



## Glass Passivated Three Phase Bridge Rectifiers

**VRRM** 600 to 1600V

**IFAV** 35 Amp

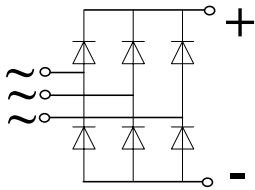
### Features

- High thermal conductivity package,
- Electrically insulated case
- Centre hole fixing
- Glass passivated chips
- High IFSM
- Epoxy compound has classification UL94V-0

### Applications

- Big power supplier
- Field supply for DC motor

Circuit



### Module Type

| TYPE   | VRRM  | VRSM  |
|--------|-------|-------|
| MT3506 | 600V  | 700V  |
| MT3508 | 800V  | 900V  |
| MT3510 | 1000V | 1100V |
| MT3512 | 1200V | 1300V |
| MT3514 | 1400V | 1500V |
| MT3516 | 1600V | 1700V |

### Maximum Ratings

| Symbol    | Item                               | Conditions                                                                         | Values      | Units                |
|-----------|------------------------------------|------------------------------------------------------------------------------------|-------------|----------------------|
| $I_o$     | Average forward output current     | $T_c = 78^\circ\text{C}$                                                           | 35          | A                    |
| IFSM      | Forward surge current, max.        | $t = 8.3\text{ms}$ Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD) | 450         | A                    |
| $i^2t$    | Value for fusing                   | $t = 8.3\text{ms}$ $VR = 0$                                                        | 840         | $\text{A}^2\text{s}$ |
| Visol     | Isolation Breakdown Voltage(R.M.S) | a.c.50HZ;r.m.s.;1min $T_j = 25^\circ\text{C}$                                      | 2500        | V                    |
| $T_{vj}$  | Operating Junction Temperature     |                                                                                    | -55 to +150 | $^\circ\text{C}$     |
| $T_{stg}$ | Storage Temperature                |                                                                                    | -55 to +150 | $^\circ\text{C}$     |
| $M_t$     | Mounting Torque                    |                                                                                    | 2           | N.m                  |
| Weight    | Bridge(Approximately)              |                                                                                    | 28          | g                    |

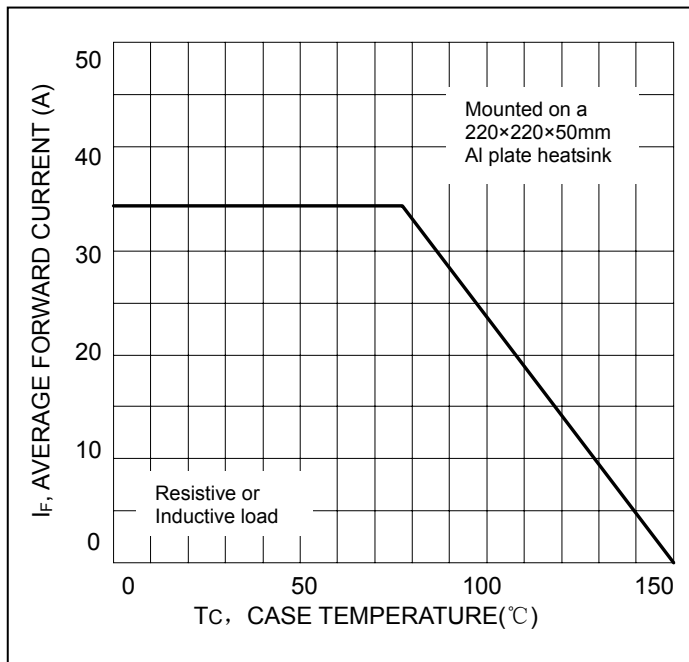
### Thermal Characteristics

| Symbol        | Item             | Conditions | Values | Units              |
|---------------|------------------|------------|--------|--------------------|
| $R_{th(j-c)}$ | Junction to Case | Bridge     | 0.9    | $^\circ\text{C/W}$ |

