

FEATURES

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

APPLICATIONS

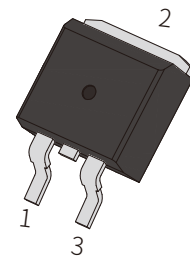
- | Motor cycle
- | Power charger
- | T-tools etc

APPROVALS

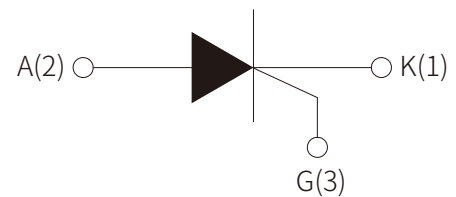
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

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	



TO-263



Schematic Symbol

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)	1.0	°C/W

PARAMETER CHARACTERISTIC CURVE

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

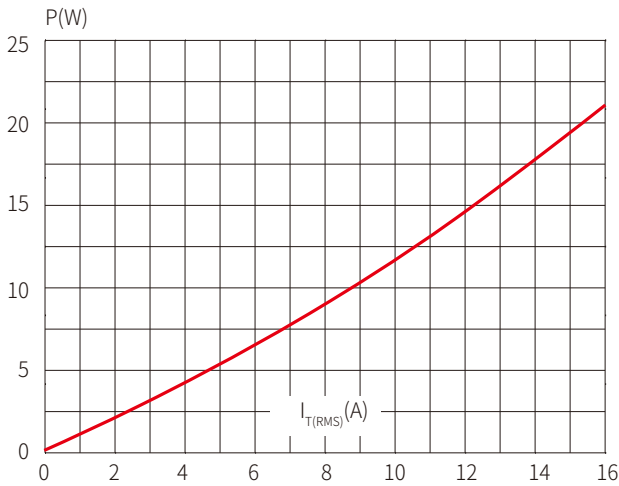


FIG.2: RMS On-state Current Versus Case Temperature

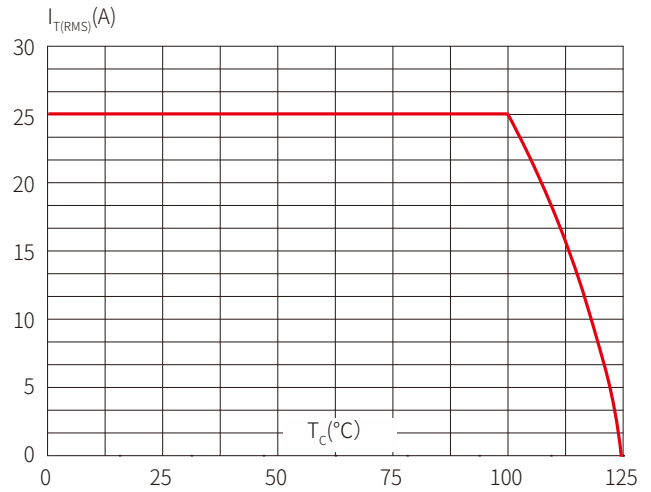


FIG.3: Surge peak on-state current versus Number of cycles

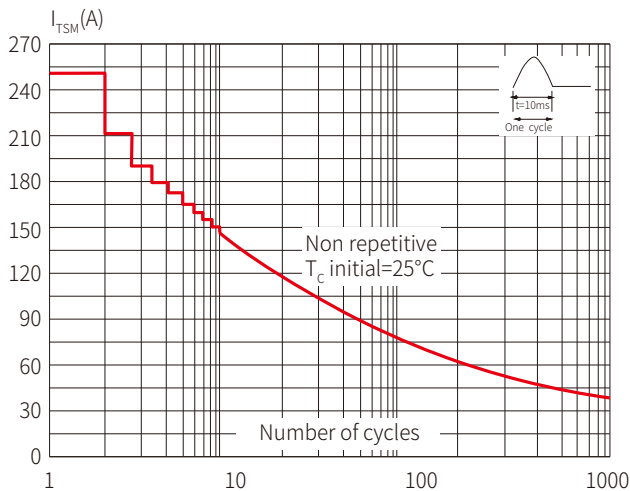


FIG.4 Relative Variations Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature

