



# MDS100

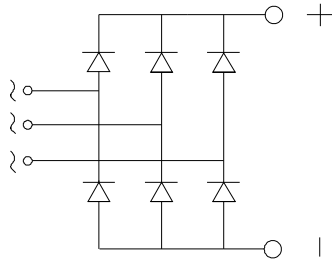


## Three Phase Rectifier Bridge

**VRRM** 800 to 1800V  
**ID** 100Amp

### 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:800 to 1800V

### Module Type

| TYPE      | VRRM  | VRSM  |
|-----------|-------|-------|
| MDS100-08 | 800V  | 900V  |
| MDS100-12 | 1200V | 1300V |
| MDS100-16 | 1600V | 1700V |
| MDS100-18 | 1800V | 1900V |

### Maximum Ratings

| Symbol    | Conditions   | Values     | Units                |
|-----------|--|------------|----------------------|
| $I_D$     | $T_c=100^\circ\text{C}$                                | 100        | A                    |
| IFSM      | $T_{vj}=45^\circ\text{C}$ $t=10\text{ms}$ (50HZ), sine | 920        | A                    |
| $i^2t$    | $T_{vj}=45^\circ\text{C}$ $t=10\text{ms}$ (50HZ), sine | 4200       | $\text{A}^2\text{S}$ |
| Viso      | a.c.50HZ;r.m.s.;1 min                                  | 2500       | V                    |
| $T_{vj}$  |  | -40 to 150 | $^\circ\text{C}$     |
| $T_{stg}$ |  | -40 to 125 | $^\circ\text{C}$     |
| Weight    | Module (Approximately)                                 | 220        | g                    |

### Thermal Characteristics

| Symbol        | Conditions | Values | Units                     |
|---------------|------------|--------|---------------------------|
| $R_{th(j-c)}$ | Per module | 0.32   | $^\circ\text{C}/\text{W}$ |

### Electrical Characteristics

| Symbol | Conditions                          | Values     | Units |
|--------|-------------------------------------|------------|-------|
| VFM    | $T=25^\circ\text{C}$ IFM=300A       | 1.90       | V     |
| IRD    | $T_{vj}=25^\circ\text{C}$ VRD=VRRM  | $\leq 0.5$ | mA    |
|        | $T_{vj}=150^\circ\text{C}$ VRD=VRRM | $\leq 5$   | mA    |



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## Performance Curves

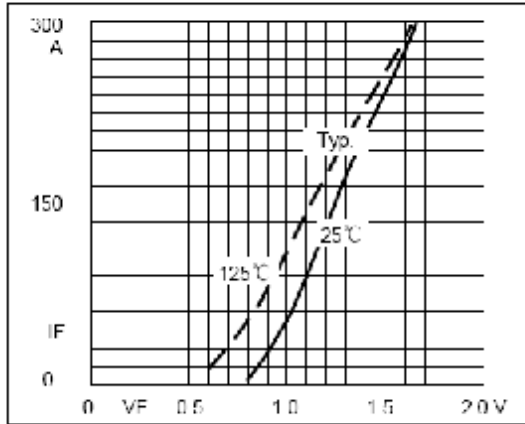


Fig1. Forward Characteristics

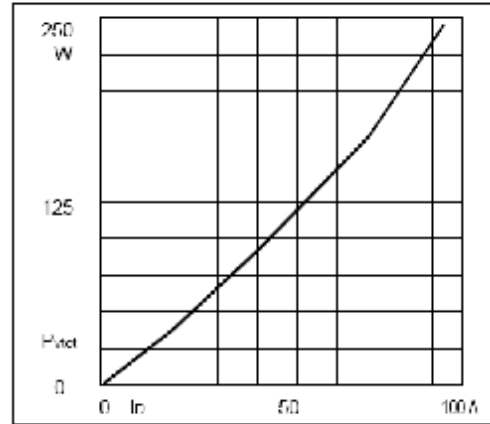


Fig2. Power dissipation

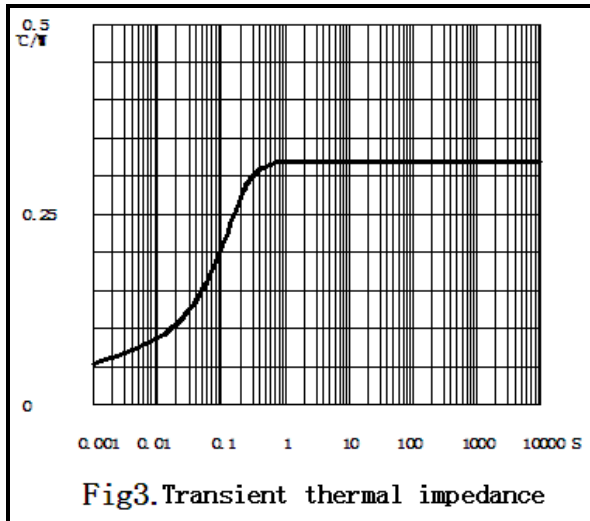


Fig3. Transient thermal impedance

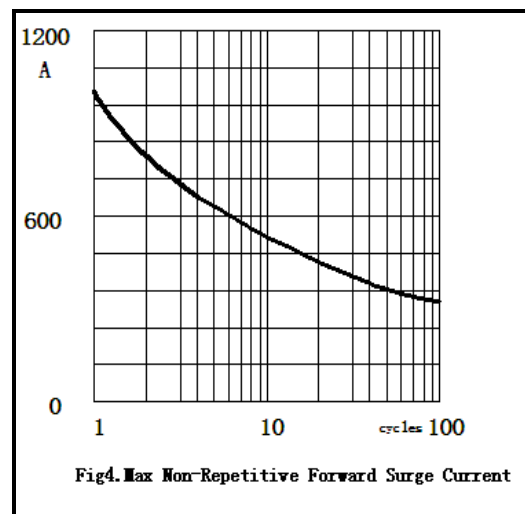


Fig4. Max Non-Repetitive Forward Surge Current

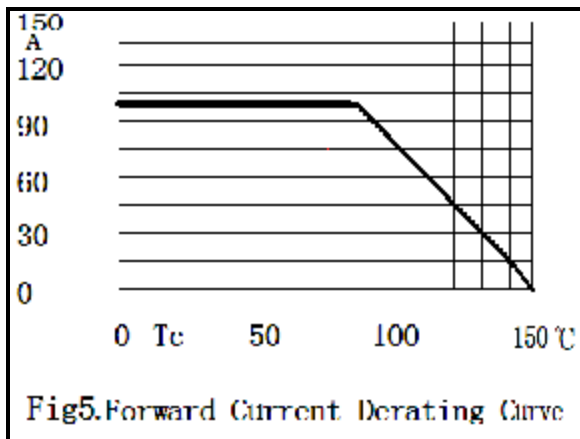
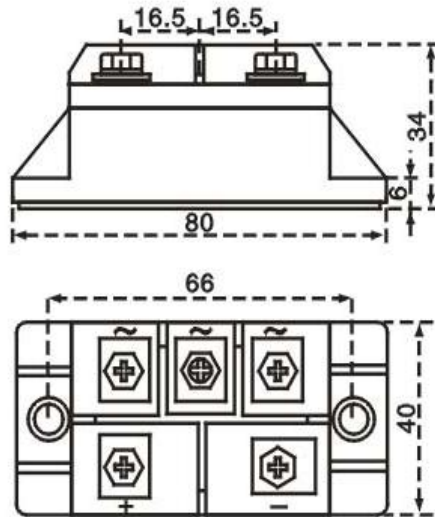


Fig5. Forward Current Derating Curve



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Dimensions in mm