

BYV255V**THERMAL RESISTANCE**

Symbol	Parameter		Value	Unit
Rth (j-c)	Junction to case	Per diode	0.4	°C/W
		Total	0.25	
Rth (c)	Coupling		0.1	°C/W

When the diodes 1 and 2 are used simultaneously :

$$T_j - T_c (\text{diode 1}) = P(\text{diode 1}) \times R_{th(j-c)} (\text{Per diode}) + P(\text{diode 2}) \times R_{th(c)}$$

ELECTRICAL CHARACTERISTICS (Per diode)**STATIC CHARACTERISTICS**

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I _R *	T _j = 25°C	V _R = V _{RRM}			100	μA
	T _j = 100°C				10	mA
V _F **	T _j = 125°C	I _F = 100 A			0.85	V
	T _j = 125°C	I _F = 200 A			1.00	
	T _j = 25°C	I _F = 200 A			1.15	

Pulse test : * tp = 5 ms, duty cycle < 2 %

** tp = 380 μs, duty cycle < 2 %

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
trr	T _j = 25 °C	I _F = 0.5A I _R = 1A	I _{rr} = 0.25A			55	ns
		I _F = 1A V _R = 30V	dI _F /dt = -50A/μs			80	
t _{rr}	T _j = 25°C	I _F = 1A V _{FR} = 1.1 x V _F	tr = 5 ns		10		ns
V _{FP}	T _j = 25°C	I _F = 1A	tr = 5 ns		1.5		V

TURN-OFF SWITCHING CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
I _{RM}	T _j = 100°C	I _F = 100A L _p @ 0.05μH V _{CC} @ 0.6 V _{RRM}	dI _F /dt = -200A/μs			16	A
			dI _F /dt = -400A/μs		24		

Fig.1 : Average forward power dissipation versus average forward current.

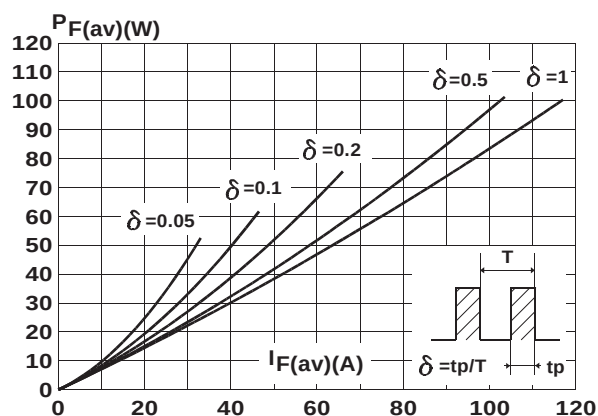


Fig.2 : Peak current versus form factor.

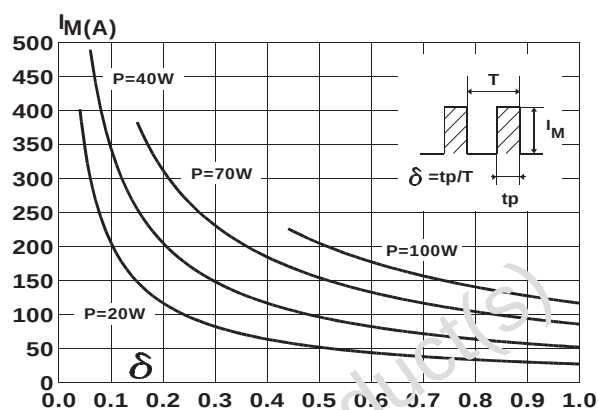


Fig.3 : Forward voltage drop versus forward current (maximum values).

