

FEATURES

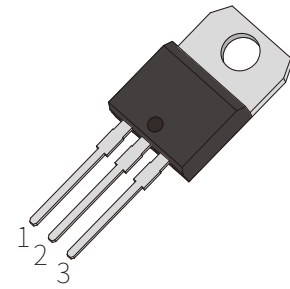
- | Glass-passivated mesa chip for reliability and uniform
- | High current output up to 4.0 A

APPLICATIONS

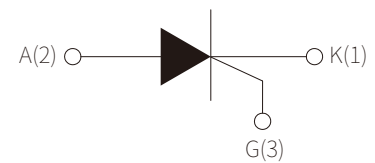
- | Flash lamp
- | Electronic ballast
- | Igniter

APPROVALS

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



TO-220A



Schematic Symbol

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$)	V_{DRM}	600	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	600	
RMS on-state current ($T_c=110^\circ\text{C}$)	$I_{\text{T(RMS)}}$	4	A
Non repetitive surge peak on-state current (tp=10ms)	I_{TSM}	30	
I2t value for fusing (tp=10ms)	I2t	4.5	A2S
Critical rate of rise of on-state current ($I_G=2 \cdot I_{\text{GT}}$)	di/dt	50	A/ μs
Peak gate current	I_{GM}	1.2	A
Average gate power dissipation	$P_{\text{G(AV)}}$	0.2	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	-	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 _j =500mA	-	-	5	mA
I _L	I _G =1.2I _{GT}	-	-	6	
dV _D /dt	V _D =2/3V _{DRM} , R _{GK} =1KΩ, T _j =125°C	10	-	-	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter	Value	Unit
V _{TM}	I _{TM} =8A, tp=380μs	≤1.5	V
I _{DRM}	V _D =V _{DRM} , V _R =V _{RRM}	≤5	μA
I _{RRM}		≤100	μA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	Junction to case(AC)	2.8	°C/W

