

FEATURES

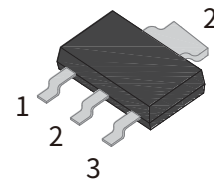
- | Glass-passivated mesa chip for reliability and uniform
- | High current output up to 0.8A

APPLICATIONS

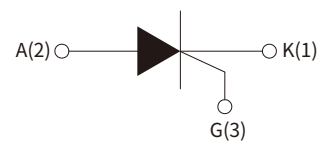
- | Flash lamp
- | Electronic ballast
- | Igniter

APPROVALS

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



SOT-89



Schematic Symbol

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 ($T_c=70^\circ\text{C}$)	$I_{\text{T(RMS)}}$	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^2S
Critical rate of rise of on-state current ($I_G=2 \cdot I_{\text{GT}}$)	di/dt	50	$\text{A}/\mu\text{s}$
Peak gate current	I_{GM}	0.2	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°C unless otherwise specified)

Symbol	Test Condition	Value			Unit
		Min.	Typ.	Max.	
I _{GT}	V _D =12V, R _L =33Ω	20	50	200	μA
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	T _j =25°C	≤1.5	V
I _{DRM}	V _D =V _{DRM} , V _R =V _{RRM}		≤5	uA
I _{RRM}		T _j =125°C	≤100	uA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	Junction to case(AC)	45	°C/W
R _{th(j-a)}	Junction to ambient	90	°C/W

PARAMETER CHARACTERISTIC CURVE

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

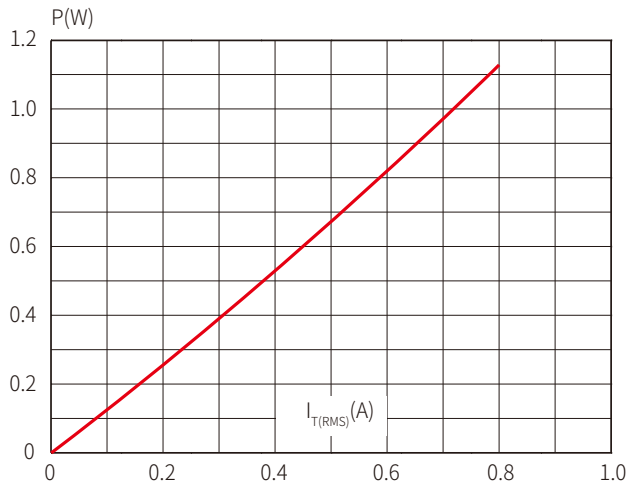


FIG.2: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness:35 μ m)(full cycle)

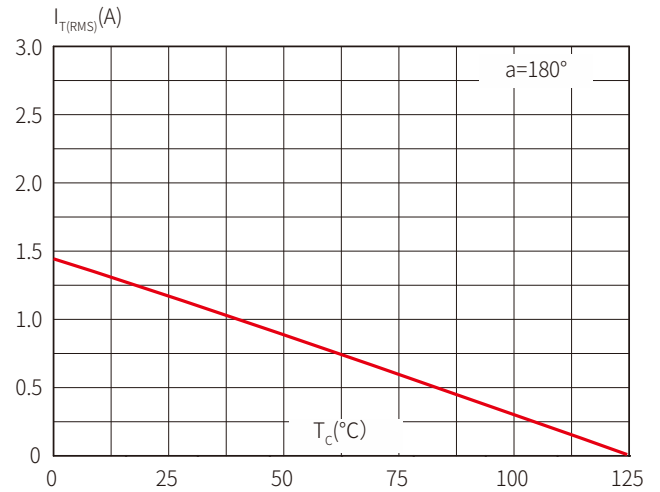


FIG.3: Surge peak on-state current versus number of cycles

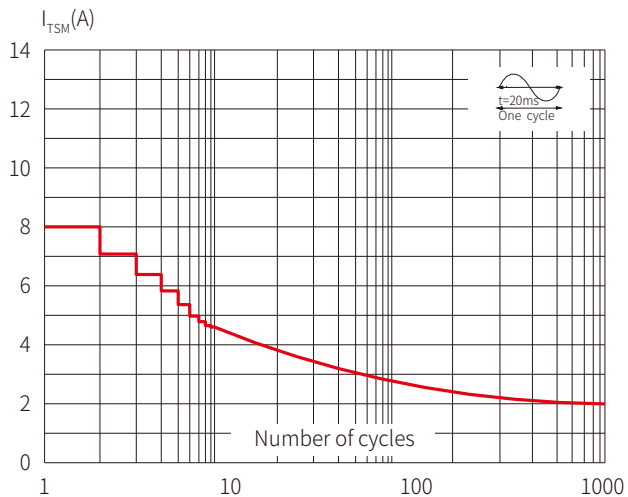


FIG.4 On-state characteristics (maximum values)

