# MD435U-BI5

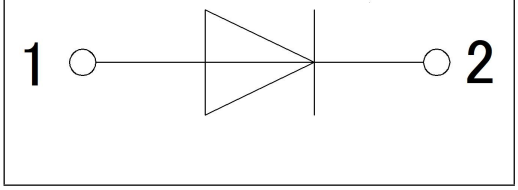
## Rectifier Diode Module

**$V_{RRM}$** 3800 to 4400V
**$I_{FAV}$** 435A

### Applications
- Bridge Circuits
- Industry converter
- Battery Supplies

### Features
- International standard package
- High Surge Capability
- Simple Mounting

**Circuit**




### Blocking Characteristics

| TYPE | $V_{RRM}$ | $V_{RSM}$ | Units |
|---|---|---|---|
| MD435U38BI5 | 3800 | 4000 | V |
| MD435U40BI5 | 4000 | 4200 | V |
| MD435U42BI5 | 4200 | 4400 | V |
| MD435U44BI5 | 4400 | 4600 | V |

### Maximum Ratings

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | Single phase ,half wave 180° conduction Tc=100℃ | 435 | A |
| $I_{FSM}$ | t=10ms $T_{vj}$=$T_{vjM}$ | 12000 | A |
| $i^2t$ | t=10ms $T_{vj}$=$T_{vjM}$ | 720000 | $A^2s$ |
| $V_{isol}$ | a.c.50HZ;r.m.s.;1min,$I_{iso}$ :2mA(max) | 5000 | V |
| $T_{vj}$ | | -40 to 150 | ℃ |
| $T_{stg}$ | | -40 to 125 | ℃ |
| Mt | To terminals(M10) | 12±15% | Nm |
| Ms | To heatsink(M6) | 6±15% | Nm |
| Weight | Module (Approximately) | 870 | g |

### Thermal Characteristics

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $R_{th(j-c)}$ | per diode | 0.073 | ℃/W |
| $R_{th(c-s)}$ | per diode | 0.02 | ℃/W |

### Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| $V_{FM}$ | T=25℃ $I_F$ =1200A | | | 1.65 | V |
| $I_{RRM}$ | $T_{vj}$=$T_{vjM}$ V=$V_{RRM}$ | | | 30 | mA |
| $V_{FO}$ | $T_{vj}$=$T_{vjM}$ | | | 0.84 | V |
| $r_F$ | $T_{vj}$=$T_{vjM}$ | | | 0.6 | mΩ |

