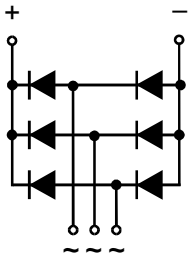


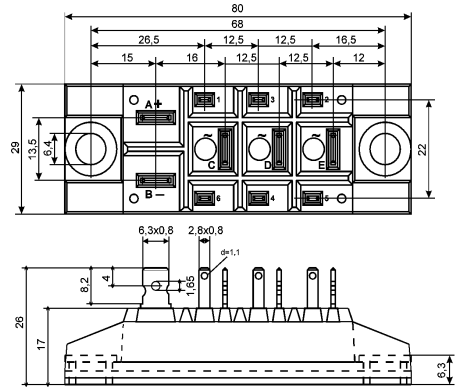
# S3PDB85

## Three Phase Rectifier Modules



Type	$V_{RSM}$ V	$V_{RRM}$ V
S3PDB85N08	900	800
S3PDB85N12	1300	1200
S3PDB85N14	1500	1400
S3PDB85N16	1700	1600
S3PDB85N18	1900	1800

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
$I_{dav}$	$T_C=100^{\circ}C$ , module	85	A
$I_{FSM}$	$T_{VJ}=45^{\circ}C$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	750 820	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	600 700	
$I^2t$	$T_{VJ}=45^{\circ}C$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2800 2820	$A^2s$
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2200 2250	
$T_{VJ}$ $T_{VJM}$ $T_{stg}$		-40...+150 150 -40...+125	$^{\circ}C$
$V_{ISOL}$	50/60Hz, RMS $I_{ISOL} \leq 1mA$ t=1min t=1s	2500 3000	V~
$M_d$	Mounting torque (M5) (10-32 UNF)	$5 \pm 15\%$ $44 \pm 15\%$	Nm lb.in.
Weight	typ.	110	g

# S3PDB85

## Three Phase Rectifier Modules

Symbol	Test Conditions	Characteristic Values	Unit
<b>I<sub>R</sub></b>	V <sub>R</sub> =V <sub>RRM</sub> ; T <sub>VJ</sub> =25°C V <sub>R</sub> =V <sub>RRM</sub> ; T <sub>VJ</sub> =T <sub>VJM</sub>	≤ 0.5 < 10	mA
<b>V<sub>F</sub></b>	I <sub>F</sub> =150A; T <sub>VJ</sub> =25°C	≤ 1.6	V
<b>V<sub>TO</sub></b>	For power-loss calculations only	0.8	V
<b>r<sub>T</sub></b>	T <sub>VJ</sub> =T <sub>VJM</sub>	6	mΩ
<b>R<sub>thJC</sub></b>	per diode per module	1.3 0.22	K/W
<b>R<sub>thJK</sub></b>	per diode per module	1.6 0.27	K/W
<b>d<sub>s</sub></b>	Creeping distance on surface	16.1	mm
<b>d<sub>A</sub></b>	Creepage distance in air	7.5	mm
<b>a</b>	Max. allowable acceleration	50	m/s <sup>2</sup>

### FEATURES

- \* Package with copper base plate
- \* Isolation voltage 3000 V~
- \* Planar passivated chips
- \* 1/4" fast-on power terminals
- \* Low forward voltage drop

### APPLICATIONS

- \* Supplies for DC power equipment
- \* Input rectifiers for PWM inverter
- \* Battery DC power supplies
- \* Field supply for DC motors

### ADVANTAGES

- \* Easy to mount with two screws
- \* Space and weight savings
- \* Improved temperature and power cycling