

BAT60J

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Tests Conditions	Tests conditions		Min.	Typ.	Max.	Unit
V_F^*	Forward voltage drop	$T_j = 25^\circ\text{C}$	$I_F = 10\text{ mA}$		0.28	0.32	V
			$I_F = 100\text{ mA}$		0.35	0.40	
			$I_F = 1\text{ A}$		0.53	0.58	
I_R^{**}	Reverse leakage current	$T_j = 25^\circ\text{C}$	$V_R = 5\text{ V}$		1	3	μA
		$T_j = 25^\circ\text{C}$	$V_R = 8\text{ V}$		1.3	4	
		$T_j = 25^\circ\text{C}$	$V_R = 10\text{ V}$		2	6	
		$T_j = 25^\circ\text{C}$	$V_R = 12\text{ V}$		2.5	7.5	
		$T_j = 80^\circ\text{C}$	$V_R = 8\text{ V}$		73	150	

Pulse test: * $t_p = 380\mu\text{s}$, $\delta < 2\%$

** $t_p = 5\text{ms}$, $\delta < 2\%$

To evaluate the conduction losses the following equation:

$$P = 0.38 \times I_{F(AV)} + 0.17 I_{F(RMS)}^2$$

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

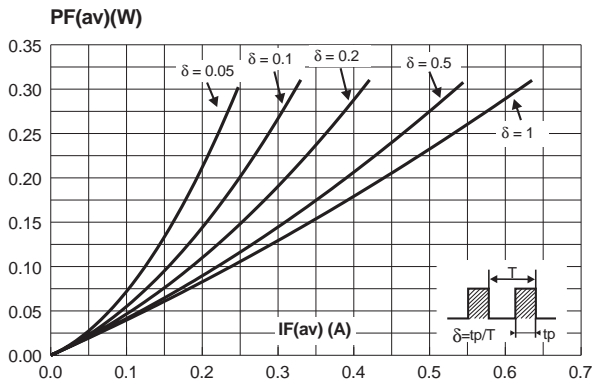


Fig. 2-1: Peak forward current versus ambient temperature ($\delta = 0.11$).

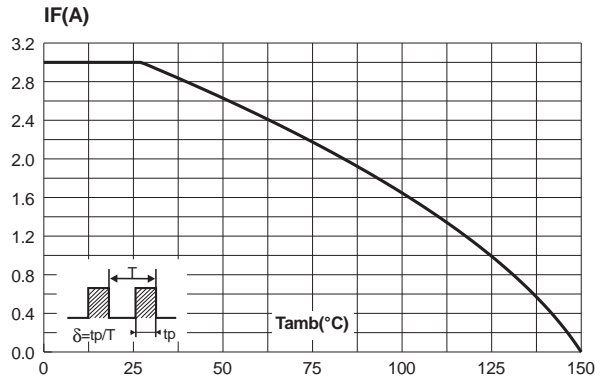


Fig. 2-2: Average forward current versus ambient temperature ($\delta = 0.5$).

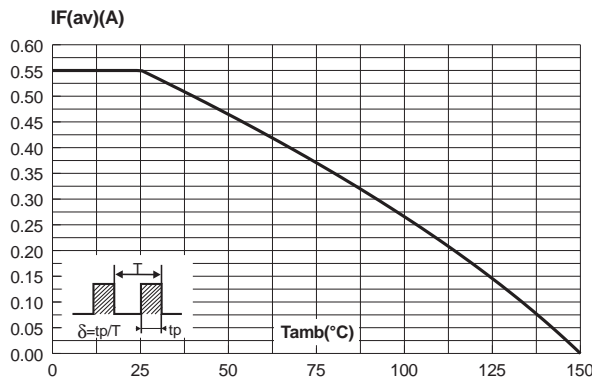


Fig. 3: Non repetitive surge peak forward current versus overload duration (maximum values).

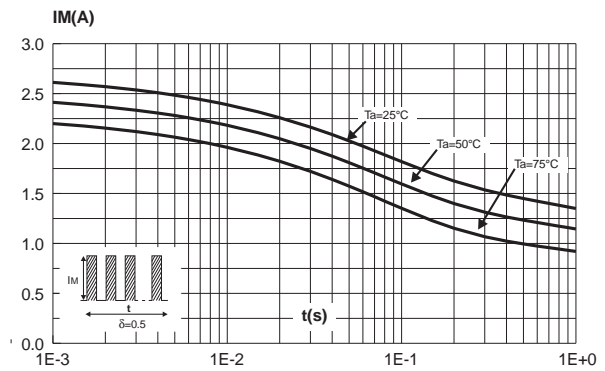


Fig. 4: Relative variation of thermal impedance junction to ambient versus pulse duration (Epoxy printed circuit board FR4 with recommended pad layout).

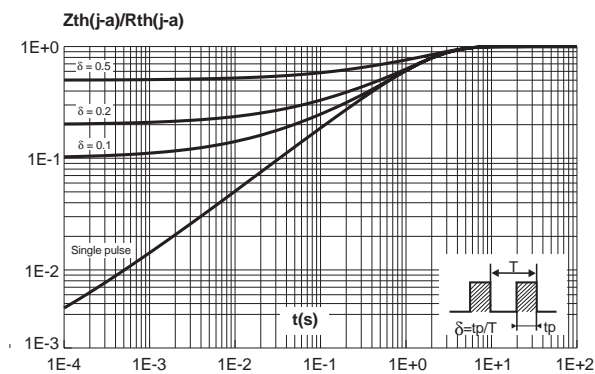
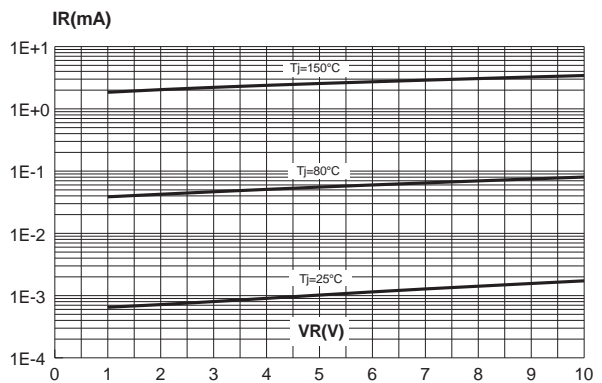


Fig. 5: Reverse leakage current versus reverse voltage applied (typical values).



