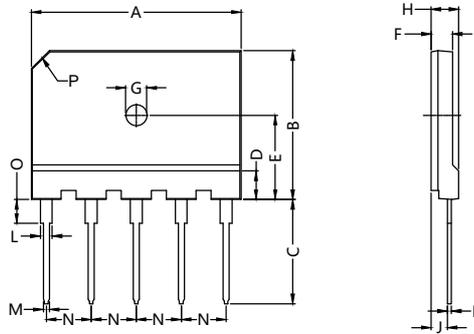


S3PDB18

Three Phase Bridge Rectifiers



Dimensions(mm)



Dim.	Millimeter	
	Min.	Max.
A	34.70	35.30
B	24.70	25.30
C	17.00	18.00
D	4.50	5.10
E	13.85	14.45
F	3.40	3.65
ØG	Ø3.1	Ø3.4
H	4.40	4.65
J	2.50	2.75
K	0.60	0.75
L	2.00	2.20
M	0.90	1.00
N	7.30	7.70
O	4.00	4.00
P	-	C3

	V _{RRM} V	V _{RSM} V
S3PDB18N02P	300	200
S3PDB18N04P	500	400
S3PDB18N06P	700	600
S3PDB18N08P	900	800
S3PDB18N12P	1300	1200
S3PDB18N14P	1500	1400
S3PDB18N16P	1700	1600
S3PDB18N18P	1900	1800

Symbol	Test Conditions	Characteristic Values	Unit
I _(AV)	Maximum Average Forward (With Heatsink) Rectified Current @T _c =100°C (Without Heatsink)	18.0 3.70	A
I _{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	150	A
V _F	I _F =18.0A; 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	4 100	µA
I ² t	I ² t Rating For Fusing (t < 8.3ms)	300	A ² S
C _J	Typical Junction Capacitance Per Element	39	pF
R _{thJC}	Per module	1.15	°C/W
T _J	Operating Temperature Range	-55...+150	°C
T _{stg}	Storage Temperature Range	-55...+150	°C

FEATURES

- * Rating to 1800V 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



Sirectifier®

S3PDB18

Three Phase Bridge Rectifiers

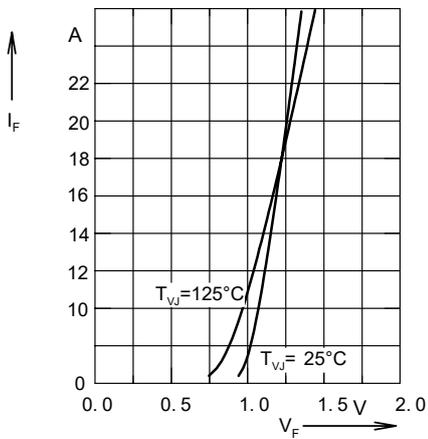


Fig. 1 Forward current versus voltage drop per diode

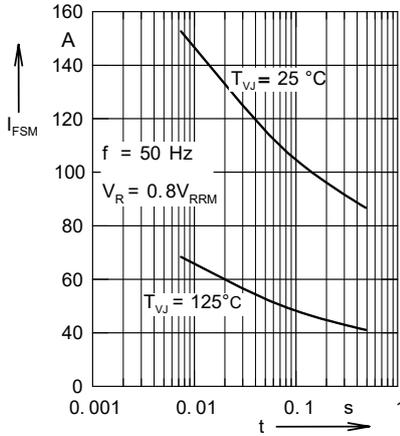


Fig. 2 Surge overload current

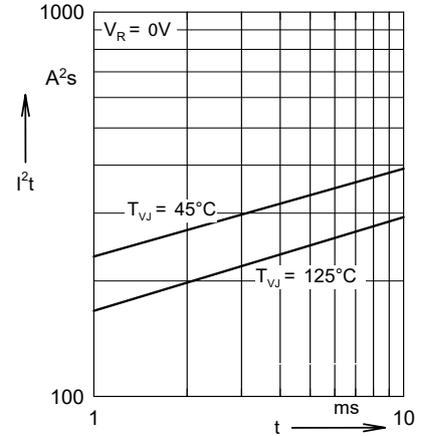


Fig. 3 I^2t versus time per diode

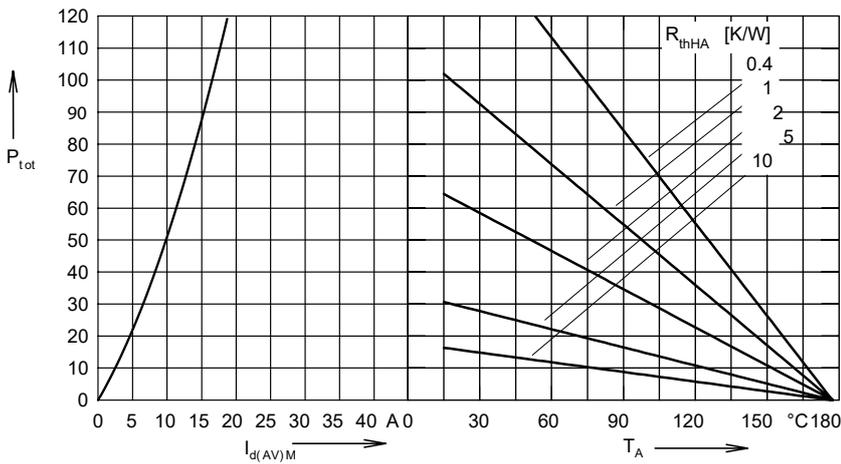


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180

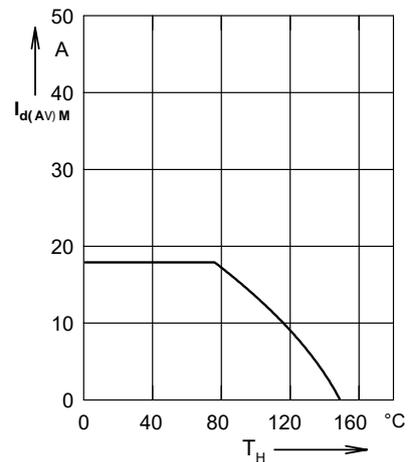


Fig. 5 Max. forward current vs. case temperature

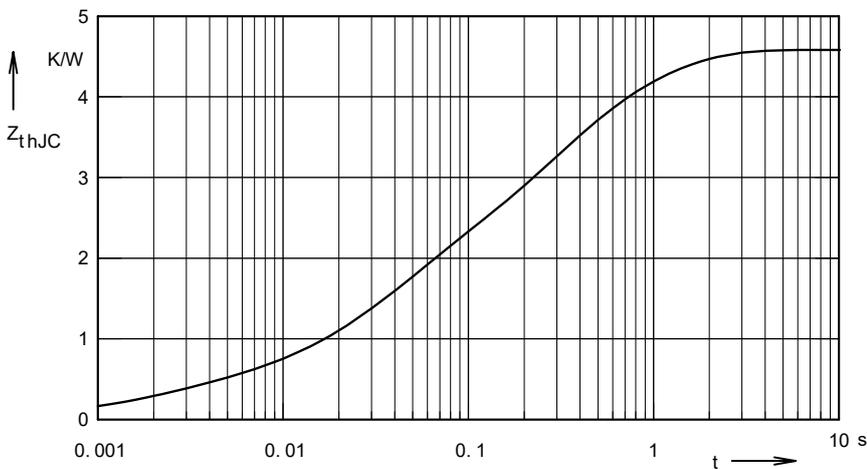


Fig. 6 Transient thermal impedance junction to case

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