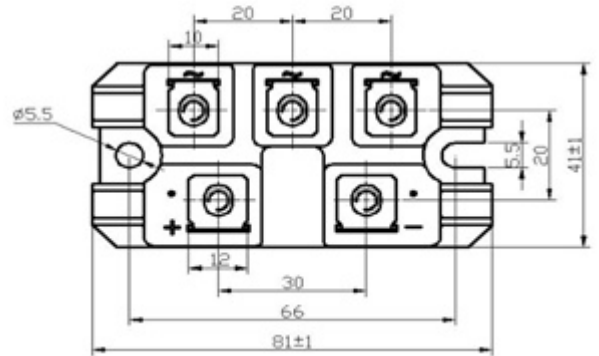
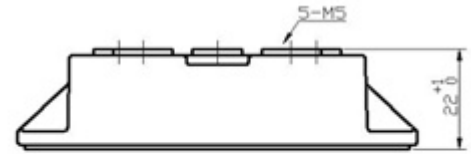
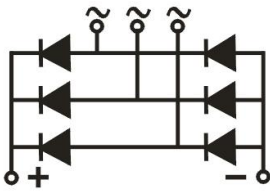


# MDS75J

## Glass Passivated Three Phase Rectifier Bridge



Dimensions in millimeters

### Applications

- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers
- Input rectifiers for variable frequency drives

### Features

- Three phase bridge rectifier
- Blocking voltage: 1200 to 1800V
- Heat transfer through aluminum oxide
- DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL recognized applied for file no. E304417

### Module Type

TYPE	VRRM	VRSM
MDS75J-12	1200V	1300V
MDS75J-16	1600V	1700V
MDS75J-18	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
$I_D$	Three phase, full wave $T_c=100^\circ\text{C}$	75	A
IFSM	$t=10\text{mS}$ $T_{vj}=45^\circ\text{C}$	750	A
$i^2t$	$t=10\text{mS}$ $T_{vj}=45^\circ\text{C}$	2800	$\text{A}^2\text{s}$
Visol	a.c.50HZ;r.m.s.;1min	3000	V
$T_{vj}$		-40 to +150	$^\circ\text{C}$
$T_{stg}$		-40 to +125	$^\circ\text{C}$
$M_t$	To terminals(M5)	$3\pm 15\%$	Nm
$M_s$	To heatsink(M5)	$3\pm 15\%$	Nm
Weight	Module (Approximately)	150	g

### Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Module	0.20	$^\circ\text{C}/\text{W}$

### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$V_{FM}$	$T=25^\circ\text{C}$ $I_F=75\text{A}$	—	1.30	1.55	V
$I_{RD}$	$T_{vj}=25^\circ\text{C}$ $VRD=VRRM$	—	—	10	$\mu\text{A}$
	$T_{vj}=150^\circ\text{C}$ $VRD=VRRM$	—	—	5	mA