## Performance Curves

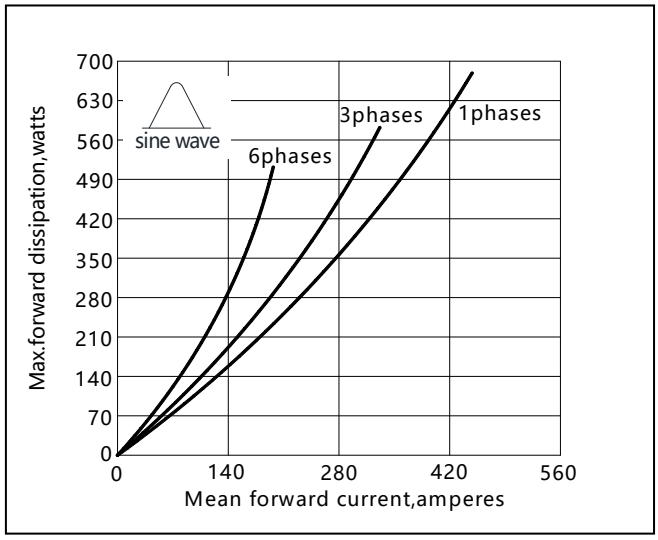



Fig1. Power dissipation

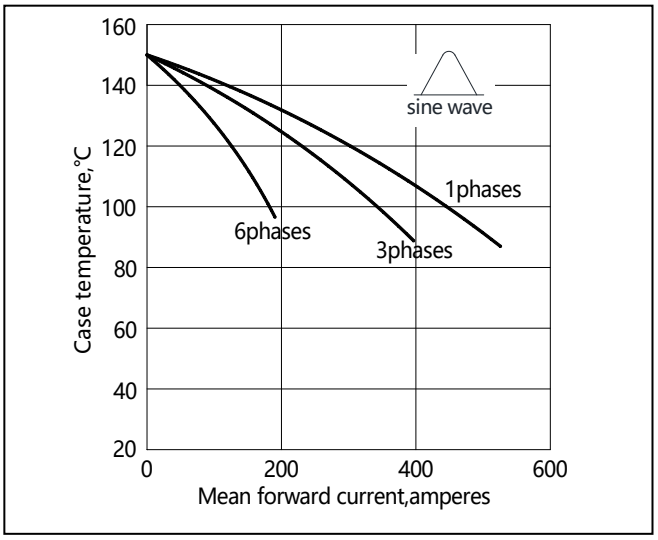



Fig2.Forward Current Derating Curve

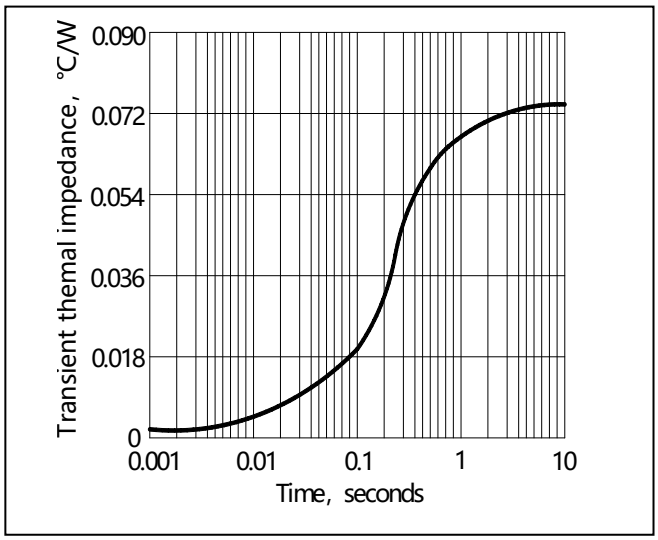



Fig3. Transient thermal impedance

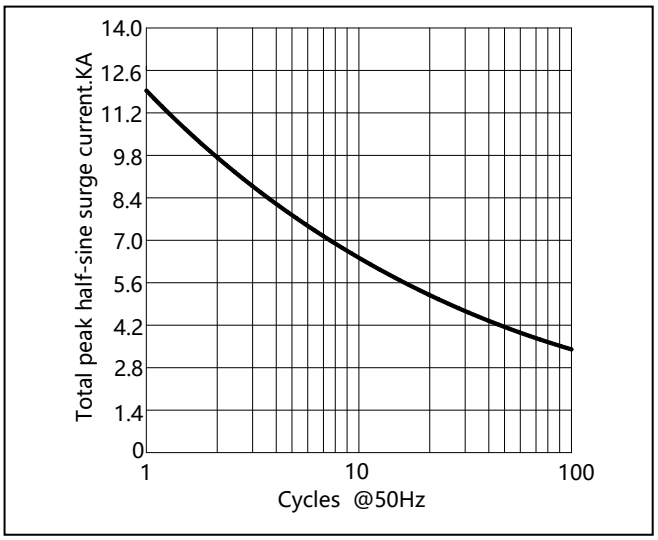



Fig4. Max Non-Repetitive Forward Surge Current

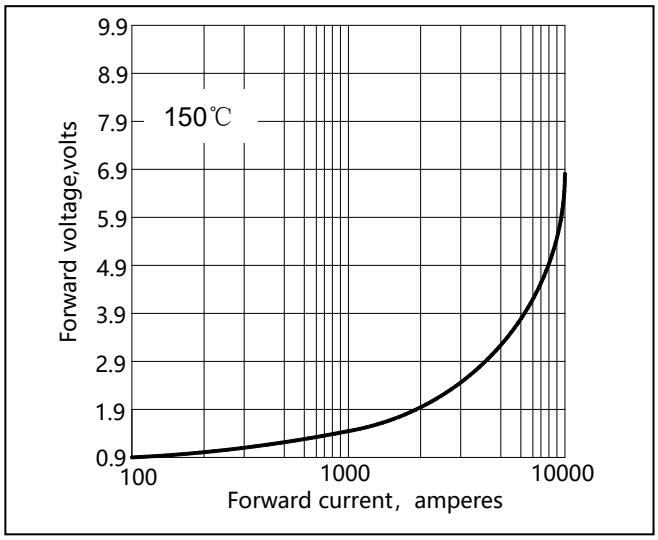
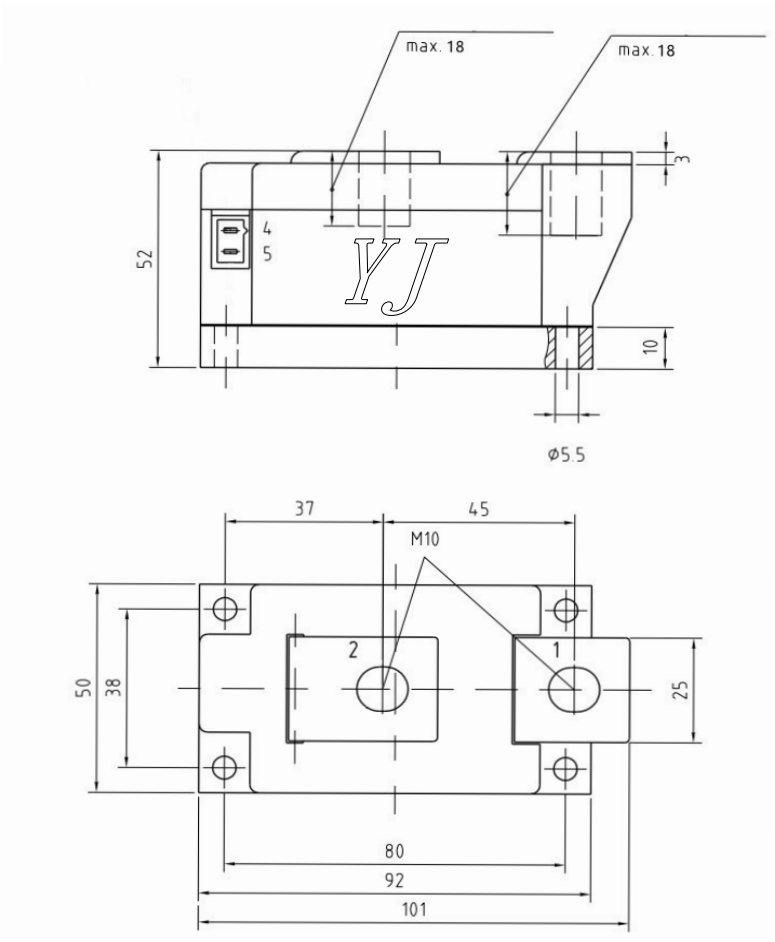



Fig5. Forward Characteristics

## Package Outline Information

**CASE: BI5**




**Dimensions in mm**
**Unmarked dimensional tolerance：±0.5mm**