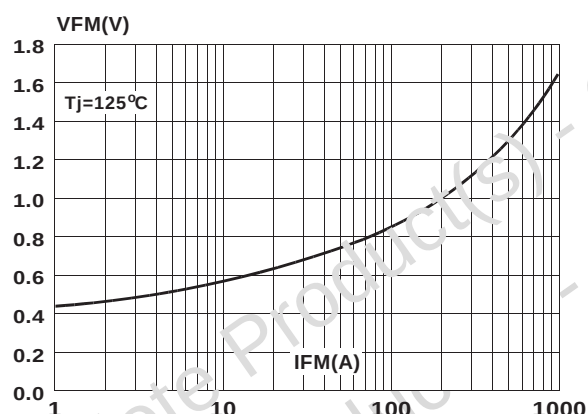


Fig.4 : Relative variation of thermal impedance junction to case versus pulse duration.

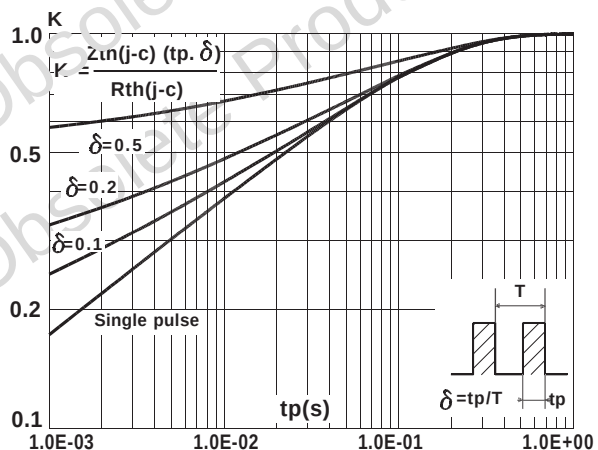


Fig.5 : Non repetitive surge peak forward current versus overload duration.

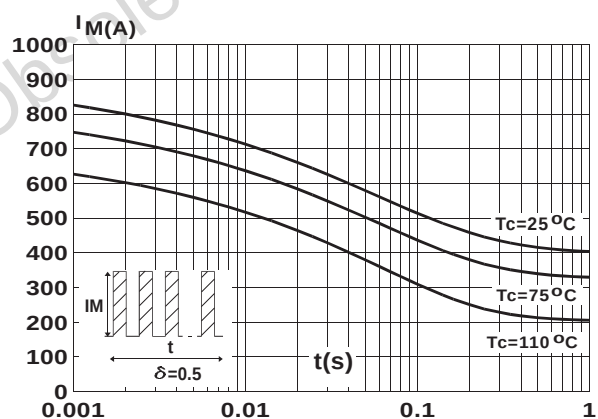


Fig.6 : Average current versus ambient temperature. (duty cycle : 0.5)

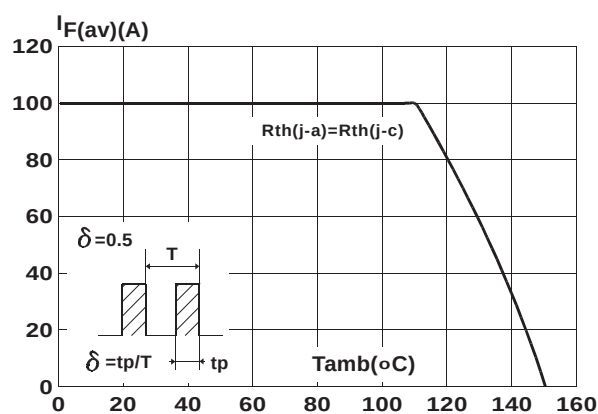


Fig.7 : Junction capacitance versus reverse voltage applied (Typical values).

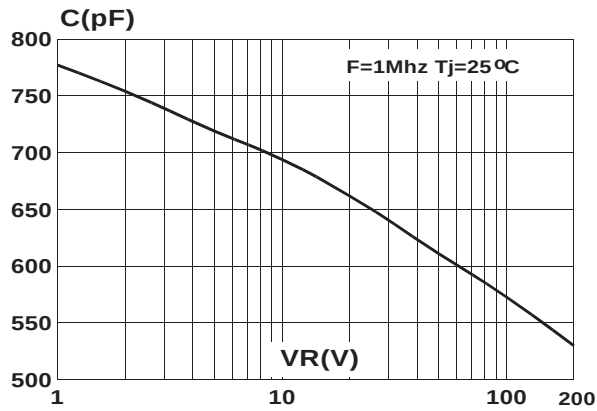


Fig.8 : Recovery charges versus dI_F/dt .

