

Three Phase Silicon Bridge Rectifier

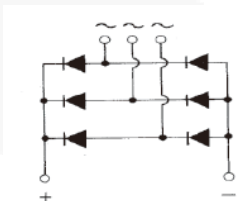
$V_{RRM} = 800\text{ V} - 1600\text{ V}$

$I_{F(AV)} = 150\text{ A}$

Features

- High Surge Capability
- Types from 800 V to 1600 V V_{RRM}
- Not ESD Sensitive

Three Phase Package



Maximum ratings, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	MDS150-08	MDS150-12	MDS150-16	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1200	1600	V
Reverse unrepeatd voltage	V_{RSM}		960	1320	1760	V
Operating temperature	T_j		-40 to 150	-40 to 150	-40 to 150	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to 125	-40 to 125	-40 to 125	$^\circ\text{C}$

Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

Single phase, half sine wave, 50 Hz, resistive or inductive load.

For capacitive load derate current by 20%.

Parameter	Symbol	Conditions	MDS150-08	MDS150-12	MDS150-16	Unit
Average forward current	$I_{F(AV)}$	3-phase, full-wave, $T_C = 90\text{ }^\circ\text{C}$	150	150	150	A
Peak forward surge current	I_{FSM}	1 pulse, 50/60 Hz, unrepeated	1500	1500	1500	A
Maximum forward voltage (per leg)	V_F	$I_{FM} = 150\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.45	1.45	1.45	V
Maximum repeated reverse current at rated DC blocking voltage (per leg)	I_R	$T_A = 25\text{ }^\circ\text{C}$	10	10	10	μA
		$T_A = 125\text{ }^\circ\text{C}$	620	620	620	μA

Thermal characteristics

Maximum thermal resistance, junction - case (per leg)	$R_{\theta jc}$		0.18	0.18	0.18	$^\circ\text{C/W}$
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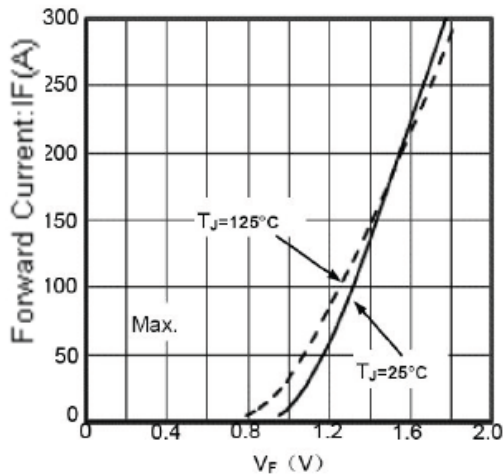


