# GLASS PASSIVATED RECTIFIER DIODE MODULES

## D1D60C18

VOLTAGE RANGE 800 to 1800V
CURRENT 60 Ampere

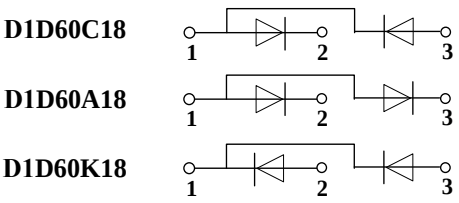
### Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

### Features

- Blocking voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

**Circuit**




### Module Type

| TYPE | | | $V_{RRM}$ | $V_{RSM}$ |
|---|---|---|---|---|
| D1D60C08 | D1D60A08 | D1D60K08 | 800V | 900V |
| D1D60C12 | D1D60A12 | D1D60K12 | 1200V | 1300V |
| D1D60C16 | D1D60A16 | D1D60K16 | 1600V | 1700V |
| D1D60C18 | D1D60A18 | D1D60K18 | 1800V | 1900V |

### Maximum Ratings

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | Single phase ,half wave 180° conduction Tc=100℃ | 60 | A |
| $I_{F(RMS)}$ | Single phase ,half wave 180° conduction Tc=98℃ | 90 | A |
| $I_{FSM}$ | t=10mS Tvj =45℃ | 1150 | A |
| $i^2t$ | t=10mS Tvj =45℃ | 6600 | $A^2s$ |
| $V_{isol}$ | a.c.50HZ;r.m.s.;1min | 3000 | V |
| $T_{vj}$ | | -40 to +150 | ℃ |
| $T_{stg}$ | | -40 to +125 | ℃ |
| Mt | To terminals(M5) | 3±15% | Nm |
| Ms | To heatsink(M6) | 5±15% | Nm |
| Weight | Module (Approximately) | 100 | g |

### Thermal Characteristics

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $R_{th(j-c)}$ | Per diode | 0.59 | ℃/W |
| $R_{th(c-s)}$ | Module | 0.1 | ℃/W |

### Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| $V_{FM}$ | T=25℃ $I_F$ =200A | — | 1.30 | 1.45 | V |
| $I_{RD}$ | $T_{vj}$=150℃ $V_{RD}$=$V_{RRM}$ | — | — | 5 | mA |

