

SMBYW02-200

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
Rth (j-l)	Junction to leads	25	°C/W

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions		Min.	Typ.	Max.	Unit
V _F *	Reverse Leakage Current	T _j = 25°C	I _F = 6 A			1.25	V
		T _j = 100°C	I _F = 2 A		0.8	0.85	
I _R **	Forward Voltage Drop	T _j = 25°C	V _R = V _{RRM}			10	μA
		T _j = 100°C			0.1	0.3	mA

Pulse test : * tp = 380 μs, δ < 2 %

** tp = 5 ms, δ < 2 %

To evaluate the conduction losses use the following equation :

$$P = 0.7 \times I_{F(AV)} + 0.075 \times I_F^2 (RMS)$$

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
trr	T _j = 25°C	I _F = 1A	dI _F /dt = -50A/μs V _R = 30V		26	35	ns
tfr	T _j = 25°C	I _F = 2A	dI _F /dt = -50A/μs V _{FR} = 1.1 x V _F max		30		ns
V _{FP}	T _j = 25°C	I _F = 2A	dI _F /dt = -50A/μs		5		V

Fig. 1: Low frequency power losses versus average current.

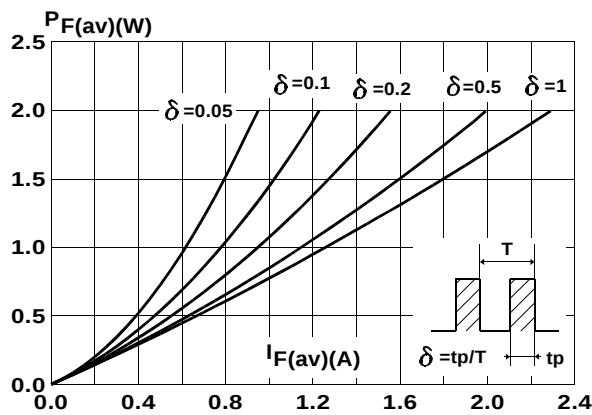


Fig. 2: Peak current versus form factor.

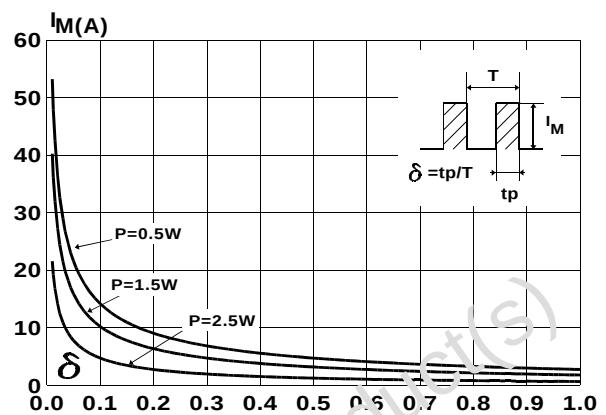


Fig. 3: Non repetitive surge peak forward current versus overload duration.

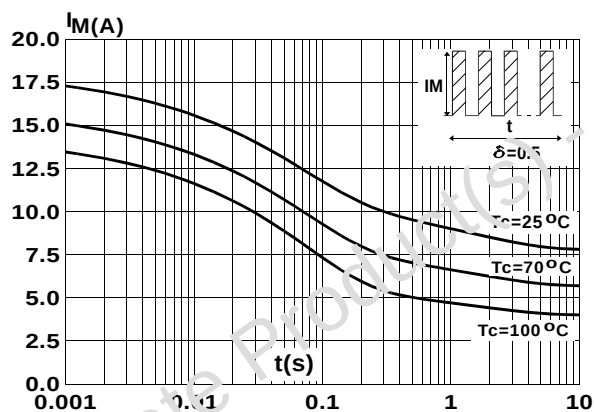


Fig. 4: Relative variation of thermal impedance junction to lead versus pulse duration.

