Three – Phase Bridge Rectifier

Features

- Easy connections
- Excellent power volume ratio
- Insulated type

Voltage Ratings (T_J = 25^{0}C unless otherwise noted)				
Type number	**Voltage code**	**VRRM, Max. repetitive peak reverse voltage (V)**	**VRSM, Max. non-repetitive peak reverse voltage (V)**	**IRRM max @ TJ max (mA)**
130MDS	80	800	900	10
	100	1000	1100	
	120	1200	1300	
	140	1400	1500	
	160	1600	1700	

MDS

Thermal and Mechanical Specifications (TA = 250C unless otherwise noted)				
Parameters		**Symbol**	**Values**	**Units**
Maximum operating junction temperature range		T_J	- 40 to + 150	^{0}C
Maximum storage temperature range		T_{Stg}	- 40 to + 150	^{0}C
Maximum thermal resistance, junction to case	DC operation per module	$R_{th(JC)}$	0.16	^{0}C/W
	DC operation per junction		0.93	
	120 Rect conduction angle per module		0.18	
	120 Rect conduction angle per junction		1.08	
Maximum thermal resistance, case to heatsink	Per module, Mounting surface smooth, flat and greased	$R_{th(CS)}$	0.03	^{0}C/W
Mounting torque ±10%	to heatsink	T	4 to 6	Nm
	to terminal		3 to 4	
Approximate weight			176	g

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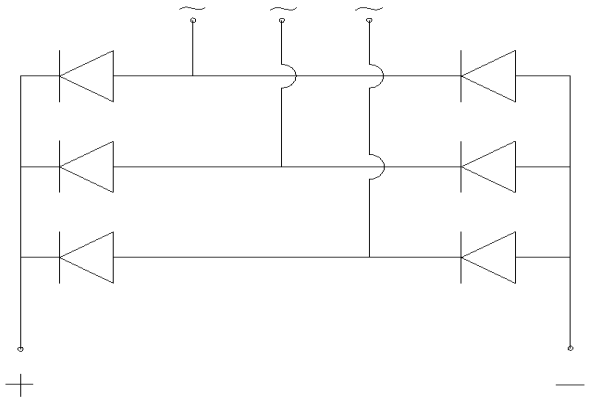
Electrical Specifications (T_J = 25^{0}C unless otherwise noted)						
Parameters	**Conditions**			**Symbol**	**Values**	**Units**
Maximum DC output current	120^0 Rect conduction angle, T_C = 85^{0}C			I_0	130	A
Maximum peak one-cycle forward, non-repetitive surge current	t = 10ms	No voltage reapplied	T_J = T_J max.	I_{FSM}	1130	A
	t = 8.3ms				1180	
	t = 8.3ms	100% V_{RRM} reapplied			950	
	t = 10ms				1000	
Maximum I^2t for fusing	T = 8.3ms	No voltage reapplied		I^2t	6400	A^2s
	T = 10ms				5800	
	T = 8.3ms	100% V_{RRM} reapplied			4500	
	T = 10ms				4100	
Maximum $J^2\sqrt{t}$ for fusing	T = 0.1 to 10ms, no voltage reapplied			$J^2\sqrt{t}$	64000	$A^2\sqrt{s}$
Low level value of threshold voltage	[16.7% * π * $I_{F(AV)}$ < I < π * $I_{F(AV)}$], @ T_J max			$V_{F(TO)1}$	0.78	V
High level value of threshold voltage	[I > π > $I_{F(AV)}$], @ T_J max			$V_{F(TO)2}$	0.99	V
Low level value of forward slope resistance	[16.7% * π * $I_{F(AV)}$ < I < π * $I_{F(AV)}$], @ T_J max			r_1	4.59	mΩ
High level value of forward slope resistance	[I > π * $I_{F(AV)}$], @ T_J max			r_2	4.17	mΩ
Maximum forward voltage drop	I_{pk} = 100A, t_P = 400 µs single junction			V_{FM}	1.63	V
RMS isolation voltage	f = 50Hz, t = 1ms, all terminals shorted			V_{ISO}	4000	V

