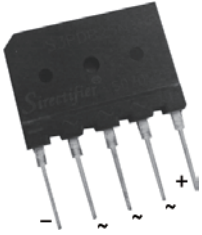
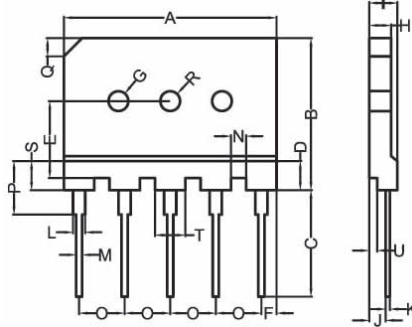


S3PDB12

Three Phase Bridge Rectifiers



Dimensions(mm)



[mm]	MIN	TYP	MAX
A	34.70	35.0	35.30
B	24.70	25.0	25.30
C	17.0	17.50	18.0
D	4.70	4.80	4.90
E	12.45	12.65	12.85
F	2.30	2.50	2.70
G	3.10	3.25	3.40
H	3.40	3.60	3.80
I	4.40	4.60	4.80
J	2.50	2.70	2.90
K	0.60	0.70	0.80
L	2.0	2.20	2.40
M	0.90	1.0	1.10
N	2.50	2.60	2.90
O	7.30	7.50	7.70
P	5.40	5.50	5.60
Q	(3.0) × 45°		
R	∅3.10	∅3.25	∅3.40
S	1.40	1.50	1.60
T	4.60	4.80	5.0
U	1.20	1.30	1.40

	V _{RRM}	V _{RMS}
	V	V
S3PDB12N02P	300	200
S3PDB12N04P	500	400
S3PDB12N06P	700	600
S3PDB12N08P	900	800
S3PDB12N12P	1300	1200
S3PDB12N14P	1500	1400
S3PDB12N16P	1700	1600
S3PDB12N18P	1900	1800

Symbol	Test Conditions	Characteristic Values	Unit
I _(AV)	Maximum Average Forward(With Heatsink) Rectified Current @T _c =100°C(Without Heatsink)	12.0 2.5	A
I _{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	130	A
V _F	I _F =12.0A; T _{VJ} =25°C	1.20	V
I _R	Maximum DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =125°C	3 100	μA
I ² t	I ² t Rating For Fusing(t < 8.3ms)	200	A ² S
V _{ISO}	RMS 1min	2500	V _{AC}
R _{thJC}	Per module	1.17	°C/W
T _J	Operating Temperature Range	-55...+150	°C
T _{stg}	Storage Temperature Range	-55...+150	°C

FEATURES

- * Rating to 1600V PRV
- * Ideal for printed circuit board
- * Low forward voltage drop, high current capability
- * Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- * UL File E310749
- * RoHS Compliant

MECHANICAL DATA

- * Polarity: Symbols molded on body
- * Weight: 0.23 ounces, 6.6 grams
- * Mounting position: Any



