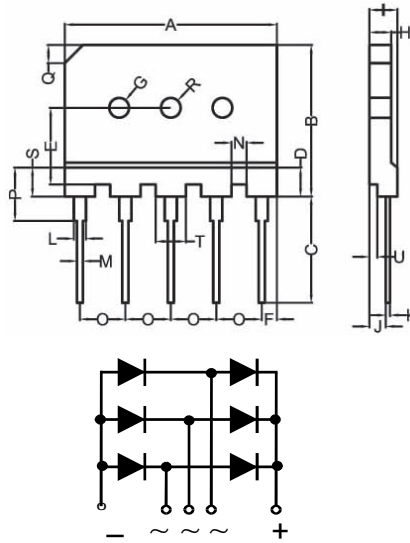


S3PDB42N**PAV

Three Phase Bridge Rectifiers

AVALANCHE DIODE INSIDE

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	2.00	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	Ø3.10	Ø3.25	Ø3.40
S	1.40	1.50	1.60
T	4.60	4.80	5.0
U	1.20	1.30	1.40

V_{RMS}
V

V_{RRM}
V

S3PDB42N08PAV	900	800
S3PDB42N12PAV	1300	1200
S3PDB42N14PAV	1500	1400
S3PDB42N16PAV	1700	1600
S3PDB42N18PAV	1900	1800

Symbol	Test Conditions	Characteristic Values	Unit
I _{AV}	Maximum Average Forward(With Heatsink) 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
PRSM	Per diode chip, T _{vj} = 25°C, t _p = 10 μs	6.0	KW
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 ² S
V _{ISO}	RMS 1min	2500	VAC
R _{thJC}	Per module	0.70	°C/W
T _J	Operating Temperature Range	-40...+180	°C
T _{stg}	Storage Temperature Range	-40...+180	°C
M _d	Mounting Torque (M3)	0.5~0.8	Nm

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
- * Avalanche Diode dies inside

MECHANICAL DATA

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

Sirectifier®

www.sirectifier.com

S3PDB42N**PAV

Three Phase Bridge Rectifiers

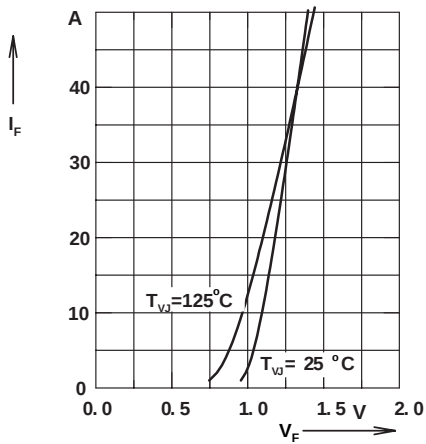


Fig.1 Forward current versus voltage drop per diode

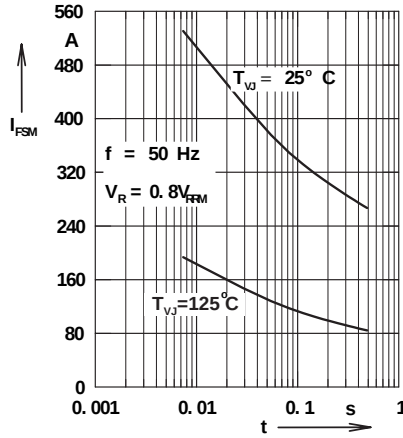


Fig.2 Surge overload current

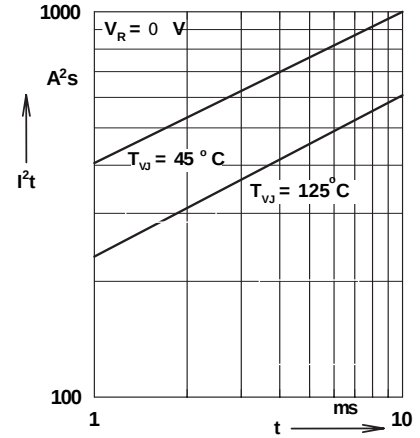


Fig.3 I^2t versus time per diode

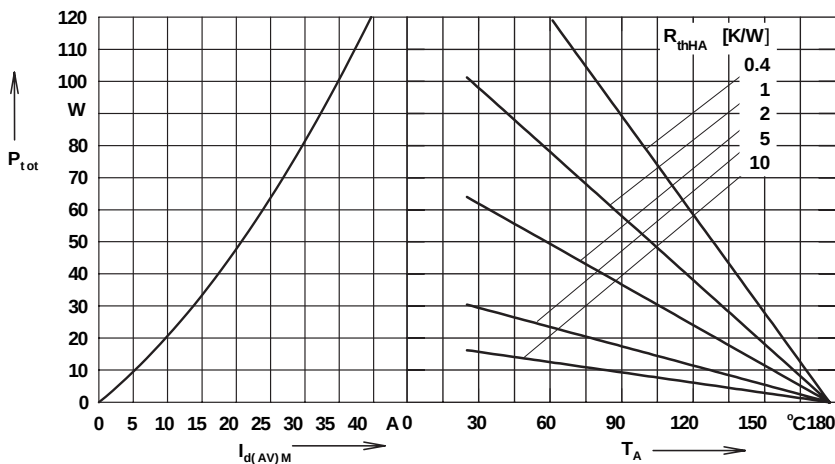


Fig.4 Power dissipation versus direct output current and ambient temperature, sine180

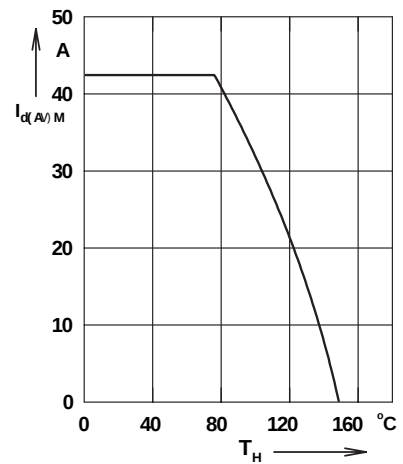


Fig.5 Max. forward current vs. case temperature

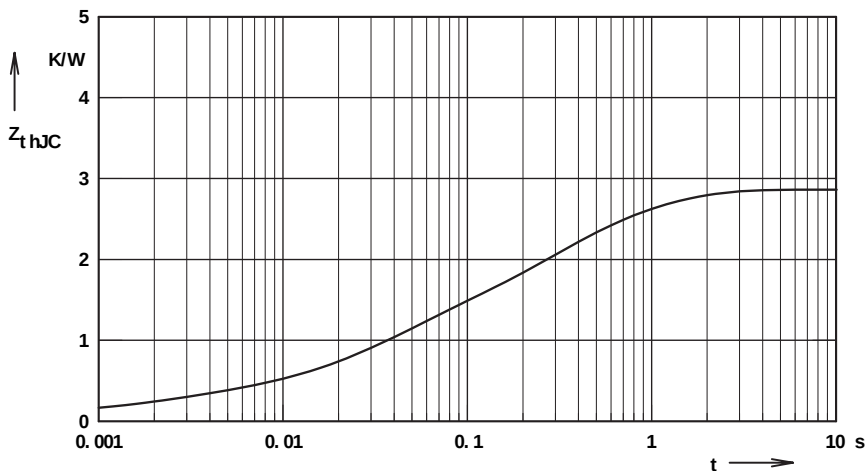


Fig.6 Transient thermal impedance junction to case

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

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