JST138E-600E 12A

ELECTRICAL CHARACTERISTICS (T_j=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	V_D=12V R_L=33Ω	- -	MAX.	10	mA
				25	
V_{GT}		ALL	MAX.	1	V
V_{GD}	V_D=V_{DRM} T_j=125 R_L=3.3kΩ	ALL	MIN.	0.2	V
I_L	I_G=1.2I_{GT}	- -	MAX.	25	mA
				35	
I_H	I_T=500mA		MAX.	25	mA
dV/dt	V_D=400V Gate Open T_j=125		MIN.	150	V/μs
(dV/dt)c	(dI/dt)c=5A/ms, T_j=110		MIN.	5	V/μs
t_{on}	I_G=40mA I_A=200mA I_R=20mA T_j=25		TYP.	3	μs
t_{off}				30	

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=15A t_p=380μs	T_j=25	1.6	V
V_{TO}	Threshold voltage	T_j=125	0.8	V
R_D	Dynamic resistance	T_j=125	41	mΩ
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=125	0.4	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1.6	/W
$R_{th(j-a)}$	junction to ambient(AC, in free air, S=2cm^2)	45	/W

ORDERING INFORMATION

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

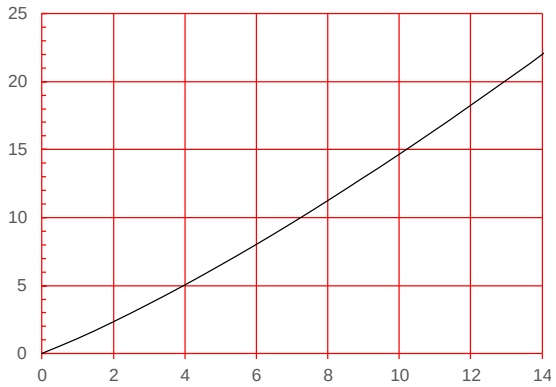
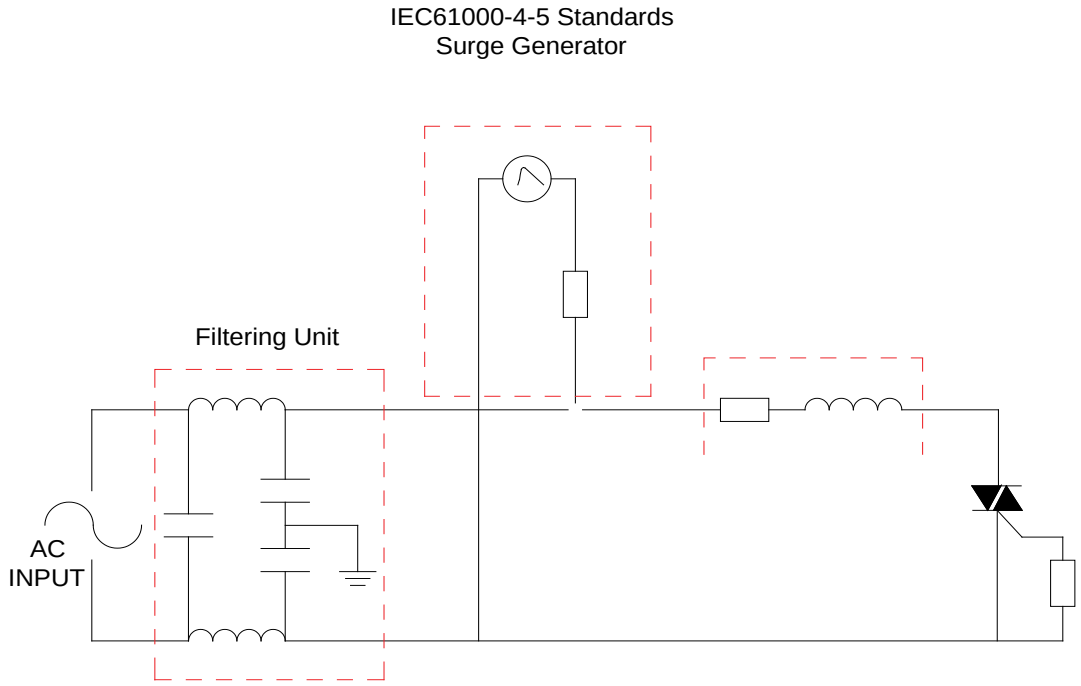


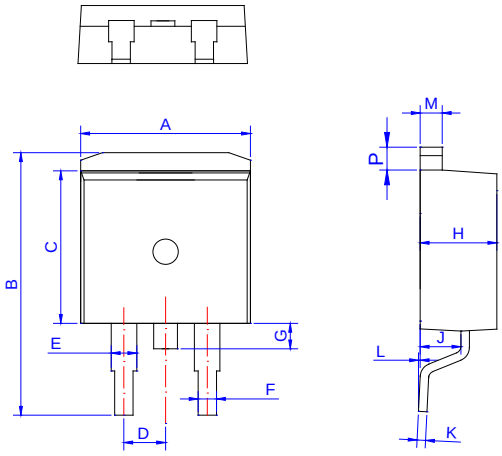
FIG.2: RMS on-state current versus case temperature

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FIG.8: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	9.40		9.60	0.370		0.378
D	2.40		2.70	0.094		0.106
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033

DELIVERY MODE