# MDS75J

## Performance Curves

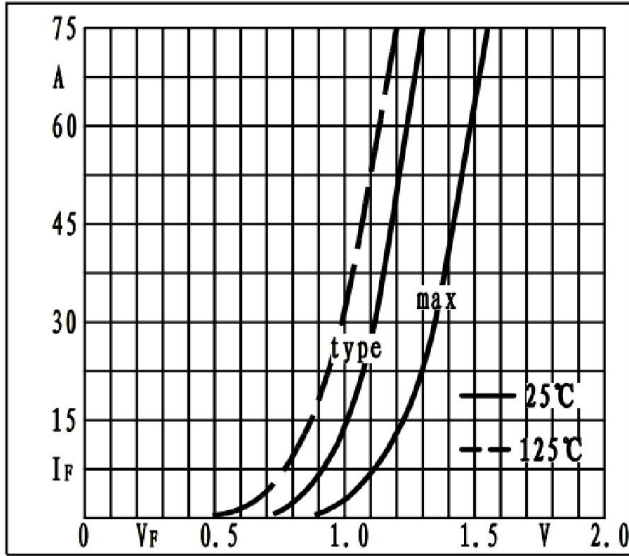


Fig1. Forward characteristics

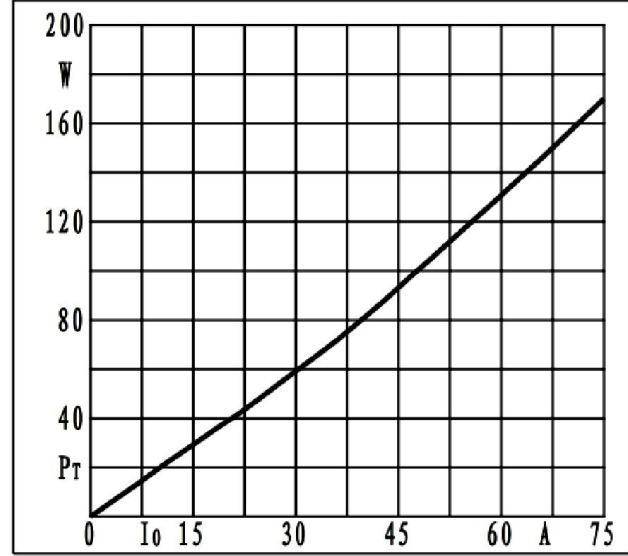


Fig2. Power dissipation

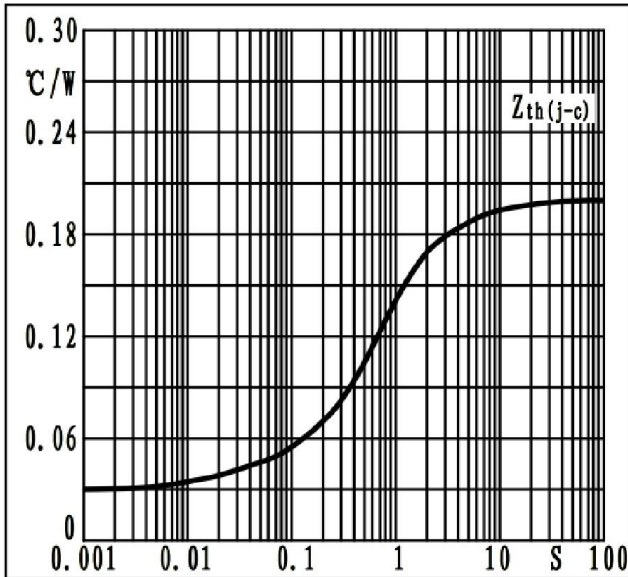


Fig3. Transient thermal impedance

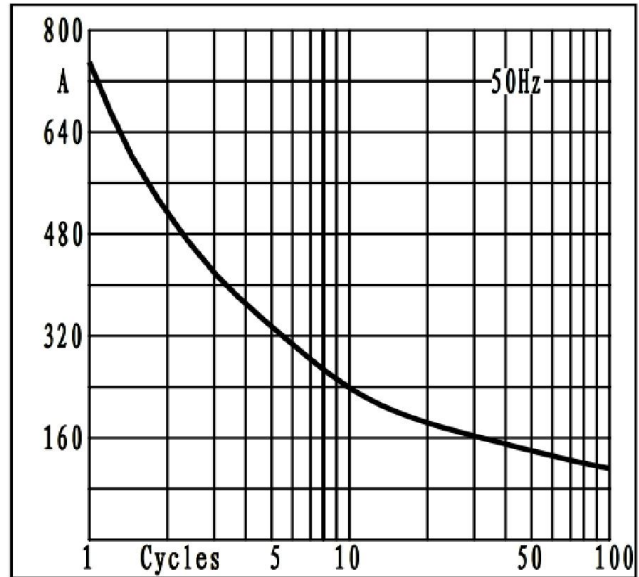


Fig4. Max non-repetitive forward surge current

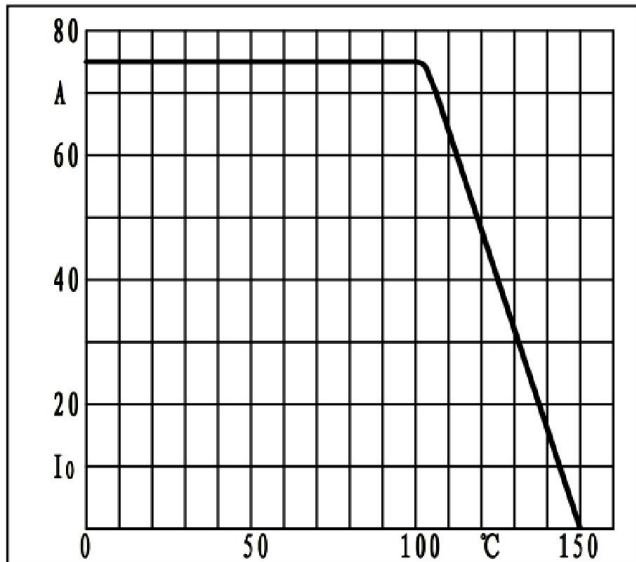


Fig5. Forward current derating curve