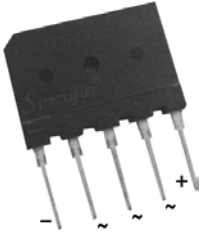
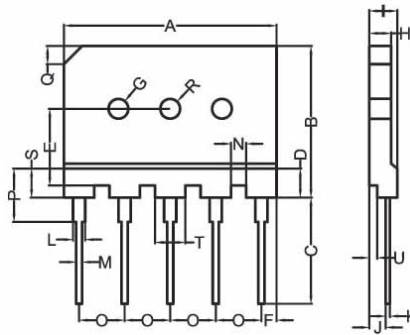


S3PDB42BLLD

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
S3PDB42N02P	300	200
S3PDB42N04P	500	400
S3PDB42N06P	700	600
S3PDB42N08P	900	800
S3PDB42N12P	1300	1200
S3PDB42N14P	1500	1400
S3PDB42N16P	1700	1600
S3PDB42N18P	1900	1800

Symbol	Test Conditions	Characteristic Values	Unit
I _(AV)	Maximum Average Forward(With Heatsink Note 2) Rectified Current @T _c =100°C(Without Heatsink)	42.0 6.0	A
I _{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	390	A
V _F	I _F =42.0A; 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	10 200	μA
I ² t	I ² t Rating For Fusing(t < 8.3ms)	720	A°S
V _{iso}	RMS 1min	2500	VAC
R _{thJC}	Per module	0.70	°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



www.sirectifier.com

S3PDB42

Three Phase Bridge Rectifiers

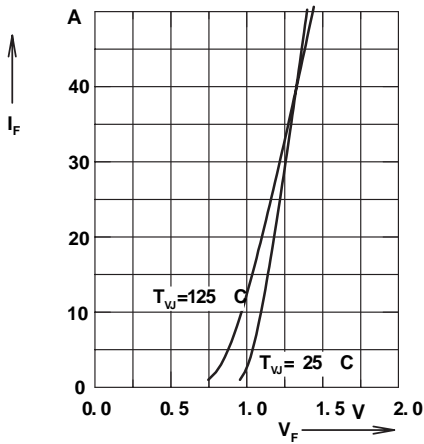


Fig. 1 Forward current versus voltage drop per diode

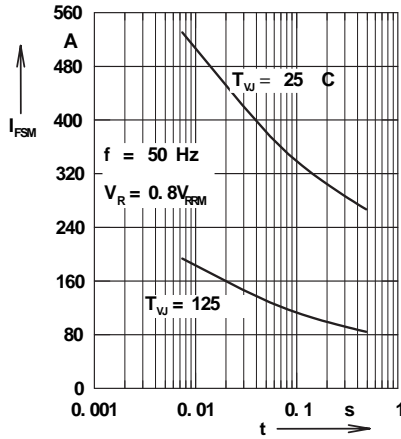


Fig. 2 Surge overload current

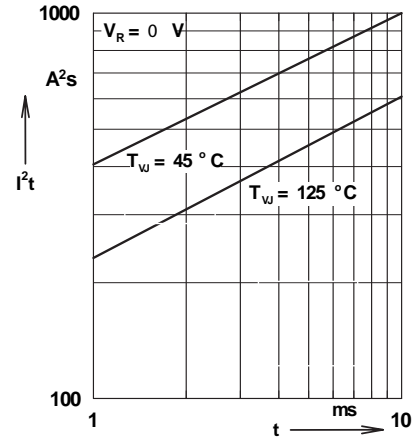


Fig. 3 I^2t versus time per diode

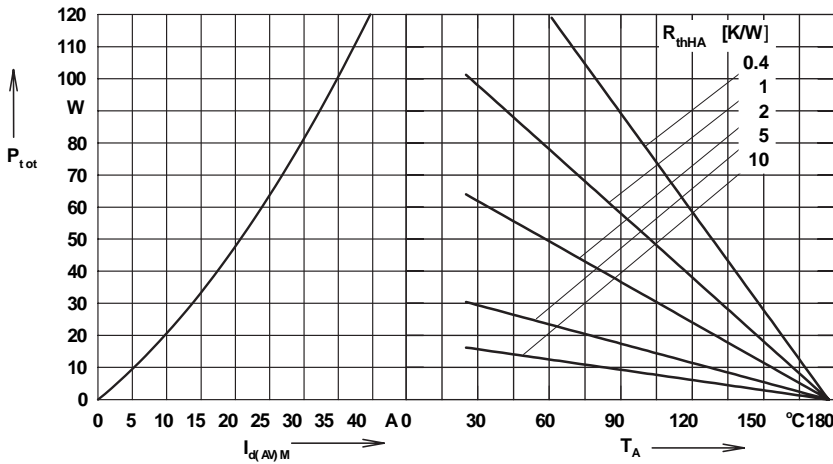


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine180

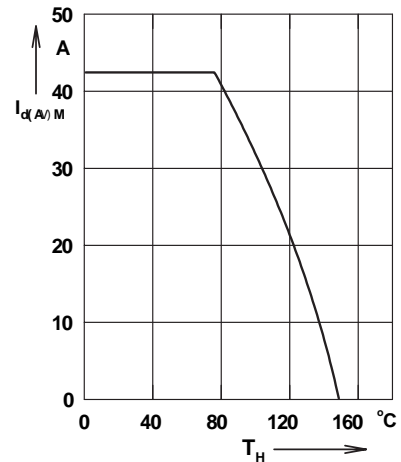


Fig. 5 Max. forward current vs. case temperature

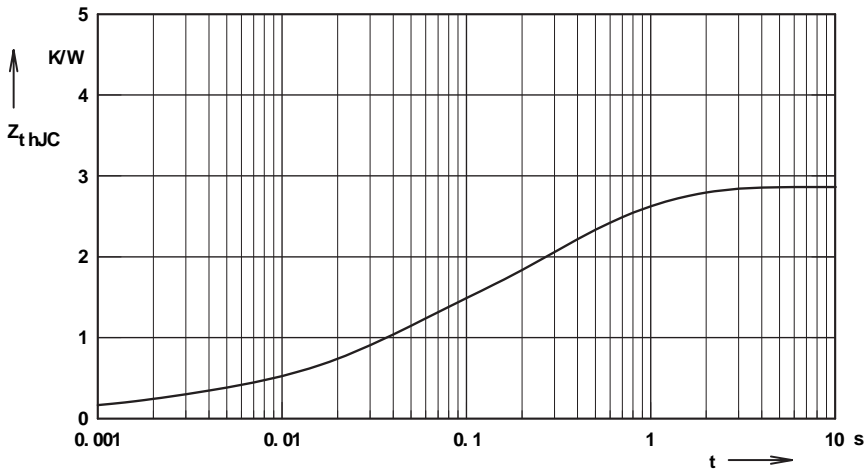


Fig. 6 Transient thermal impedance junction to case

Constants for ZthJC calculation:

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

