

**Insel Rectifiers (India) Pvt. Ltd.**

151, 152 Udyog Kendra Extn II, Ecotech III  
Greater Noida: 201306, U.P., India

☎ 1800 3070 9989 ✉ [insel@rectifierindia.com](mailto:insel@rectifierindia.com)

🌐 [www.rectifierindia.com](http://www.rectifierindia.com)

## THREE PHASE BRIDGE MODULE

### MDS100



## FEATURES

- ☞ **Isolated mounting base 2500V-**
- ☞ **Pressure contact technology with increased power cycling capability**
- ☞ **Space and weight savings**
- ☞ **Welding**

## TYPICAL APPLICATIONS

- ☞ **Inverter**
- ☞ **Inductive heating**
- ☞ **Chopper**

**THREE PHASE  
BRIDGE MODULE  
MDS100**



**TECHNICAL DATA**

**DEVICE TYPE**

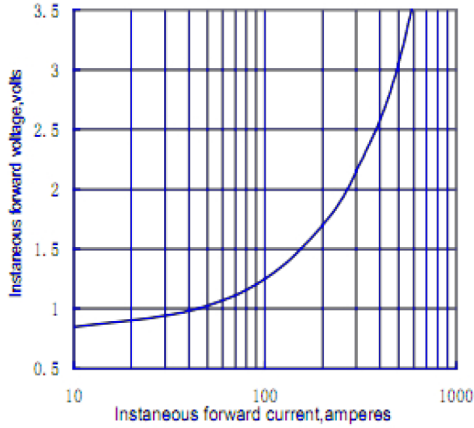
**$V_{RRM}$   
(V)**

**$V_{RSM}$   
(V)**

<b>MDS100/04</b>	<b>400</b>	<b>500</b>
<b>MDS100/16</b>	<b>1600</b>	<b>1700</b>

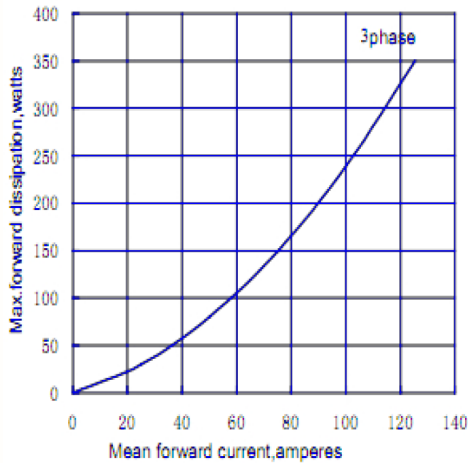
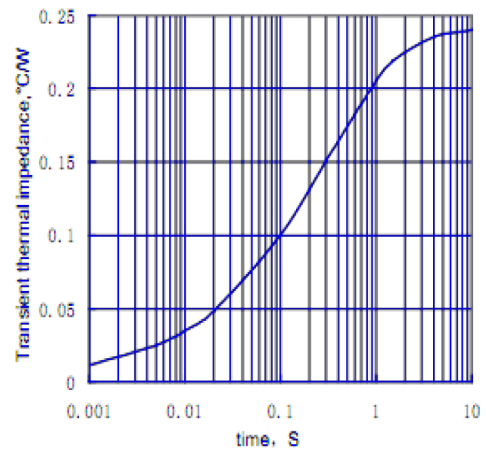
SYMBOL	CHARACTERISTIC	TEST CONDITION	T(°C)	VALUE			UNIT
				MIN	TYPE	MAX	
$I_O$	DC output current	Three-phase full wave rectifying circuit, $T_C=100^\circ\text{C}$	150			100	A
$V_{RRM}$	Repetitive peak reverse voltage	$V_{RRM}$ tp=10ms $V_{RSM}=V_{RRM}+200\text{V}$	150	600		1600	V
$I_{RRM}$	Repetitive peak current	at $V_{RRM}$	150			8	mA
$I_{FSM}$	Surge forward current	10ms half sine wave	150			1.2	KA
$I^2t$	$I^2t$ for fusing coordination	$V_R=0.6V_{RRM}$				7.2	$\text{A}^2\text{s}\cdot 10^3$
$V_{FO}$	Threshold voltage		150			0.8	V
$r_F$	Forward slop resistance					4.5	mΩ
$V_{FM}$	Peak forward voltage	$I_{FM}=100\text{A}$	25			1.3	V
$R_{\theta(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.2	$^\circ\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled				0.07	$^\circ\text{C}/\text{W}$
$V_{I22}$	Isolation voltage	50Hz, R.M.S., t=1min, $I_{I22}$ : 1mA(max)		2500			V
$F_m$	Terminal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
$T_{stg}$	Stored temperature			-40		125	$^\circ\text{C}$
$W_t$	Weight				200		g
Outline	IR- 5						

