

FEATURES

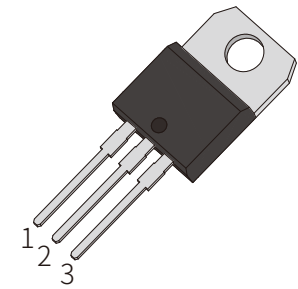
- | Glass-passivated mesa chip for reliability and uniform
- | High current output up to 25A

APPLICATIONS

- | Motor cycle
- | Power charger
- | T-tools etc

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}	1200	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1200	
RMS on-state current ($T_c=95^\circ\text{C}$)	$I_{\text{T(RMS)}}$	25	A
Non repetitive surge peak on-state current (tp=10ms)	I_{TSM}	250	
I^2t value for fusing (tp=10ms)	I^2t	310	A^2S
Critical rate of rise of on-state current ($I_G=2 \cdot I_{\text{GT}}$)	d/d_t	100	$\text{A}/\mu\text{s}$
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{\text{G(AV)}}$	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
I _{GT}	V _D =12V, R _L =33Ω	≤40	mA
V _{GT}		≤1.5	V
V _{GD}	V _D =V _{DRM} , R _L =3.3KΩ, T _j =150°C	≤0.2	
I _H	I _T =500mA	≤60	mA
I _L	I _G =1.2I _{GT}	≤80	
dV _D /dt	V _D =2/3, V _{DRM} , Gate Open, T _j =150°C	≥500	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter	Value	Unit
V _{TM}	I _{TM} =50A, tp=380μs	≤1.6	V
I _{DRM}	V _D =V _{DRM} , V _R =V _{RRM}		
I _{RRM}		T _j =150°C	≤4

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	Junction to case(AC)	1.9	°C/W

PARAMETER CHARACTERISTIC CURVE

FIG.1 Maximum Average power Dissipation Versus Average On-State Current

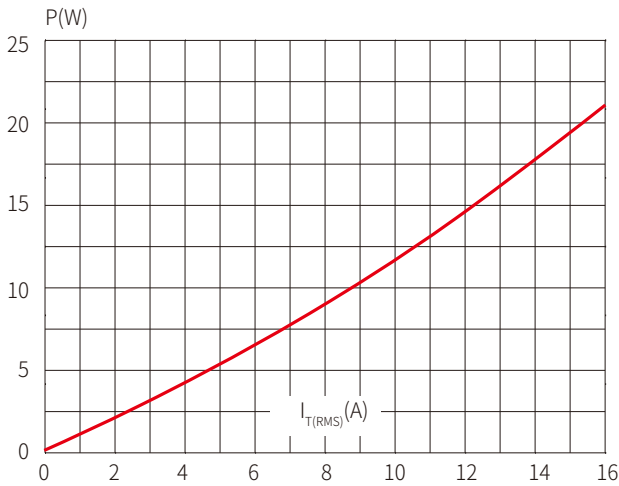


FIG.2: RMS On-state Current Versus Case Temperature

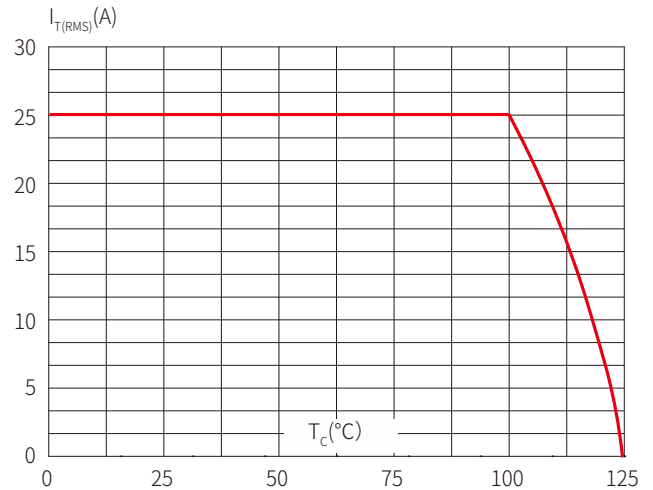


FIG.3: Surge peak on-state current versus Number of cycles

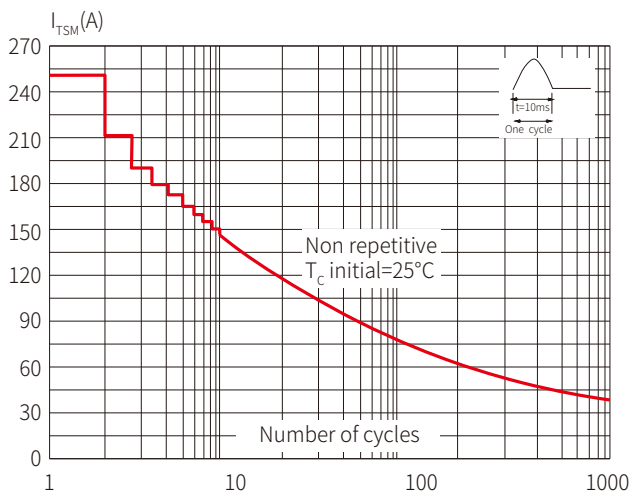


FIG.4 Relative Variations Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature

