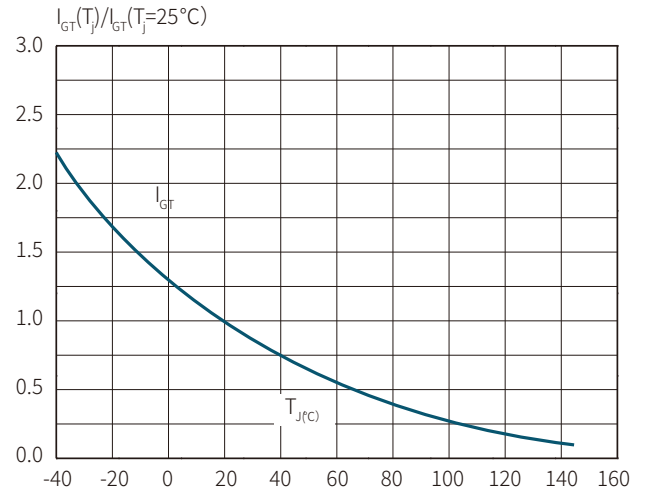


FIG.7 Relative variations of holding current versus junction temperature

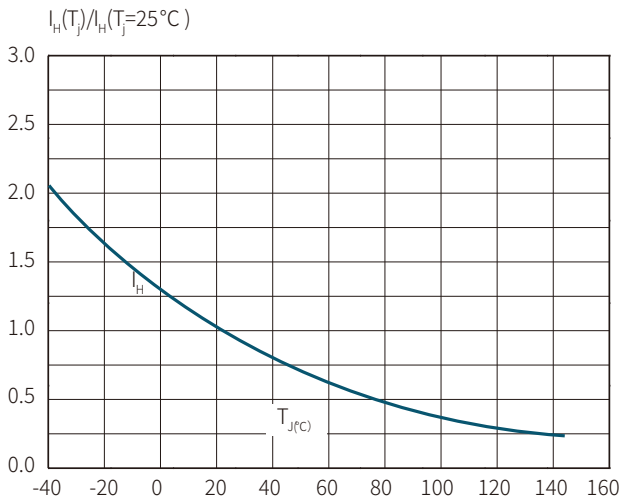
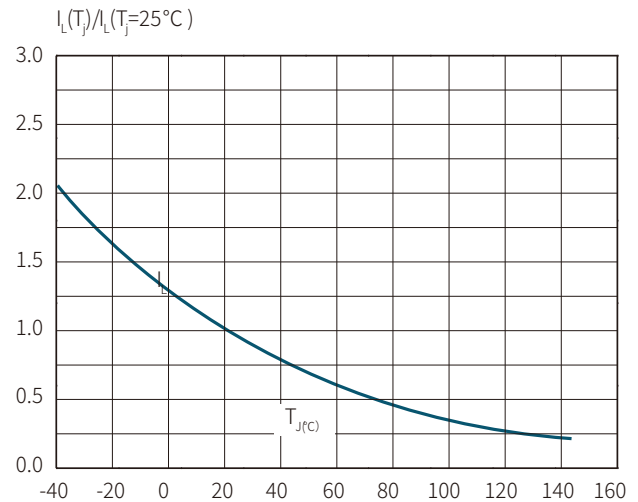
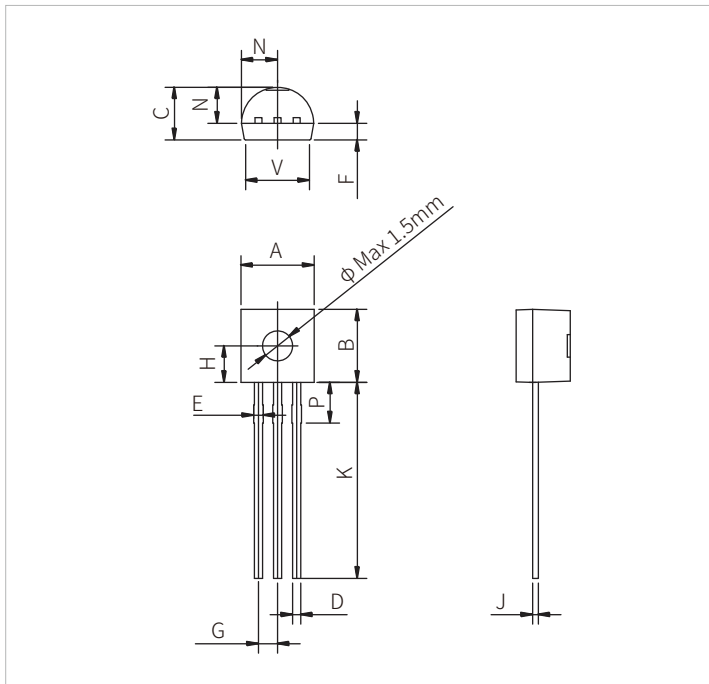


FIG.8 Relative variations of latching current versus junction temperature



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	InnerBox	Carton
MCR100-8	TO-92	1000	10000	30000

To find your local partner within Semiwell' s website : www.semiwell.com

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