

Three Phase Silicon Bridge Rectifier

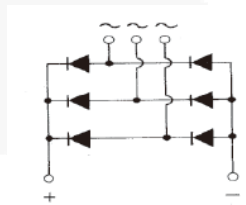
$V_{RRM} = 800\text{ V} - 1600\text{ V}$

$I_{F(AV)} = 75\text{ A}$

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	MDS75-08	MDS75-12	MDS75-16	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	MDS75-08	MDS75-12	MDS75-16	Unit
Average forward current	$I_{F(AV)}$	3-phase, full-wave, $T_C = 90\text{ }^\circ\text{C}$	75	75	75	A
Peak forward surge current	I_{FSM}	1 pulse, 50/60 Hz, unrepeated	700	700	700	A
Maximum forward voltage (per leg)	V_F	$I_{FM} = 75\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.3	1.3	1.3	V
Maximum repeated reverse current at rated DC blocking voltage (per leg)	I_R	$T_A = 25\text{ }^\circ\text{C}$	5	5	5	μA
		$T_A = 125\text{ }^\circ\text{C}$	450	450	450	μA

Thermal characteristics

Maximum thermal resistance, junction - case	$R_{\theta jc}$		0.25	0.25	0.25	$^\circ\text{C/W}$
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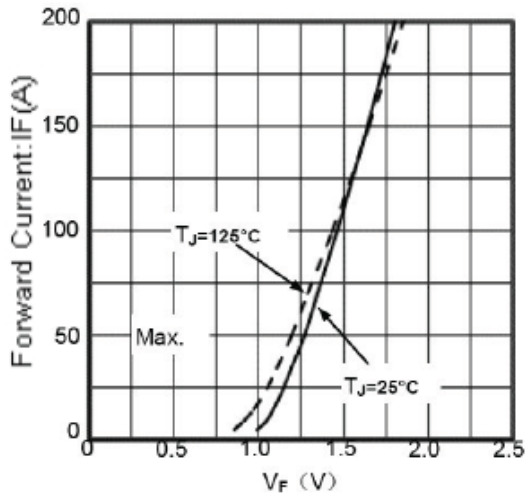


Figure1. Forward Voltage Drop vs Output Current

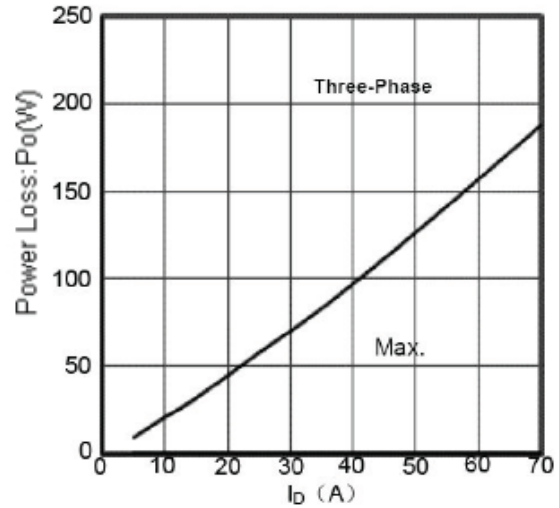


Figure2. Power dissipation vs. Output Current

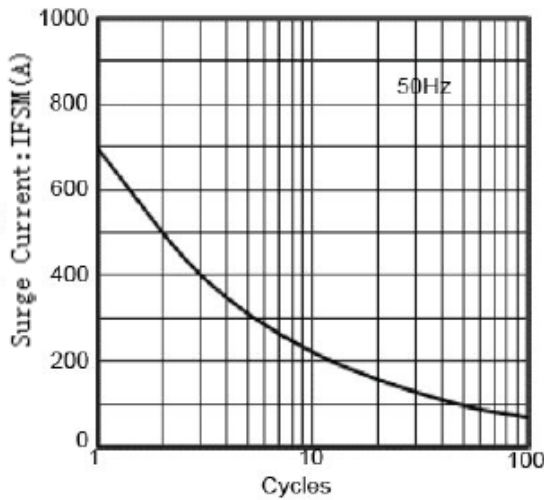


Figure3. Max Non-Repetitive Forward Surge Current

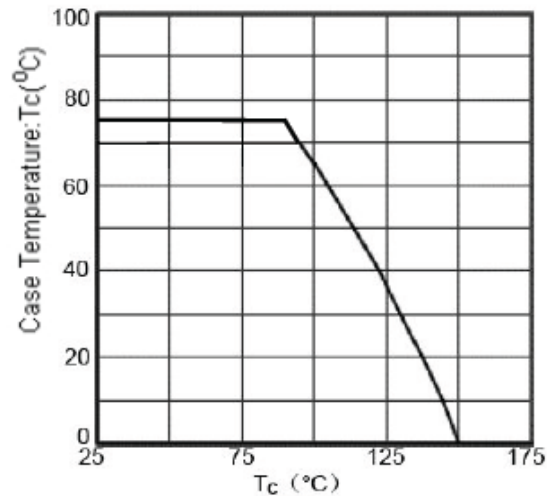


Figure4. Output Current vs. Case temperature

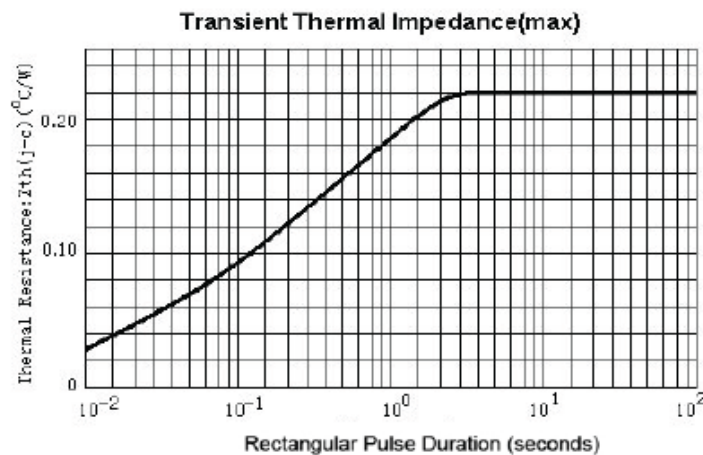
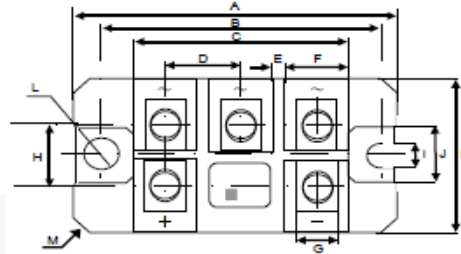


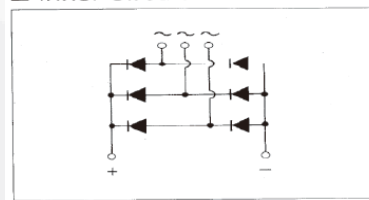
Figure5. Transient Thermal Impedance

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