

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
Rth (j-c) DC	Junction to case for DC	1.5	°C/W
Rth (j-c) AC	Junction to case for 360° conduction angle (F= 50 Hz)	1.1	°C/W

GATE CHARACTERISTICS (maximum values)

P_G (AV) = 1W P_{GM} = 40W (tp = 20 μs) I_{GM} = 8A (tp = 20 μs) V_{GM} = 16V (tp = 20 μs).

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant		Suffix		Unit
					A	B	
I _{GT}	V _D =12V (DC) R _L =33Ω	T _j =25°C	I-II-III	MAX	100	50	mA
			IV	MAX	150	100	
V _{GT}	V _D =12V (DC) R _L =33Ω	T _j =25°C	I-II-III-IV	MAX	1.5		V
V _{GD}	V _D =V _{DRM} R _L =3.3kΩ	T _j =125°C	I-II-III-IV	MIN	0.2		V
tgt	V _D =V _{DRM} I _G = 500mA dI _G /dt = 3A/μs	T _j =25°C	I-II-III-IV	TYP	2.5		μs
I _L	I _G =1.2 I _{GT}	T _j =25°C	I-III-IV	TYP	70	60	mA
			II		200	180	
I _H *	I _T = 500mA gate open	T _j =25°C		MAX	100	80	mA
V _{TM} *	I _{TM} = 42A tp= 380μs	T _j =25°C		MAX	1.8		V
I _{DRM} I _{RRM}	V _{DRM} Rated V _{RRM} Rated	T _j =25°C		MAX	0.01		mA
		T _j =125°C		MAX	6		
dV/dt *	Linear slope up to V _D =67%V _{DRM} gate open	T _j =125°C		MIN	250		V/μs
(dV/dt)c *	(dI/dt)c = 13.3A/ms	T _j =125°C		MIN	10		V/μs

* For either polarity of electrode A2 voltage with reference to electrode A1.

ORDERING INFORMATION

Package	$I_T(\text{RMS})$	$V_{\text{DRM}} / V_{\text{RRM}}$	Sensitivity Specification	
	A	V	A	B
BTA (Insulated)	30	400	X	X
		600	X	X
		700	X	X
		800	X	X

Fig.1 : Maximum RMS power dissipation versus RMS on-state current ($F=50\text{Hz}$).
(Curves are cut off by $(di/dt)_c$ limitation)

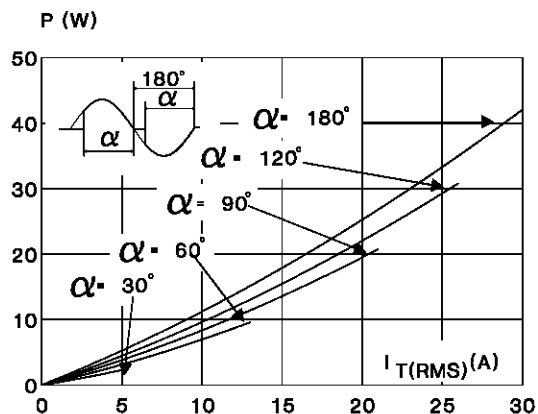


Fig.3 : RMS on-state current versus case temperature.

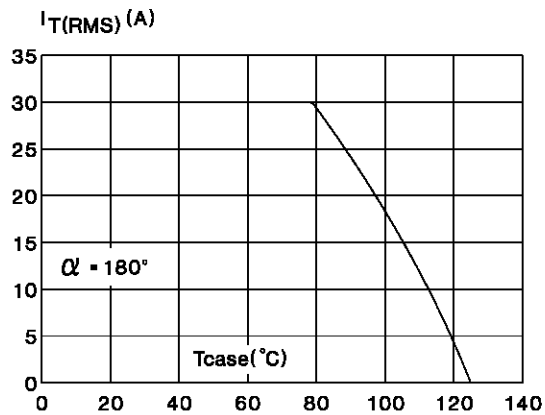


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact.