Figure1. Forward Voltage Drop vs Output Current

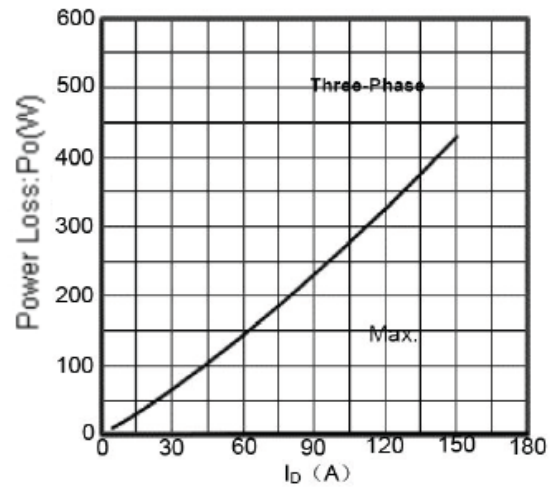


Figure2. Power dissipation vs. Output Current

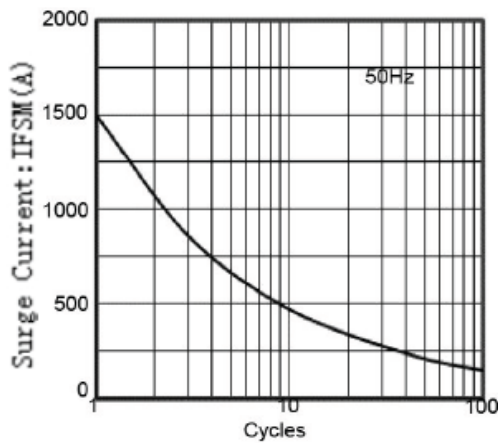


Figure3. Max Non-Repetitive Forward Surge Current

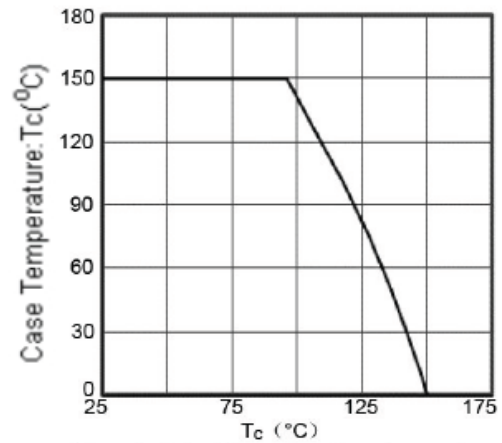


Figure4. Output Current vs. Case temperature

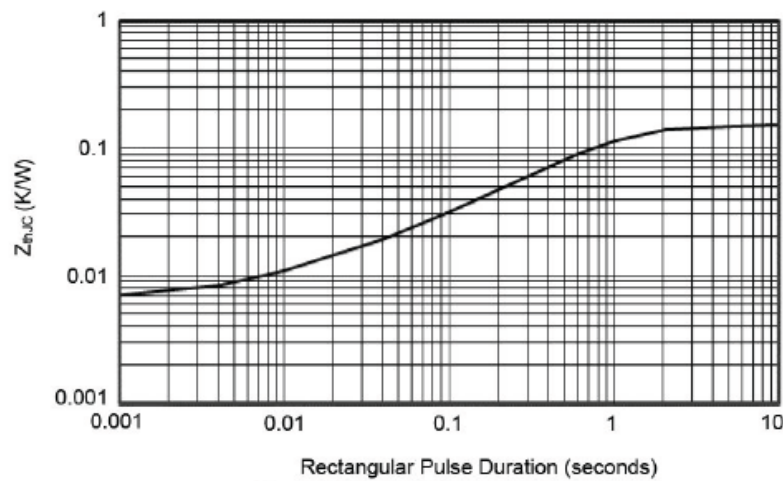
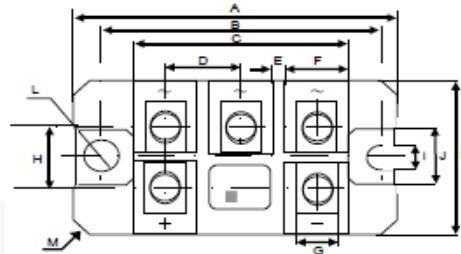


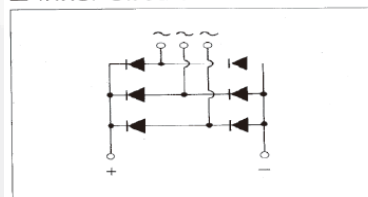
Figure5. Transient Thermal Impedance

Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



■ Inner Circuit Schematic



DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	3.15	---	80	---
B	2.60	---	66	---
C	2.01	---	51	---
D	0.71	---	18	---
E	0.16	---	4	---
F	0.57	---	14.5	---
G	0.40	---	10.2	---
H	0.63	---	16	---
I	0.26	---	6.7	---
J	0.55	---	14	---
K	1.57	---	40	---
L	$\varnothing 0.26$	---	$\varnothing 6.7$	---
M	4-C5			
N	---	0.90 MAX	---	23 MAX
O	---	1.06 MAX	---	27 MAX
P	---	1.14 MAX	---	29 MAX