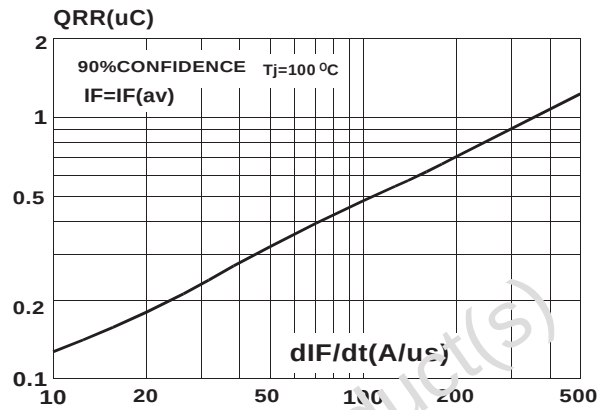


Fig.9 : Peak reverse current versus dI_F/dt .

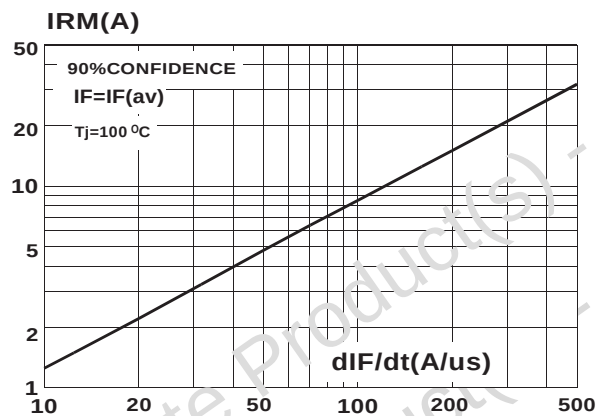
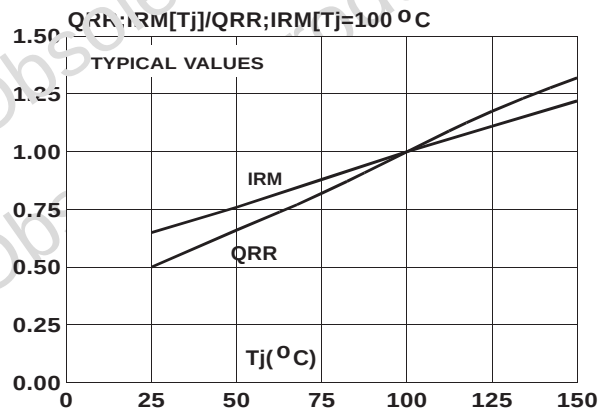


Fig.10 : Dynamic parameters versus junction temperature.



PACKAGE MECHANICAL DATA **ISOTOP**

REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	11.80	12.20	0.465	0.480
A1	8.90	9.10	0.350	0.358
B	7.8	8.20	0.307	0.323
C	0.75	0.85	0.030	0.033
C2	1.95	2.05	0.077	0.081
D	37.80	38.20	1.488	1.504
D1	31.50	31.70	1.240	1.248
E	25.15	25.50	0.990	1.004
E1	23.85	24.15	0.939	0.951
E2	24.80 typ.		0.976 typ.	
G	14.90	15.10	0.587	0.594
G1	12.60	12.80	0.496	0.504
G2	3.50	4.30	0.138	0.169
F	4.10	4.30	0.161	0.169
F1	4.60	5.00	0.181	0.197
F2	4.00	4.30	0.157	0.69
P1	4.00	4.40	0.157	0.173
S	30.10	30.30	1.185	1.193

- **Marking** : Type number
- Cooling method : C
- Weight : 27 g
- Epoxy meets UL94, V0

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