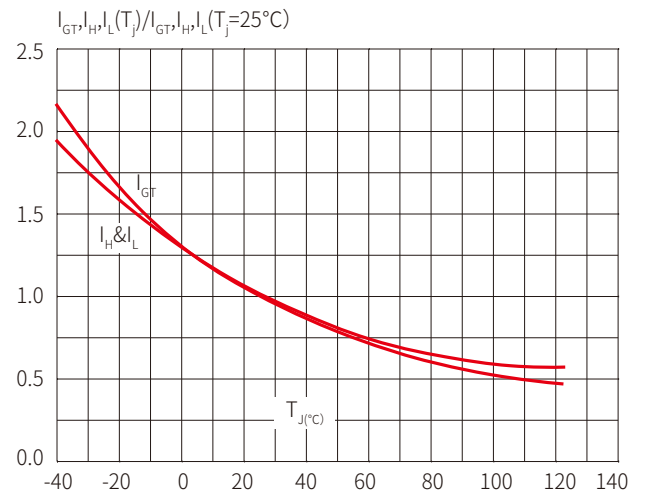


FIG.5: Non-Repetitive Surge Peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$ and corresponding value of I^2t

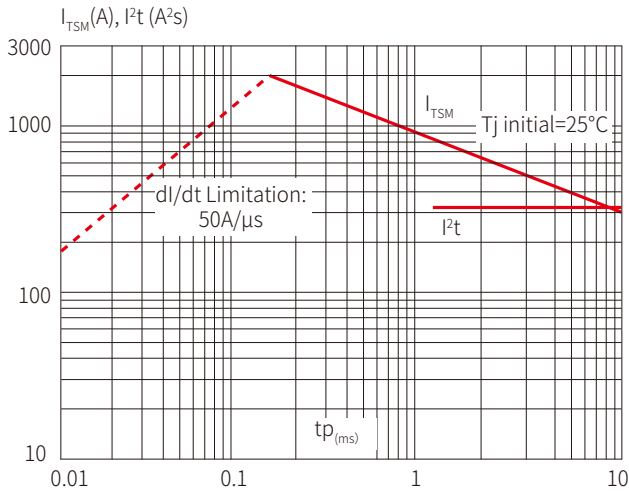
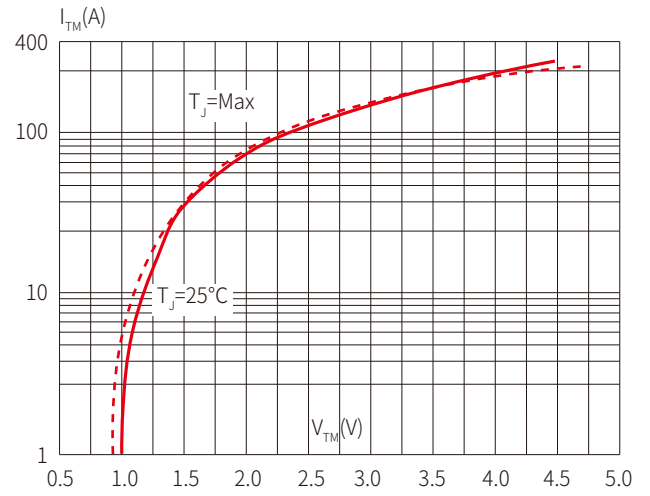
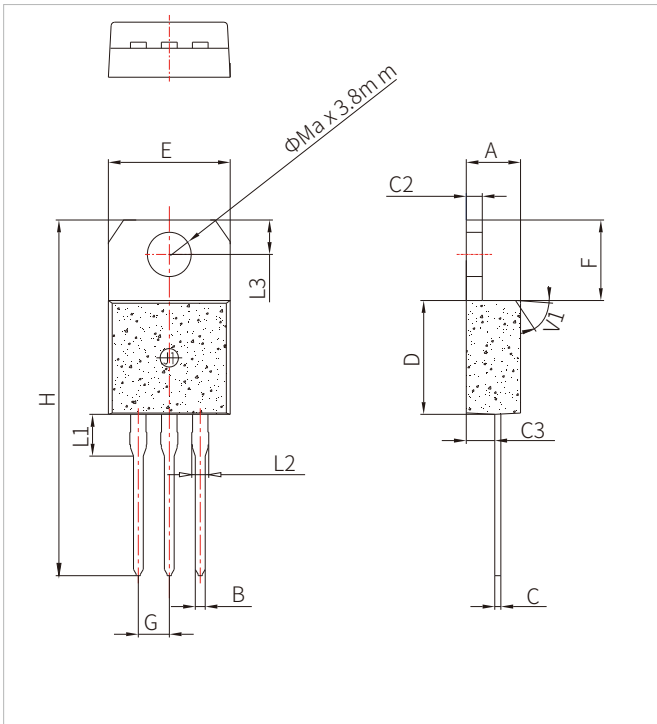


FIG.6 On-State Characteristics (Maximum Values)



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	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
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
SCA25C120	TO-220A	50	1000	5000

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By QR Code

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