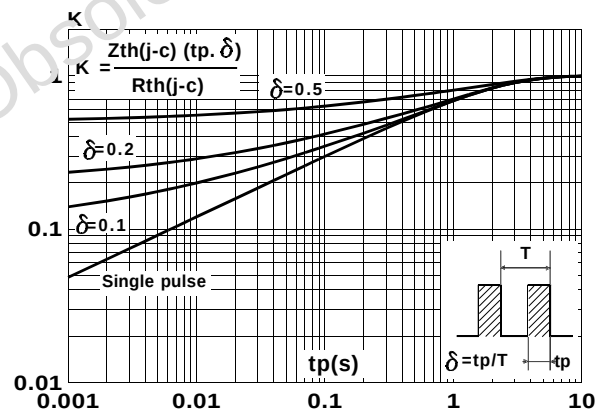


Fig. 5: Voltage drop versus forward current (maximum values).

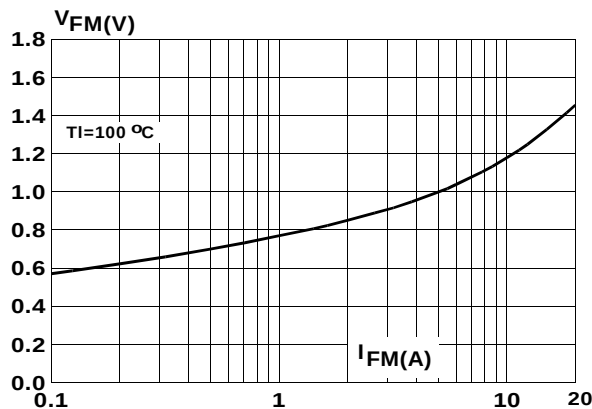


Fig. 6: Average current versus ambient temperature ($\delta=0.5$).

