

THREE PHASE BRIDGE

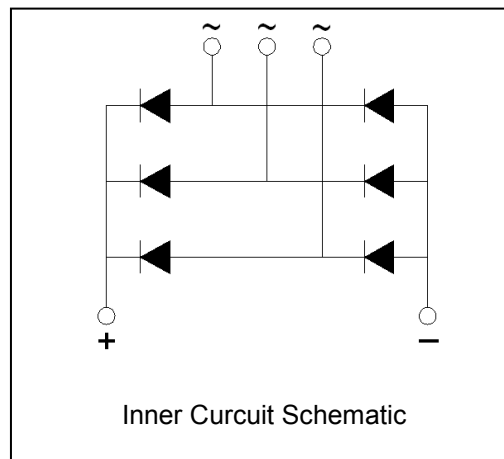
3-Phase Rectifier Series

Features

- Low V_F
- Direct Mounting to heatsink
- Low profile package
- Glass Passivation Chip
- Easy Connection
- Insulated Type

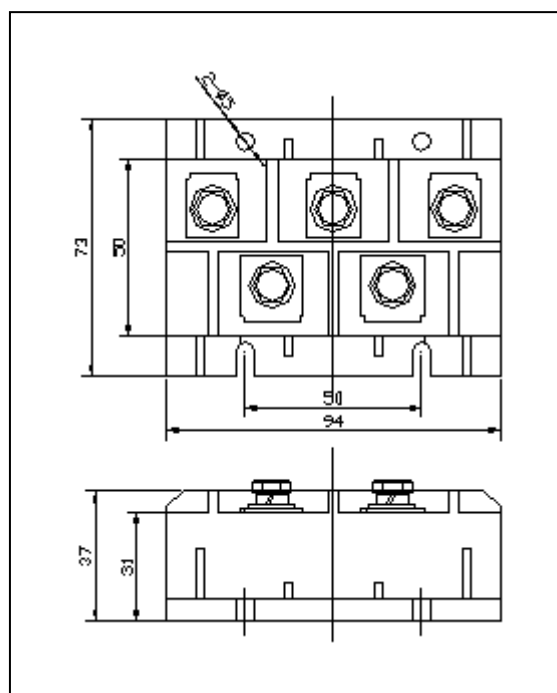
Typical Applications

- Inverters
- Welding
- UPS
- SMPS
- Battery Chargers
- DC Motors
- General Purpose DC Power Supplies



Major Ratings and Characteristics

Parameters	DPC250A 1K6V	Units
I_o	250	A
@ T_c	105	°C
I_{FSM} @ 50Hz	400	A
@ 60Hz	620	A
$I^2 t$ @ 50Hz	1370	A ² s
@ 60Hz	1230	A ² s
V_{DRM} / V_{RRM}	1600	V
T_J range	- 40 to 150	°C



ELECTRICAL SPECIFICATIONS

Voltage Ratings

Type number	Voltage Code	V_{RRM} / V_{DRM} , maximum repetitive peak reverse voltage V	V_{RSM} , maximum non- repetitive peak rev. voltage V	I_{RRM} / I_{DRM} max. @ $T_J = T_{J \text{ max.}}$ mA
DPC250A.	04	400	500	5
	08	800	900	
	12	1200	1300	
	14	1400	1500	
	16	1600	1700	

Forward Conduction

Parameter		DPC250A	Units	Conditions			
I _O	Maximum DC output current	250	A	120° Rect conduction angle			
	@ Case temperature	105	°C				
I _{FSM}	Maximum peak, one-cycle forward, non-repetitive on state surge current	400	A	t = 10ms	No voltage	Initial T _J = T _J max.	
		620		t = 8.3ms	reapplied		
		430		t = 10ms	100% V _{RRM}		
		460		t = 8.3ms	reapplied		
I ² t	Maximum I ² t for fusing	1370	A ² s	t = 10ms	No voltage		
		1230		t = 8.3ms	reapplied		
		620		t = 10ms	100% V _{RRM}		
		690		t = 8.3ms	reapplied		
I ² √ t	Maximum I ² √ t for fusing	15100	A ² √ s	t = 0.1 to 10ms, no voltage reapplied			
V _{FM}	Maximum forward voltage drop	1.25	V	pk = 160A, T _J = 25°C, t p = 400 μs single junction			

Insulation Table

Parameter	DPC250A	Units	Conditions
V_{INS} RMS insulation voltage	2500	V	$T = 25^\circ C$ all terminal shorted f = 50Hz, t = 1s

Thermal and Mechanical Specifications

Parameter	DPC250A	Units	Conditions
T _J Maximum junction operating temperature range	- 40 to 150	°C	
T _{stg} Maximum storage temperature range	- 40 to 150	°C	
R _{thJC} Maximum thermal resistance, junction to case	0.1	K/W	DC operation per module
	1.0		DC operation per junction
	0.12		120° Rect conduction angle per module
	1.0		120° Rect conduction angle per junction
R _{thJC} Maximum I ² √ t for fusing	0.10	K/W	Per module. Mounting surface smooth, flat and greased. Heatsink compound thermal conductivity = 0.42W/mK
T Mounting torque ± 10% to heatsink	3	Nm	A mounting compound is recommended and the torque should be rechecked after a period of 3 hours to allow for the spread of the compound. Lubricated threads.
wt Approximate weight	458	g	

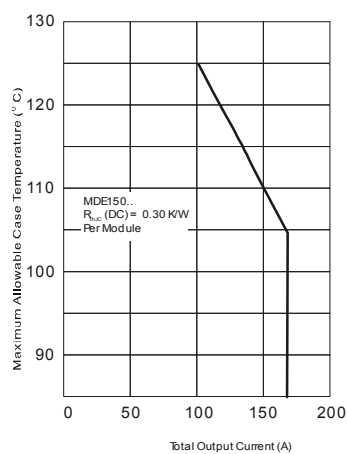
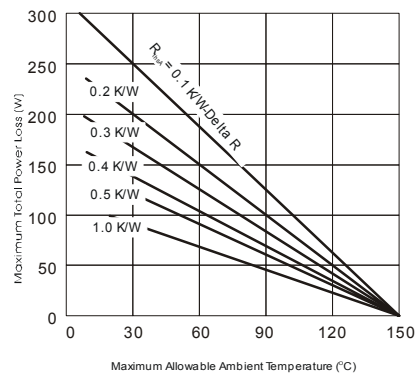
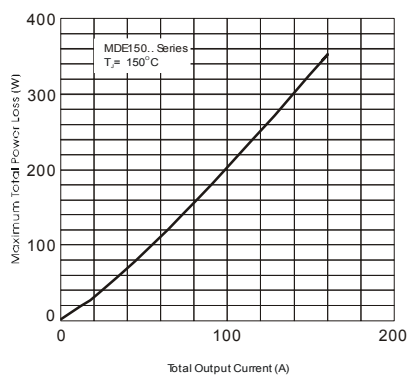


Fig. 1 - Current Rating Characteristics



Outline Table