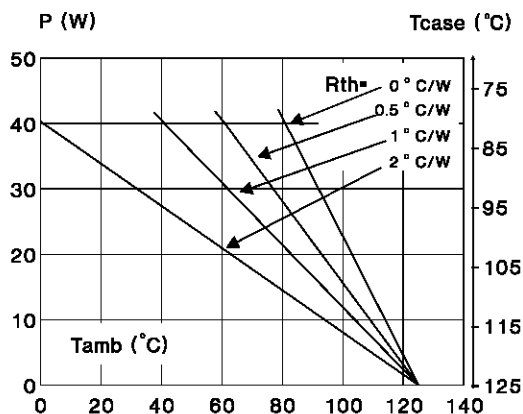


Fig.4 : Relative variation of thermal impedance junction to case versus pulse duration.

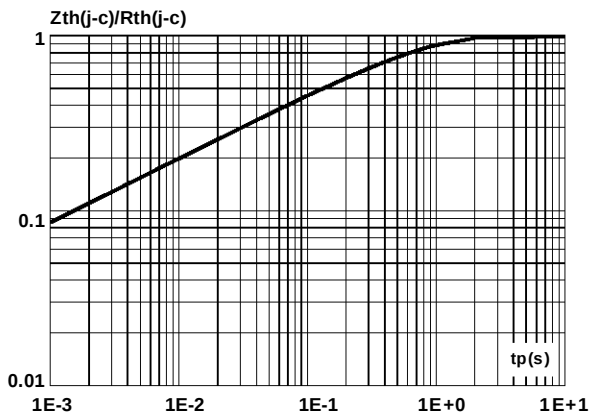


Fig.5 : Relative variation of gate trigger current and holding current versus junction temperature.

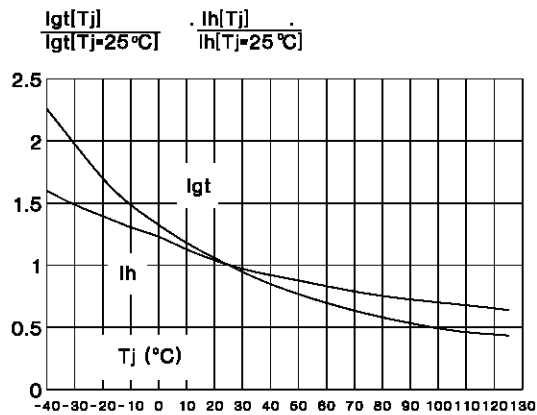


Fig.6 : Non Repetitive surge peak on-state current versus number of cycles.

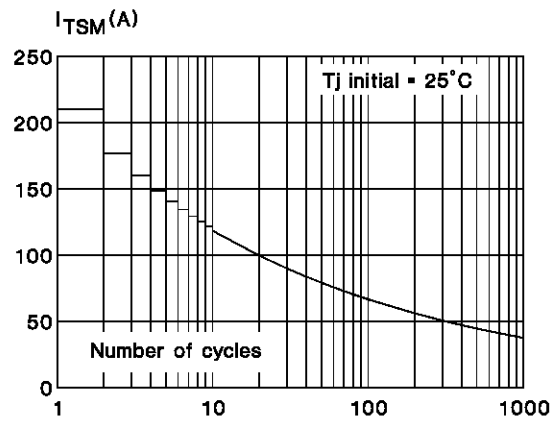


Fig.7 : Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10\text{ms}$, and corresponding value of I^2t .