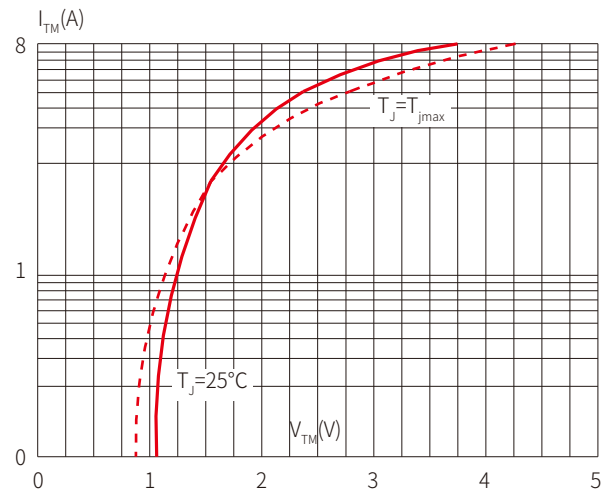


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$ and corresponding value of I^2t ($dI/dt < 50\text{A}/\mu\text{s}$)

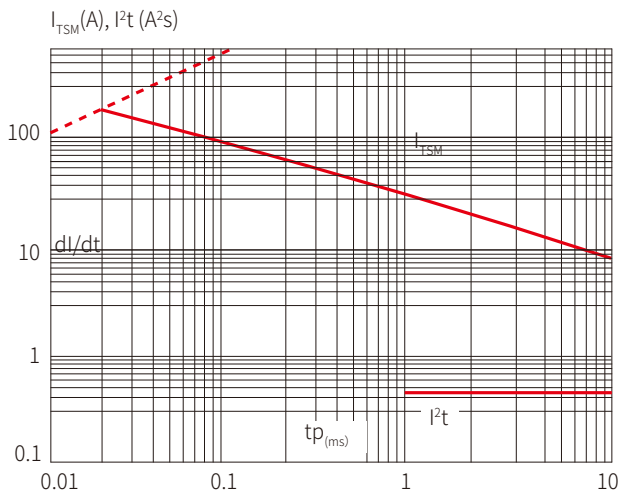


FIG.6 Relative variations of gate trigger current versus junction temperature

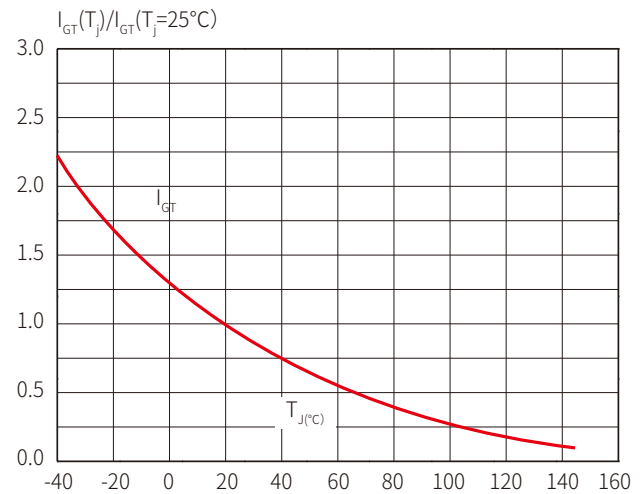


FIG.7 Relative variations of holding current versus junction temperature

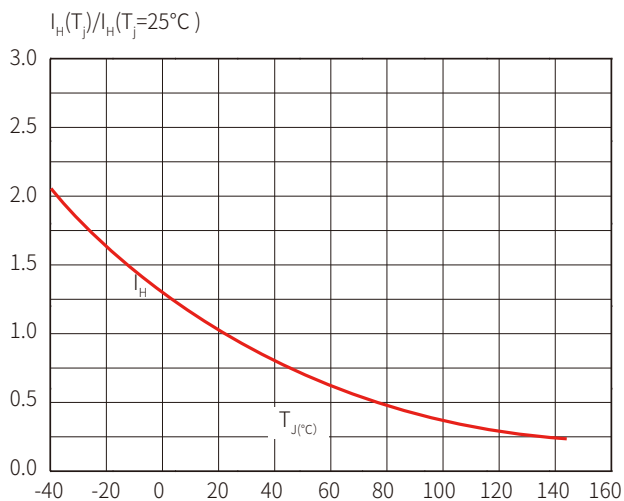
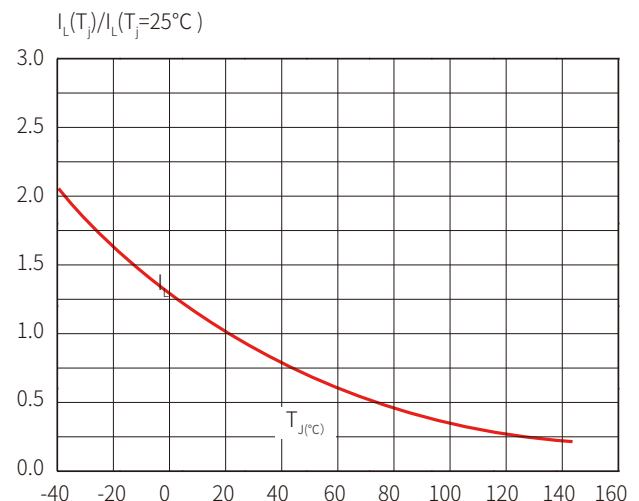
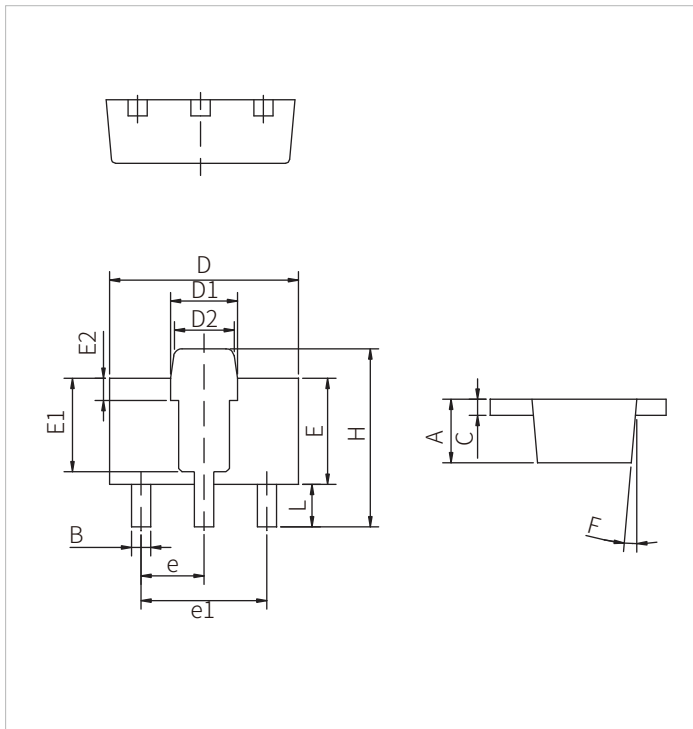


FIG.8 Relative variations of latching current versus junction temperature



SOT-89 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.40		1.60	0.055		0.063
B	0.40		0.52	0.016		0.020
C	0.35		0.41	0.014		0.016
D	4.40		4.60	0.173		0.181
D1	1.50		1.70	0.059		0.067
D2	1.30		1.50	0.051		0.059
E	2.40		2.60	0.094		0.102
E1		2.20			0.087	
E2		0.52			0.020	
e		1.50			0.059	
e1		3.00			0.118	
F		5.00			5.000	
H	4.05		4.25	0.159		0.167
L	0.89		1.20	0.035		0.047

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SCM08M80	SOT-89	1000PCS	7"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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