

THREE PHASE BRIDGE MODULE MDS150



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
MDS150**



TECHNICAL DATA

DEVICE TYPE

V_{RRM}
(V)

V_{RSM}
(V)

MDS150/04	400	500
MDS150/16	1600	1700

SYMBOL

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			150	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			10	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			1.5	KA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$	150			1.14	$\text{A}^2\text{s}\cdot 10^3$
V_{FO}	Threshold voltage		150			0.8	V
r_F	Forward slop resistance		150			3.8	mΩ
V_{FM}	Peak forward voltage	$I_{FM}=150\text{A}$	25			1.20	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.14	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.07	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min, $I_{iso}:1\text{mA}(\text{max})$		2500			V
F_m	Terminal connection torque (M64)				6		N·m
	Mounting torque (M5)				4		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				450		g
Outline	IR- 5						

**THREE PHASE
BRIDGE MODULE
MDS150**

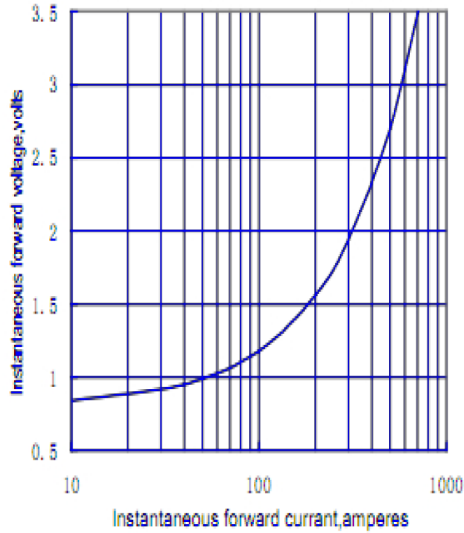


FIG. 1 peak forward voltage vs. peak forward current

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

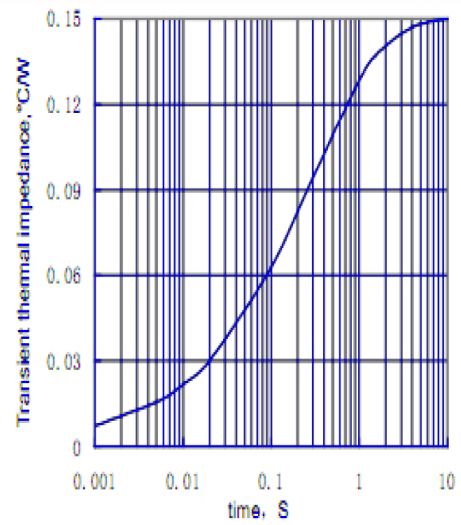
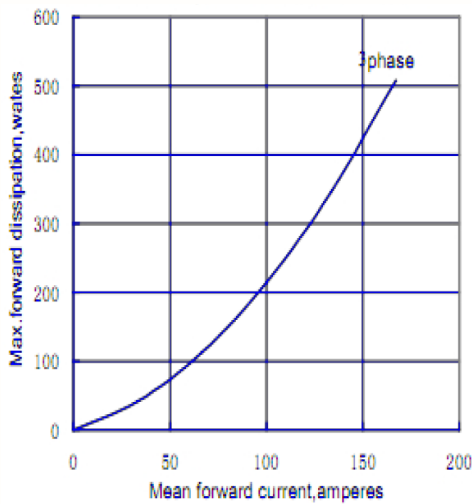