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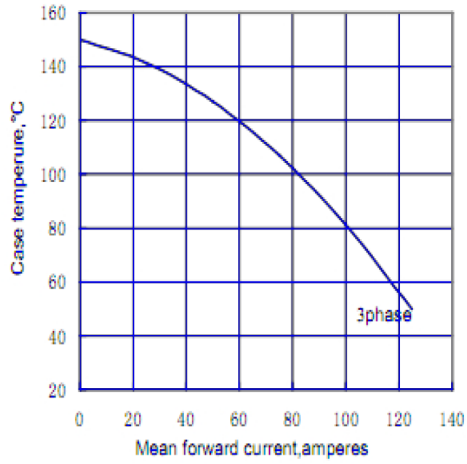
**FIG. 1** peak forward voltage vs. peak forward current

**FIG. 2** max junction to case thermal impedance vs. time



**FIG. 3** max power dissipation vs. mean forward current

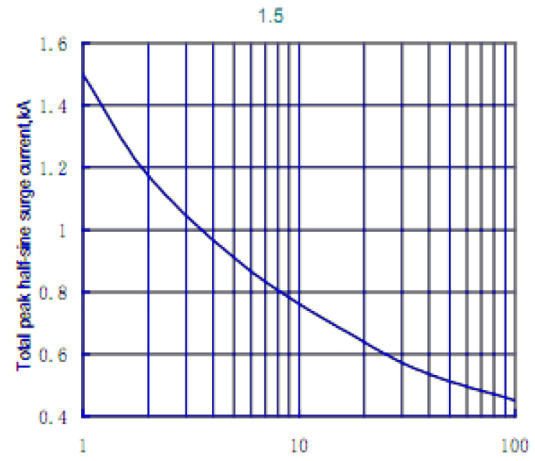
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**FIG.4**

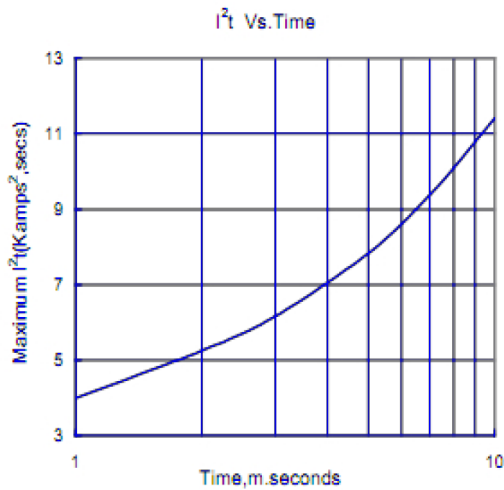
**max case temperature vs. mean forward current**

**FIG.5** cycles at 50Hz



**FIG.6**

**i<sup>2</sup>t vs. time**

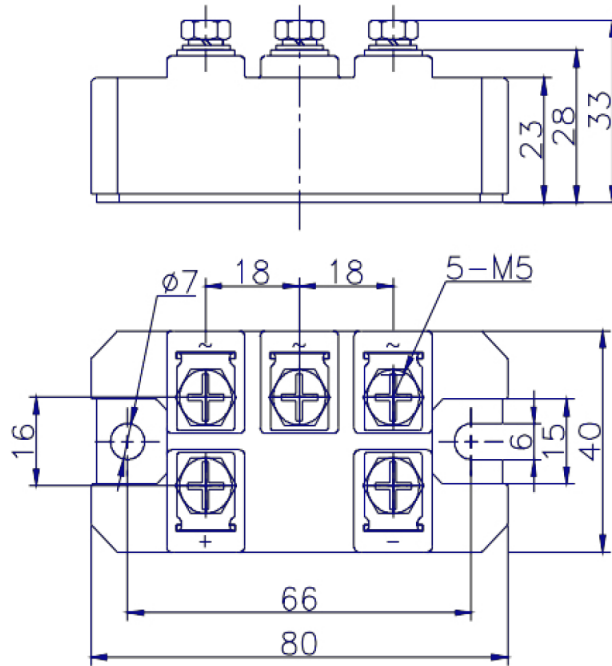


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PACKAGE OUTLINE



IR-5

**CIRCUIT DIAGRAM**