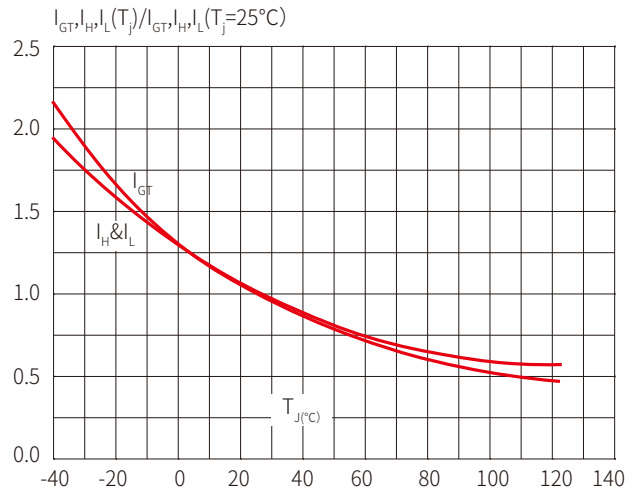
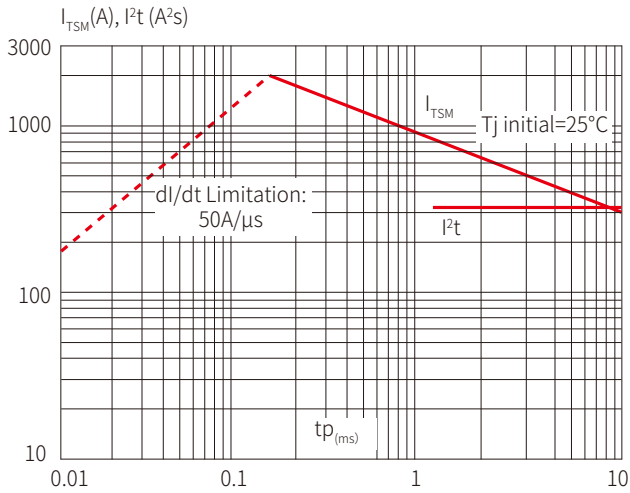
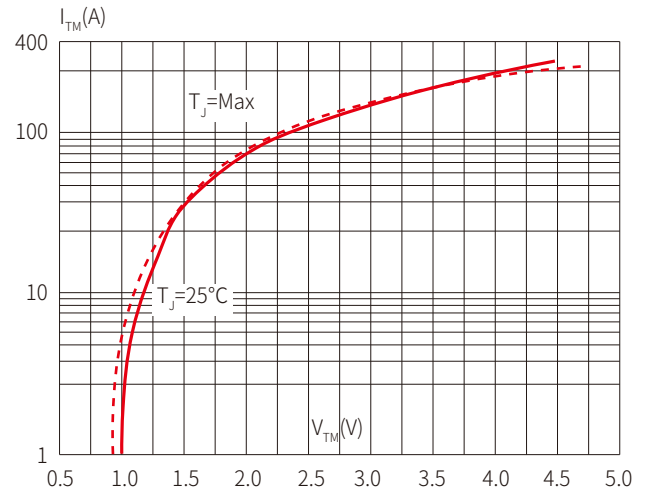
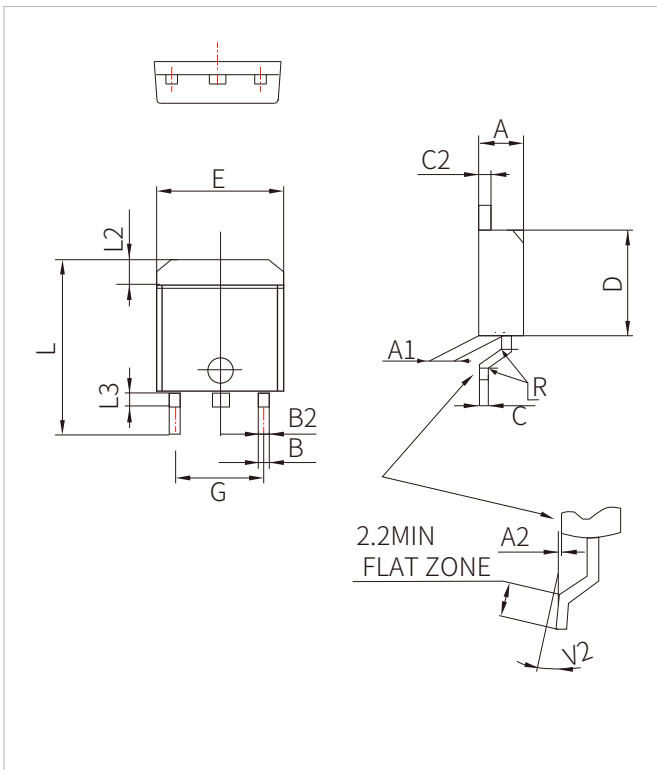


FIG.5: Non-Repetitive Surge Peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$ and corresponding value of I^2t

FIG.6 On-State Characteristics (Maximum Values)


TO-263 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.30		4.60	0.169		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.037
B2	1.25	1.40		0.048	0.055	
C	0.45		0.60	0.017		0.024
C2	1.21		1.36	0.047		0.054
D	8.95		9.35	0.352		0.368
E	10.00		10.28	0.392		0.405
G	4.88		5.28	0.192		0.208
L	15.00		15.85	0.590		0.624
L2	1.27		1.40	0.050		0.055
L3	1.40		1.75	0.055		0.069
R		0.40			0.016	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Package	QTY/Reel	Reel Size
SCE25C120	TO-263	800PCS	13"

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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