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## Performance Curves

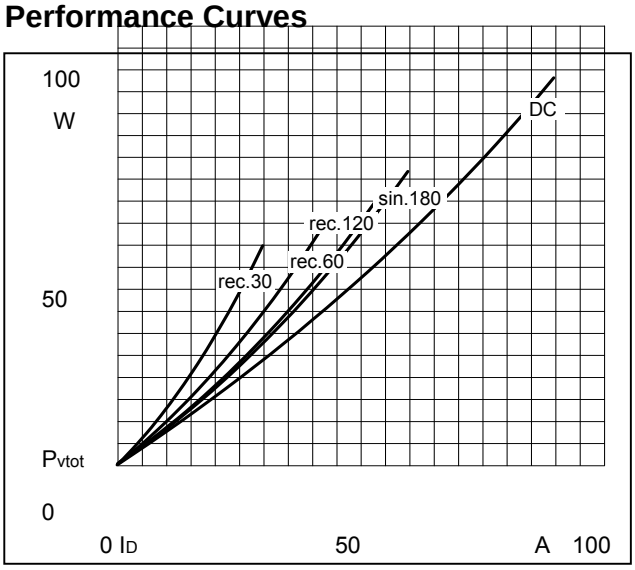


Fig1. Power dissipation

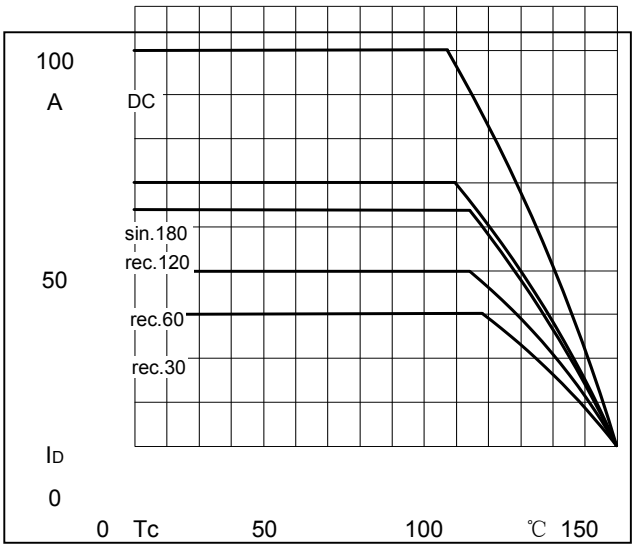


Fig2.Forward Current Derating Curve

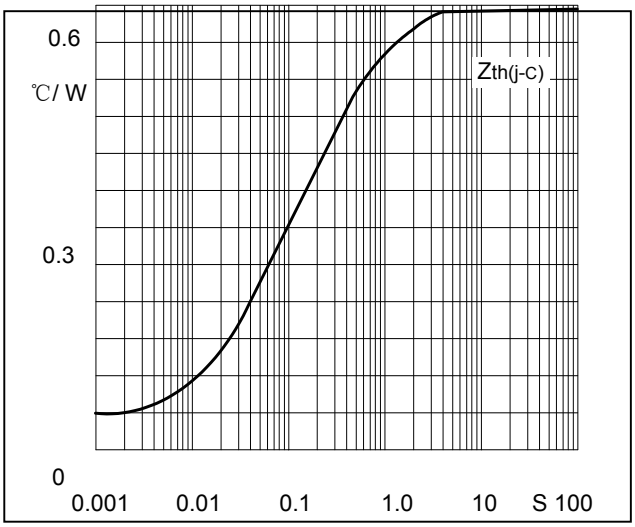


Fig3. Transient thermal impedance

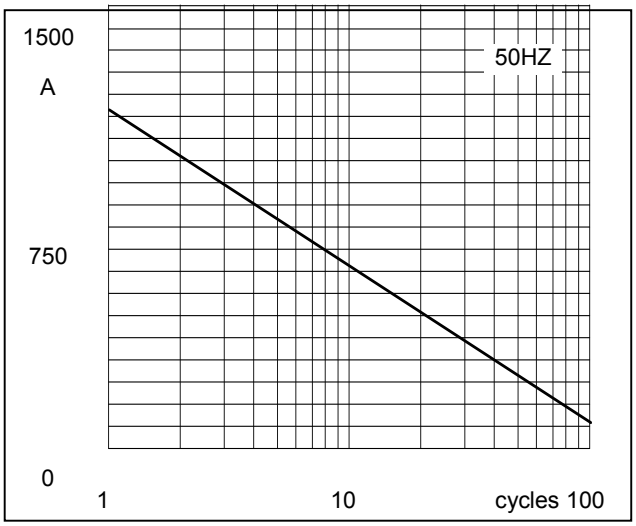


Fig4. Max Non-Repetitive Forward Surge Current

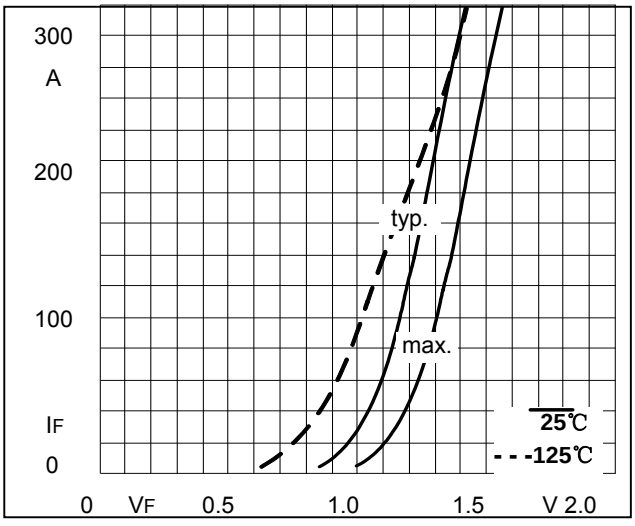


Fig5. Forward Characteristics

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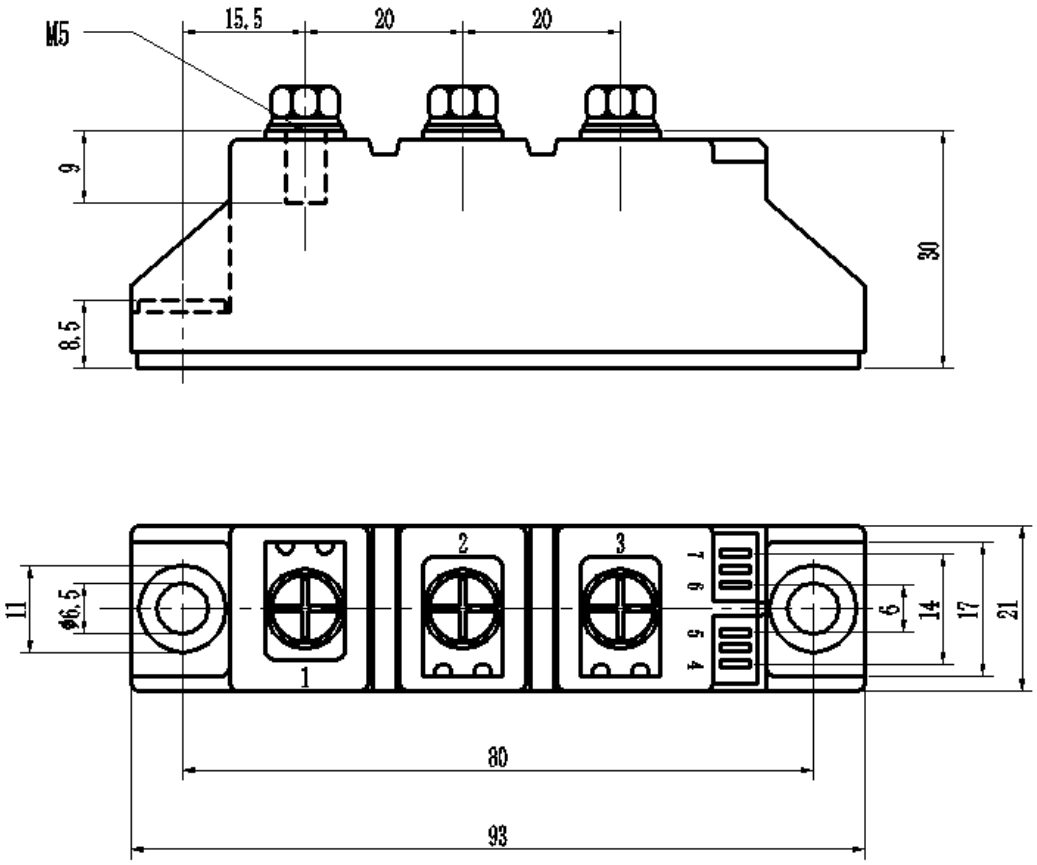
## Package Outline Information

### CASE: D1




Dimensions in mm

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