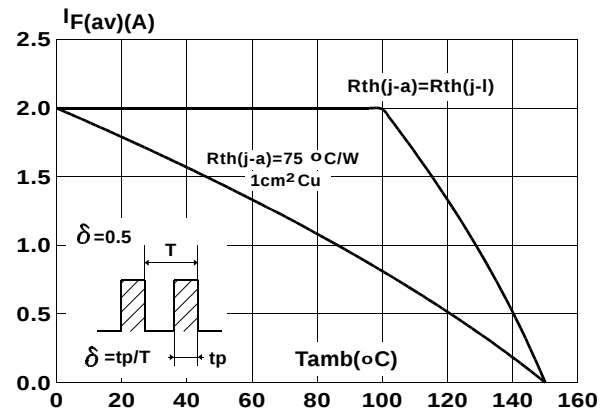
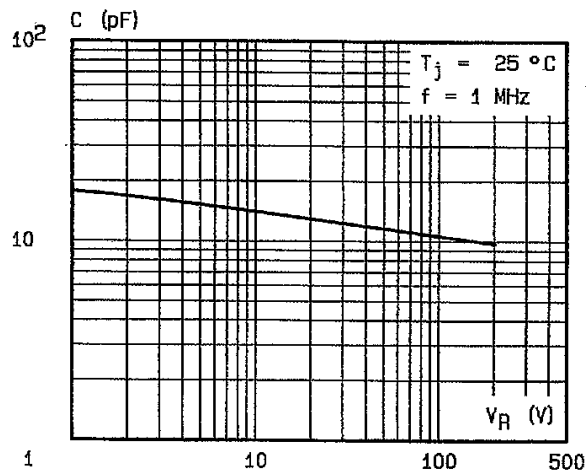
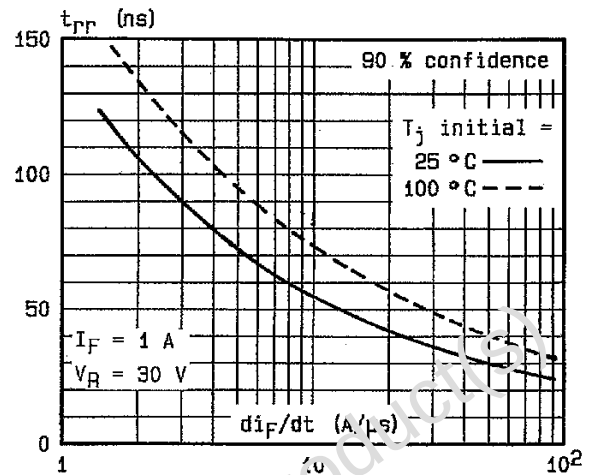
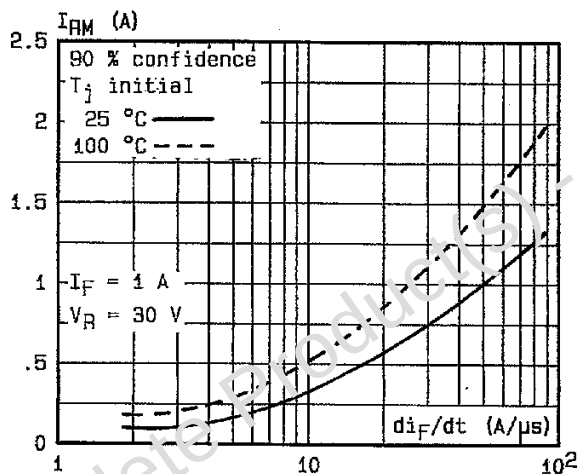
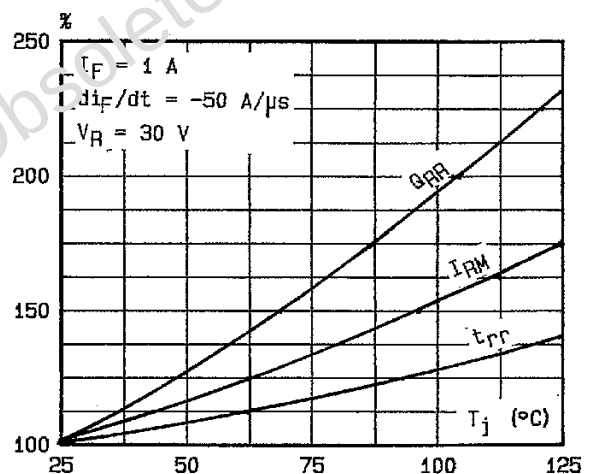
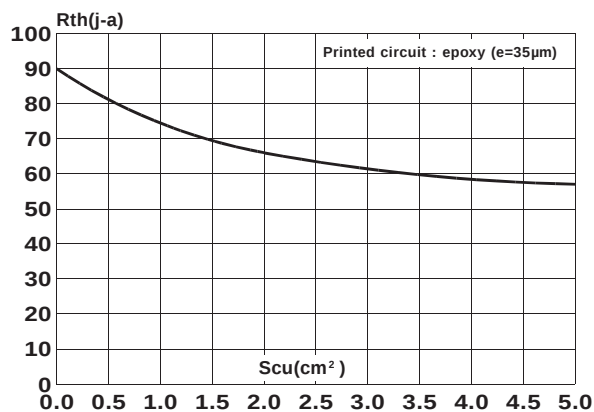
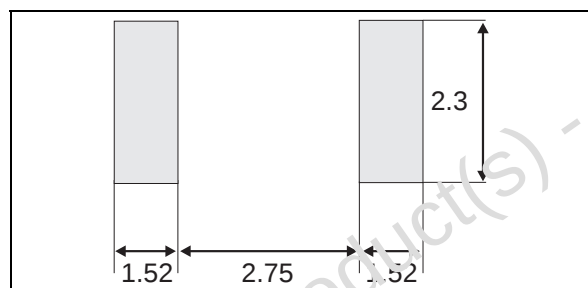


Fig. 7: Capacitance versus reverse voltage applied.**Fig. 8:** Recovery time versus di_F/dt .**Fig. 9:** Peak reverse current versus di_F/dt .**Fig. 10:** Dynamic parameters versus junction temperature.**Fig. 11:** Thermal resistance junction to ambient versus copper surface under each lead.

PACKAGE MECHANICAL DATA**SMB**

REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A1	1.90	2.45	0.075	0.096
A2	0.05	0.20	0.002	0.008
b	1.95	2.20	0.077	0.087
c	0.15	0.41	0.006	0.016
E	5.10	5.60	0.201	0.220
E1	4.05	4.60	0.159	0.181
D	3.30	3.95	0.130	0.156
L	0.75	1.00	0.030	0.063

FOOTPRINT DIMENSIONS (in millimeters)**SMB**

Ordering type	Marking	Package	Weight	Base qty	Delivery mode
SMBYW02-200	A20	SMB	0.11g	2500	Tape & reel

- Band indicates cathode
- Epoxy meets UL94,V0

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