FIG. 3 max power dissipation vs. mean forward current



**THREE PHASE
BRIDGE MODULE
MDS150**

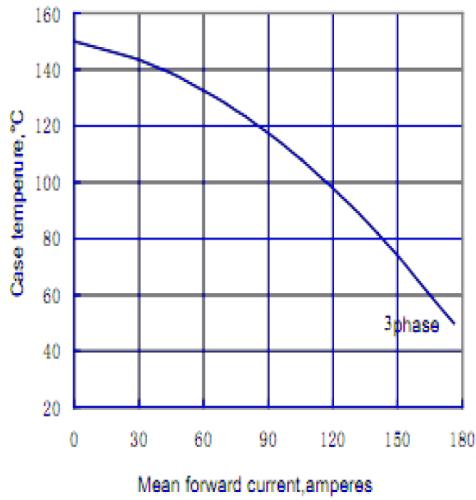


FIG.4 max case temperature vs. mean forward current

FIG.5 surge current vs. cycles

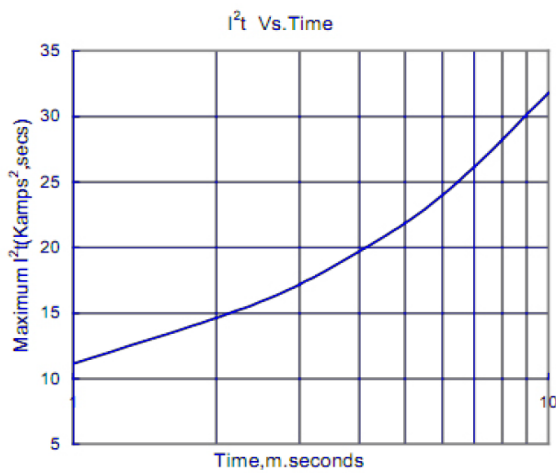
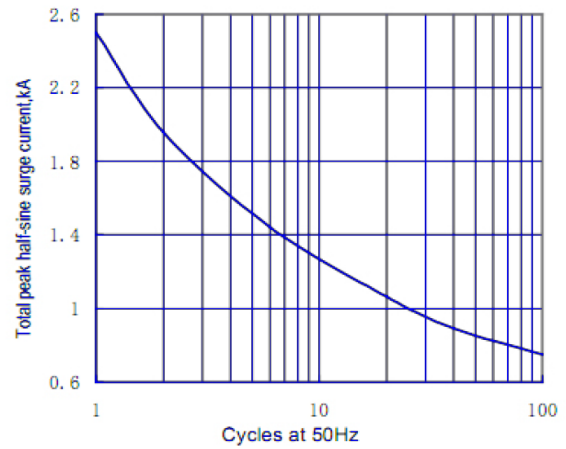


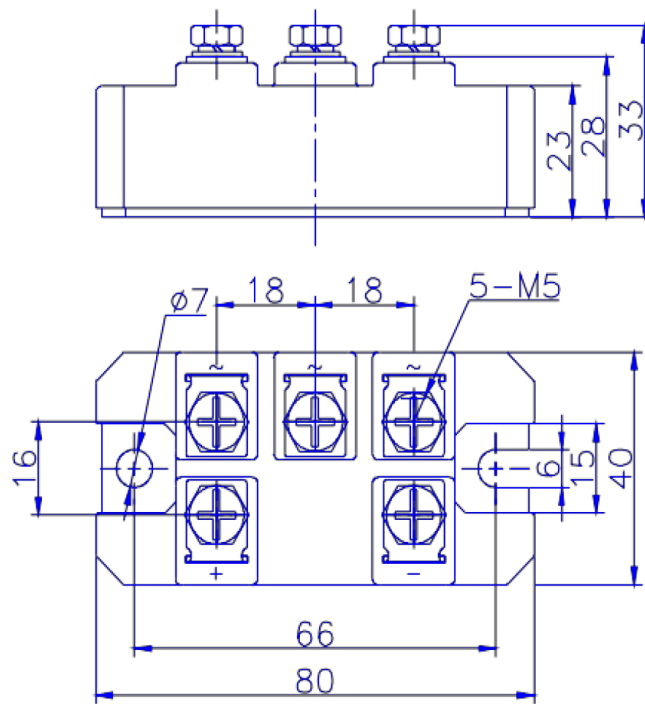
FIG.6 i² t vs.time

**THREE PHASE
BRIDGE MODULE**

MDS150

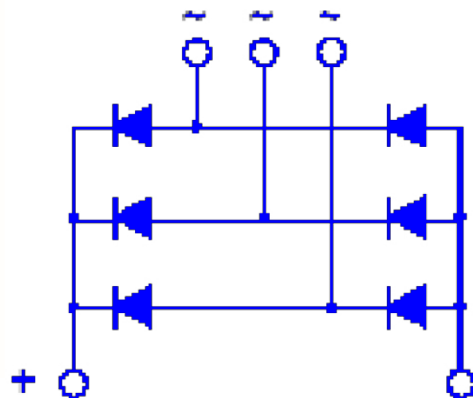


PACKAGE OUTLINE



IR-5

CIRCUIT DIAGRAM



all dimensions in mm