Diode Configuration



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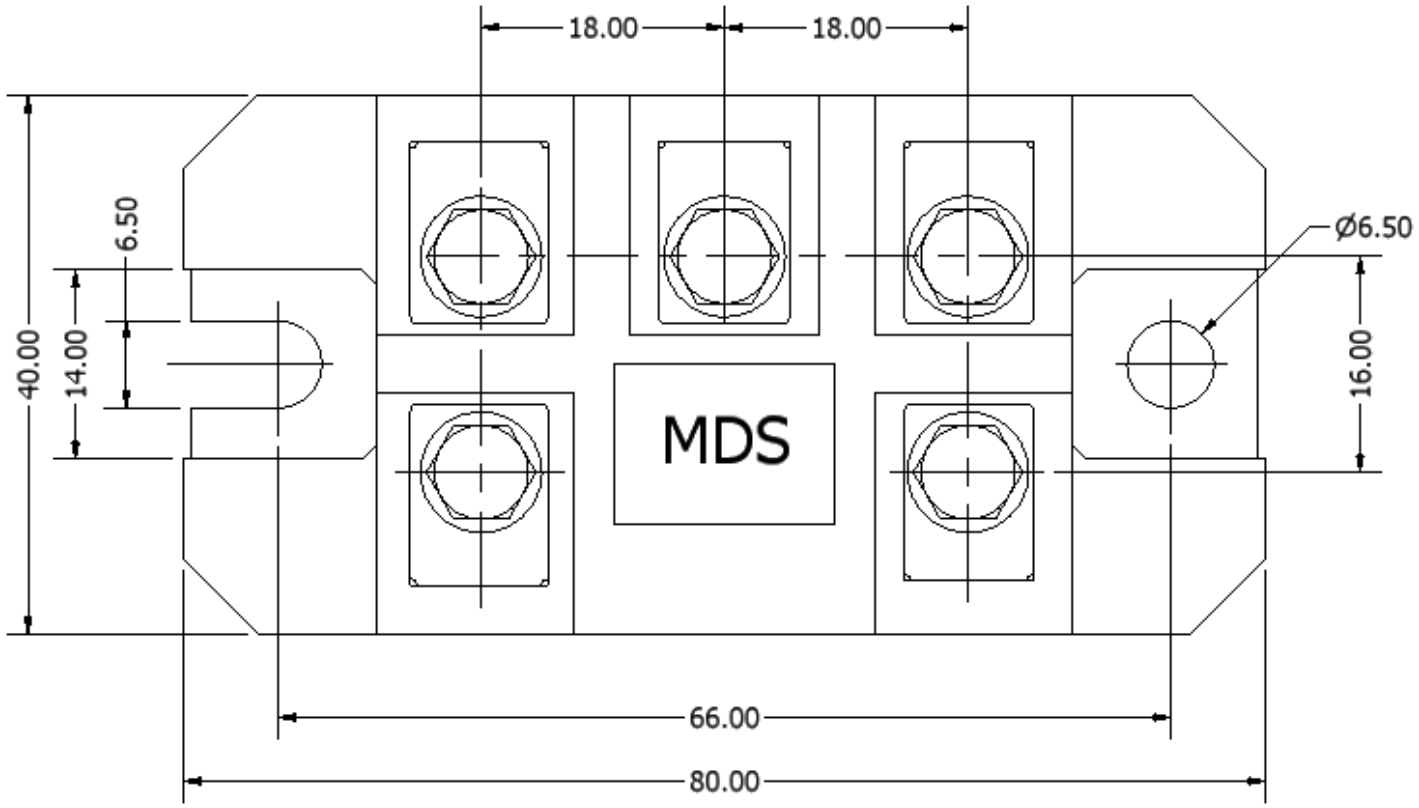

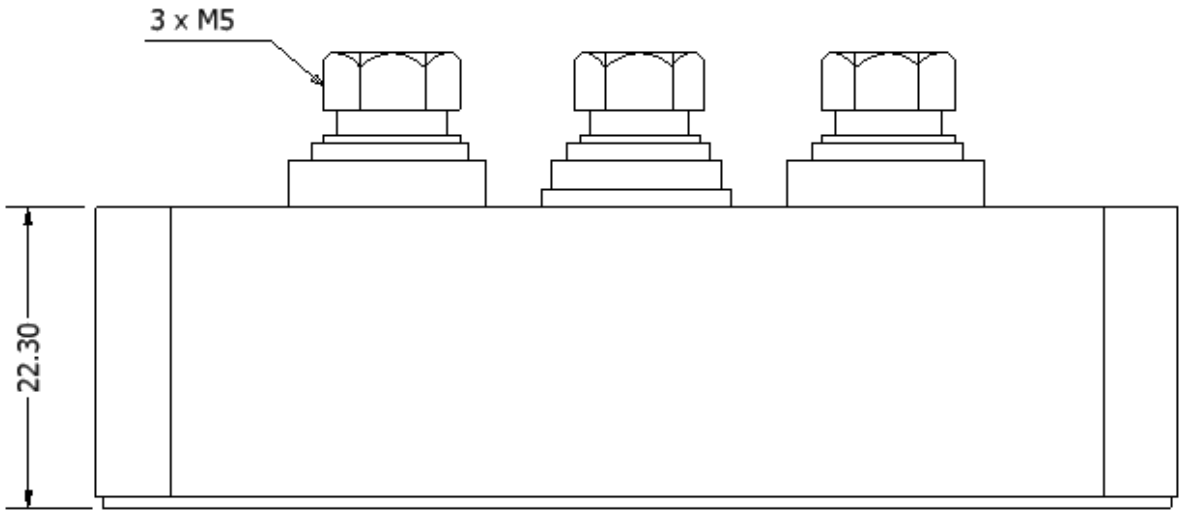

ALL DIMENSIONS IN MM

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