PARAMETER CHARACTERISTIC CURVE

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

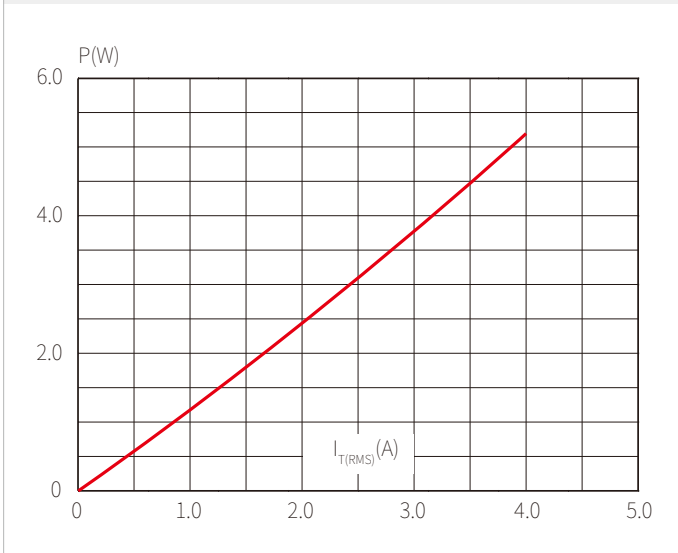


FIG.2: RMS on-state current versus case temperature

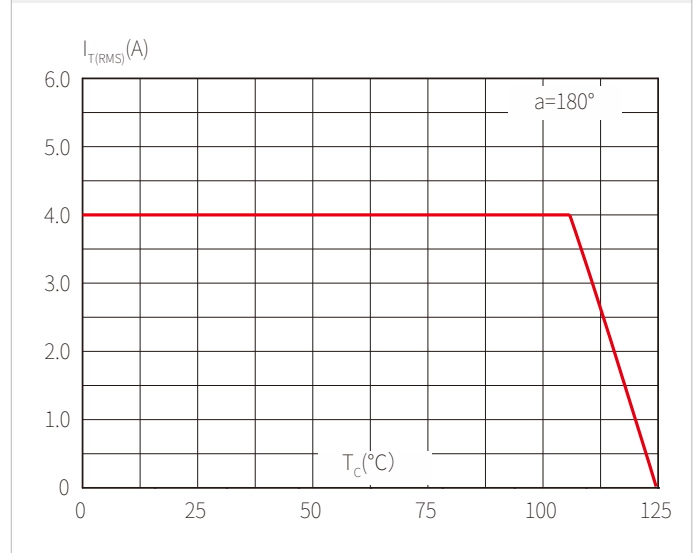


FIG.3: Surge peak on-state current versus number of cycles

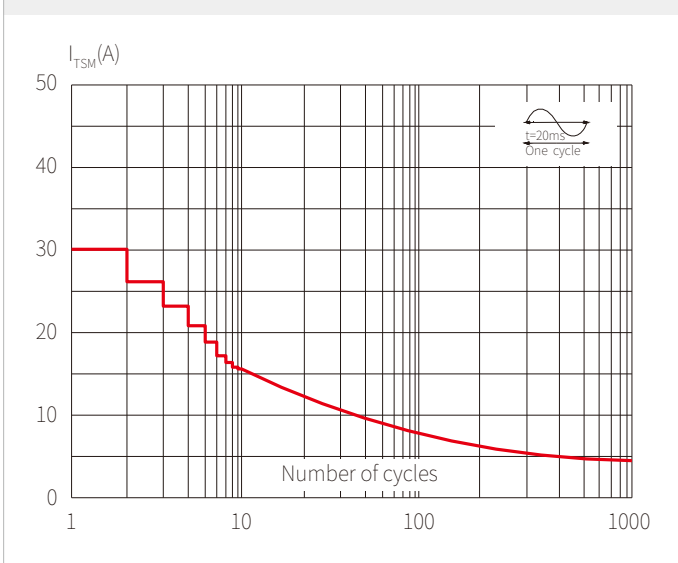


FIG.4 On-state characteristics (maximum values)

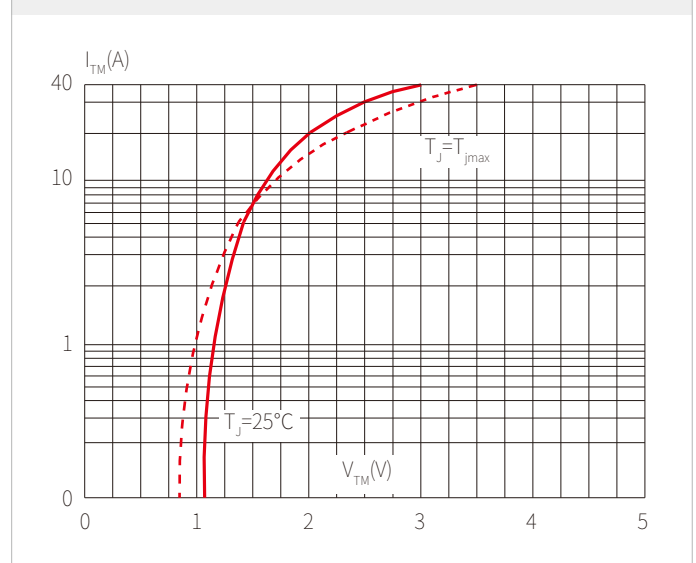


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$ and corresponding value of I^2t ($dI/dt < 50\text{A}/\mu\text{s}$)