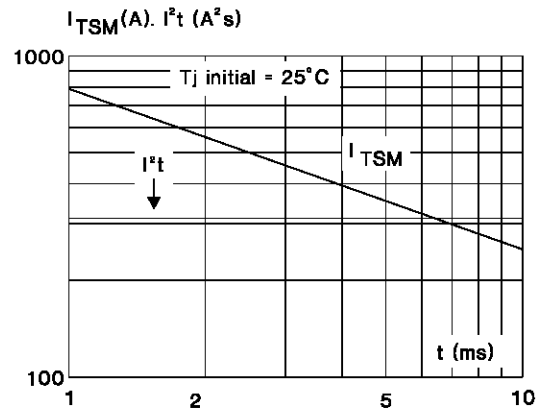
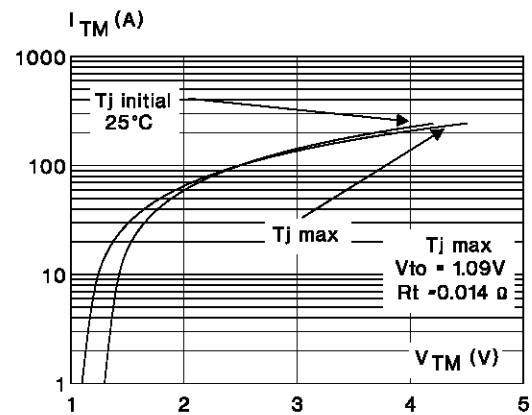
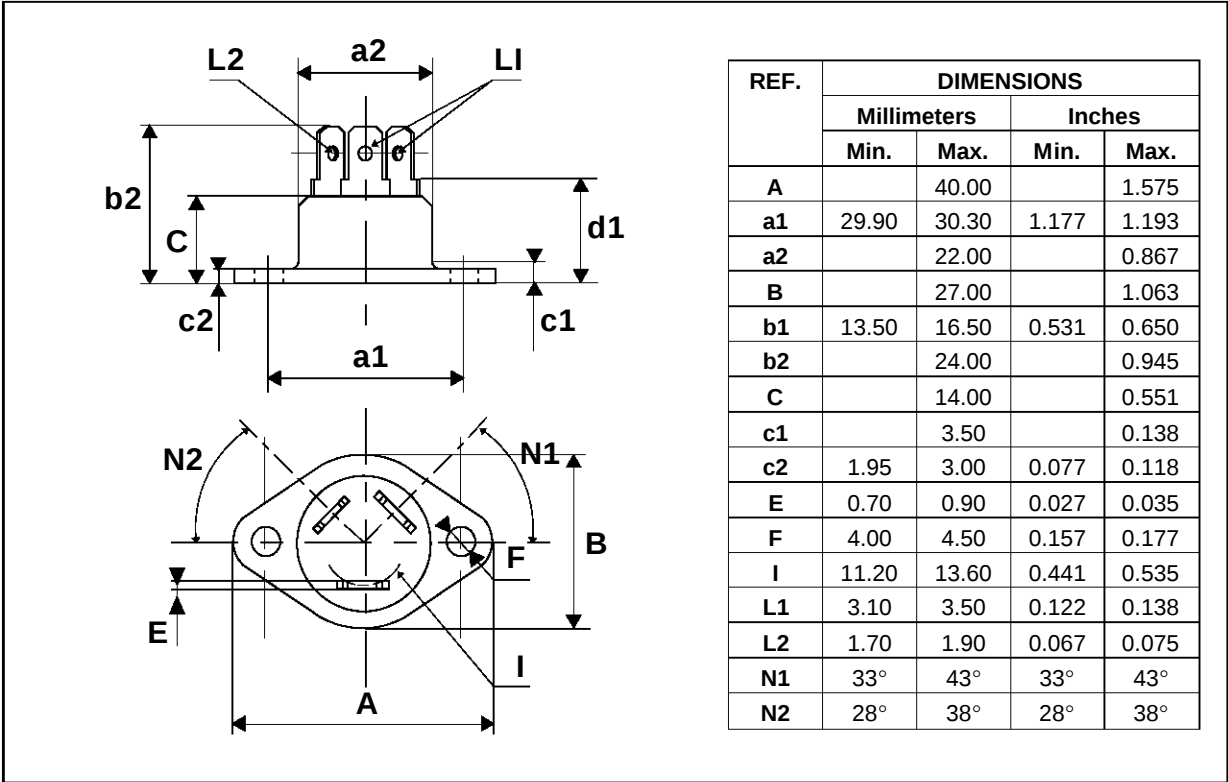


Fig.8 : On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA
RD91 Plastic



Marking : type number
Weight : 20 g

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