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S3PDB12

Three Phase Bridge Rectifiers

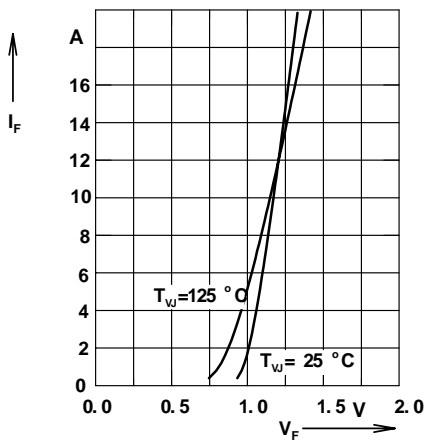


Fig. 1 Forward current versus voltage drop per diode

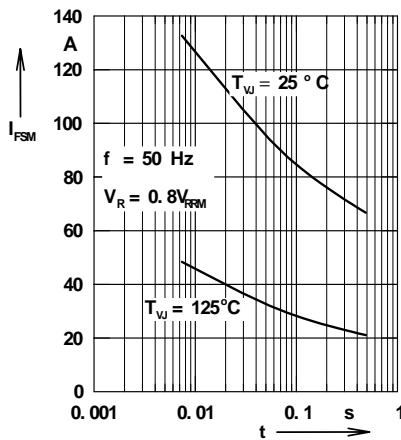


Fig. 2 Surge overload current

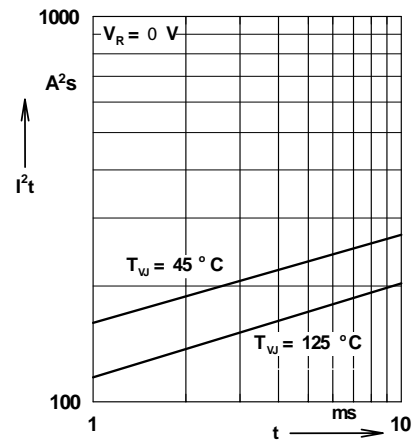


Fig. 3 I^2t versus time per diode

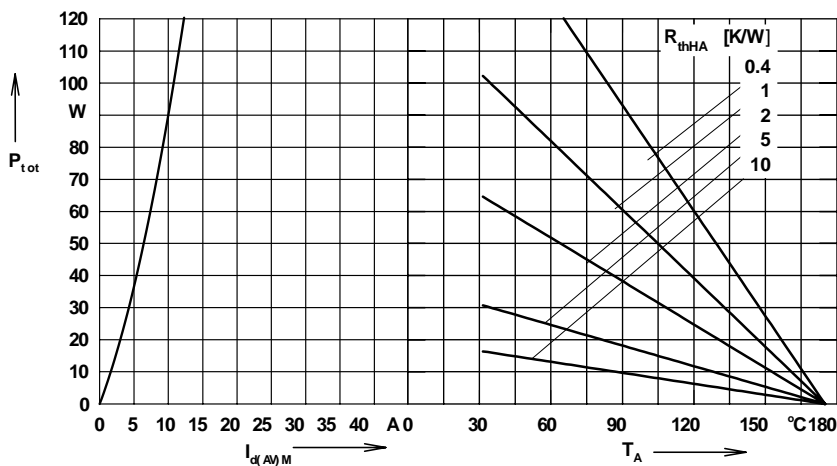


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine180

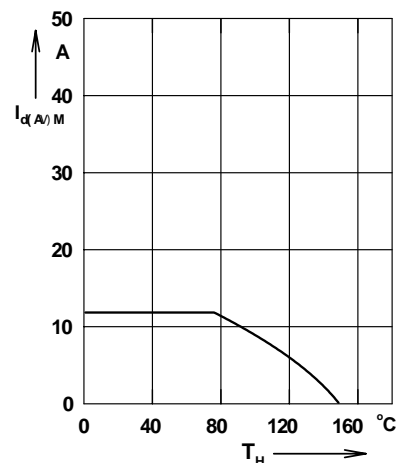


Fig. 5 Max. forward current vs. case temperature

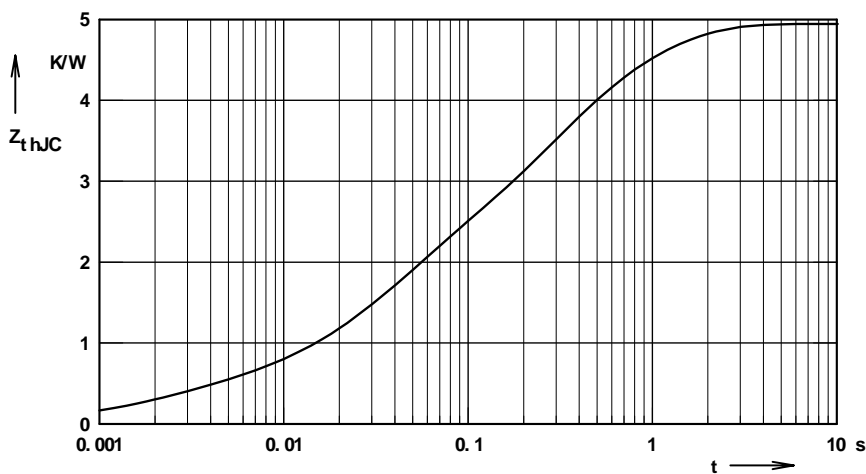


Fig. 6 Transient thermal impedance junction to case

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.302	0.002
2	1.252	0.032
3	1.582	0.227
4	1.164	0.82