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Fig. 6: Reverse leakage current versus junction temperature (typical values).

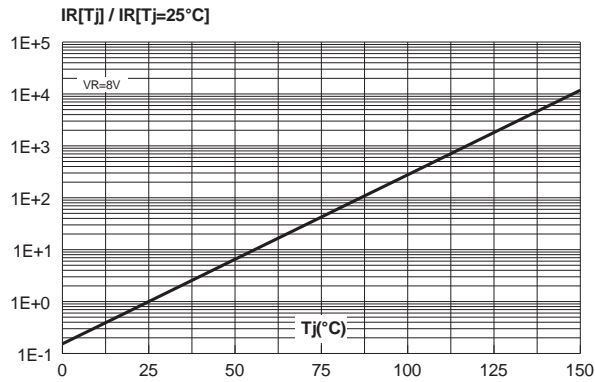


Fig. 7: Junction capacitance versus reverse voltage applied (typical values).

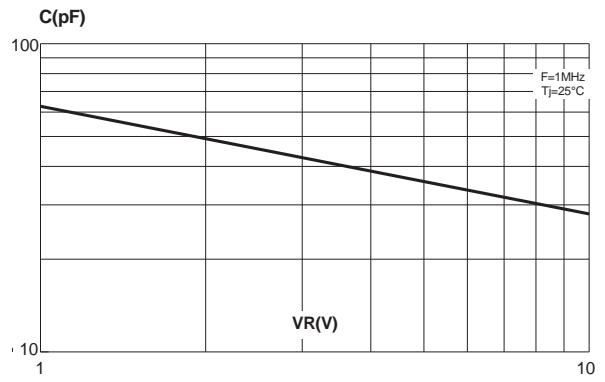


Fig. 8-1: Forward voltage drop versus forward current (High level).

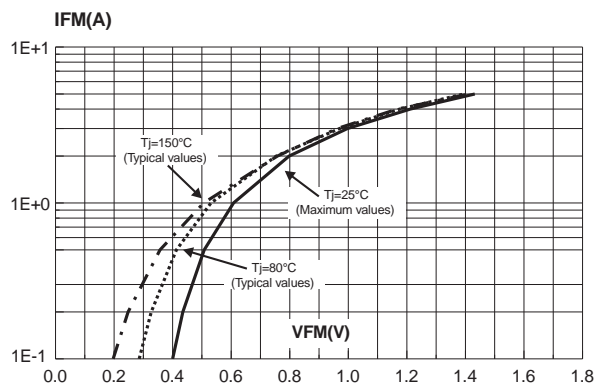


Fig. 8-2: Forward voltage drop versus forward current (Low level).

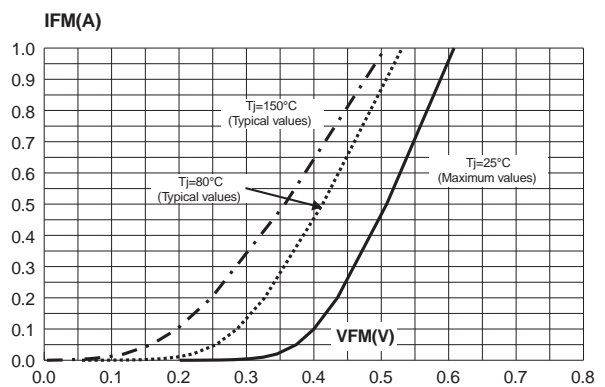
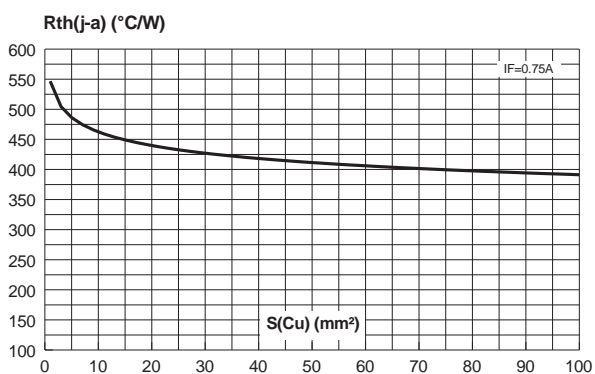


Fig. 9: Thermal resistance junction to ambient versus copper surface (epoxy printed circuit board FR4, copper thickness: $35\mu\text{m}$).



PACKAGE MECHANICAL DATA
SOD-323

	DIMENSIONS				
	REF.	Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A		1.17		0.046
A1	0	0.1	0	0.004	
b	0.25	0.44	0.01	0.017	
c	0.1	0.25	0.004	0.01	
D	1.52	1.8	0.06	0.071	
E	1.11	1.45	0.044	0.057	
H	2.3	2.7	0.09	0.106	
L	0.1	0.46	0.004	0.02	
Q1	0.1	0.41	0.004	0.016	

MARKING

Type	Marking	Package	Weight	Base qty	Delivery mode
BAT60JFILM	60	SOD-323	0.005 g.	3000	Tape & reel

- Epoxy meets UL94V-0

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