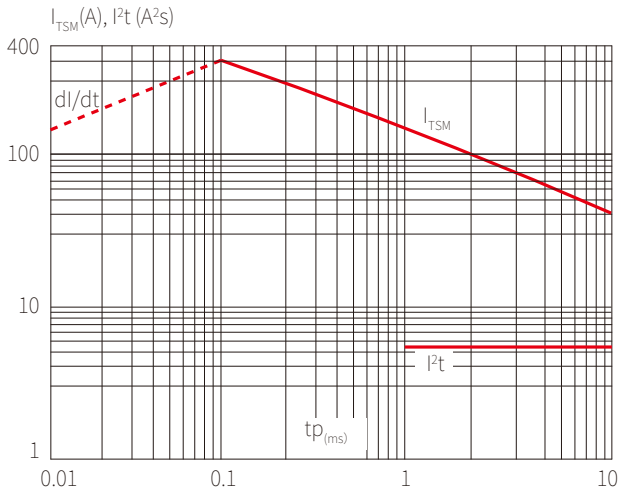


FIG.6 Relative variations of gate trigger current versus junction temperature

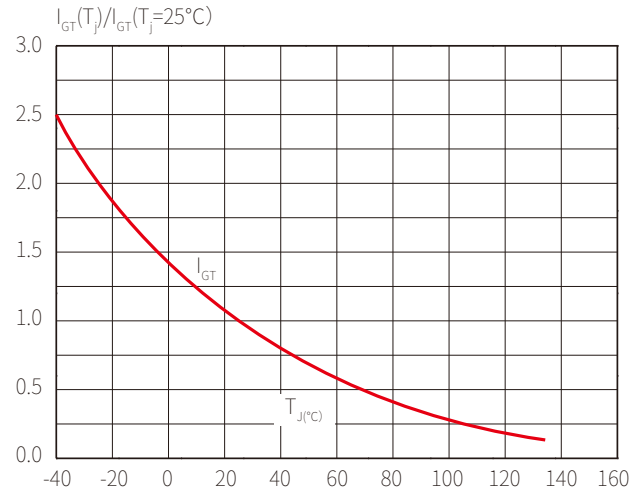


FIG.7 Relative variations of holding current versus junction temperature

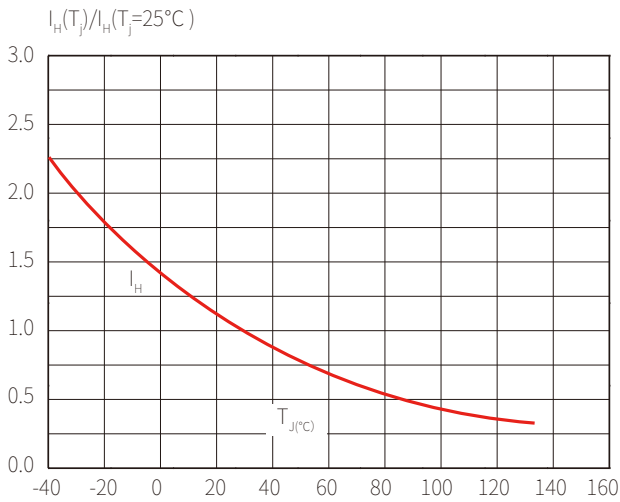
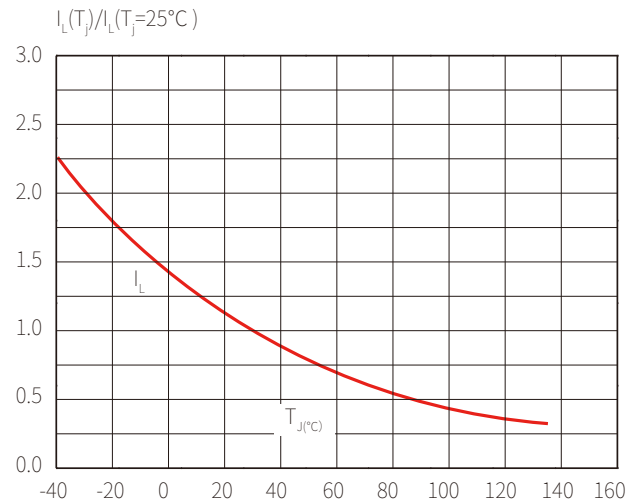
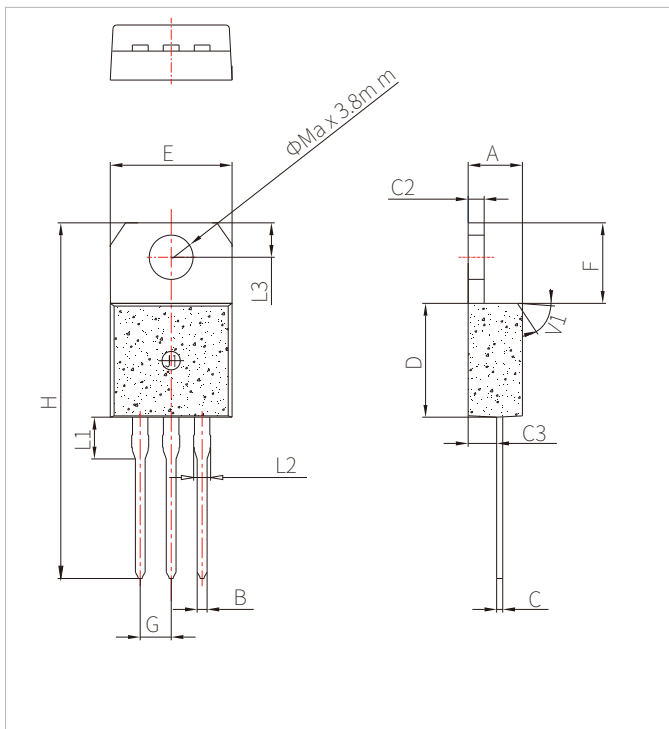


FIG.8 Relative variations of latching current versus junction temperature



TO-220A PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

ORDERING INFORMATION

Part Number	Package	Qty/pcs		
		Tube	Inner Box	Carton
SCA4M60	TO-220A	50	1000	5000

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