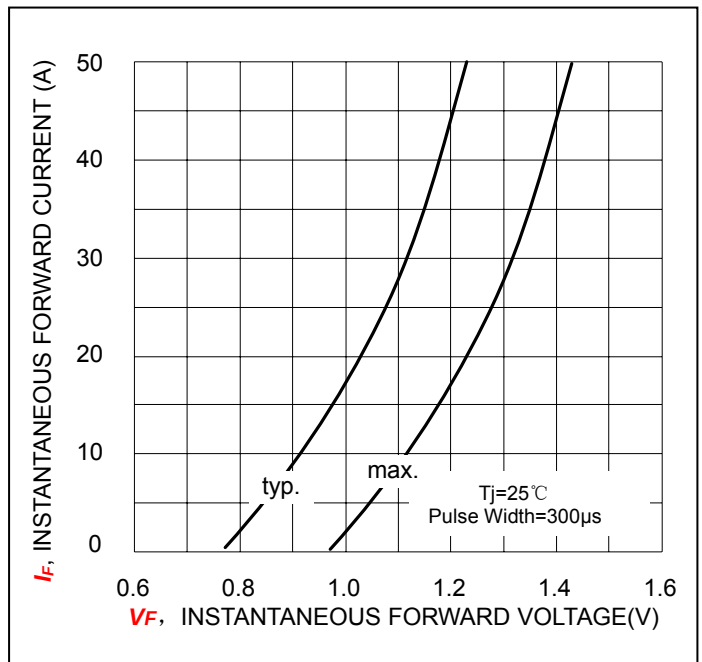
### Electrical Characteristics

| Symbol | Item                       | Conditions                                                                            | Values |      |            | Units               |
|--------|----------------------------|---------------------------------------------------------------------------------------|--------|------|------------|---------------------|
|        |                            |                                                                                       | Min.   | Typ. | Max.       |                     |
| VFM    | Forward Voltage Drop, max. | $T = 25^\circ\text{C}$ $I_F = 17.5\text{A}$                                           | —      | 1.00 | 1.20       | V                   |
| IRD    | Maximum DC Reverse         | $T_{vj} = 25^\circ\text{C}$ $VRD = VRRM$<br>$T_{vj} = 150^\circ\text{C}$ $VRD = VRRM$ | —      | —    | 5.0<br>2.0 | $\mu\text{A}$<br>mA |

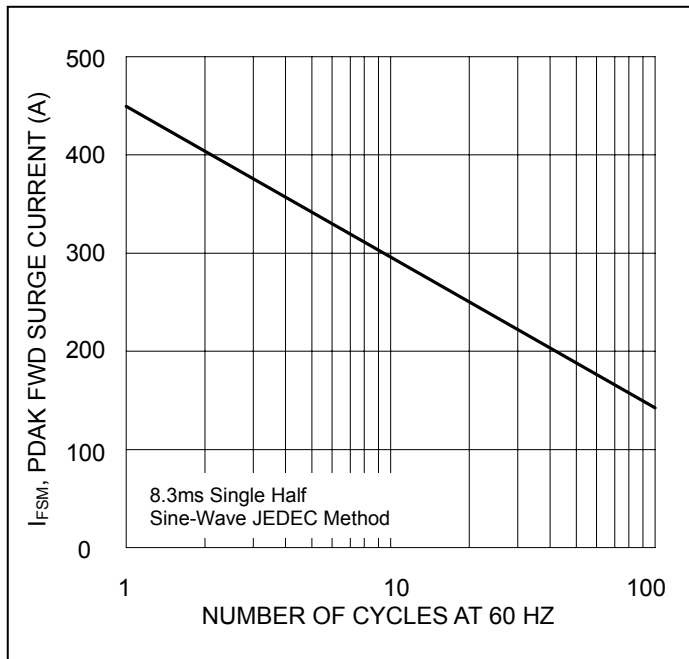
## Characteristic Curve



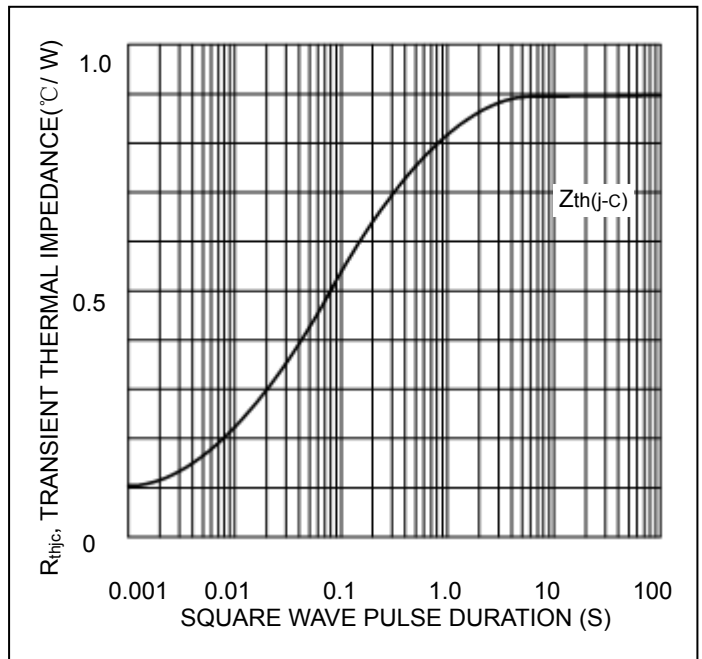
**Fig. 1 Forward Current Derating Curve**



**Fig. 2 Typical Forward Characteristics**



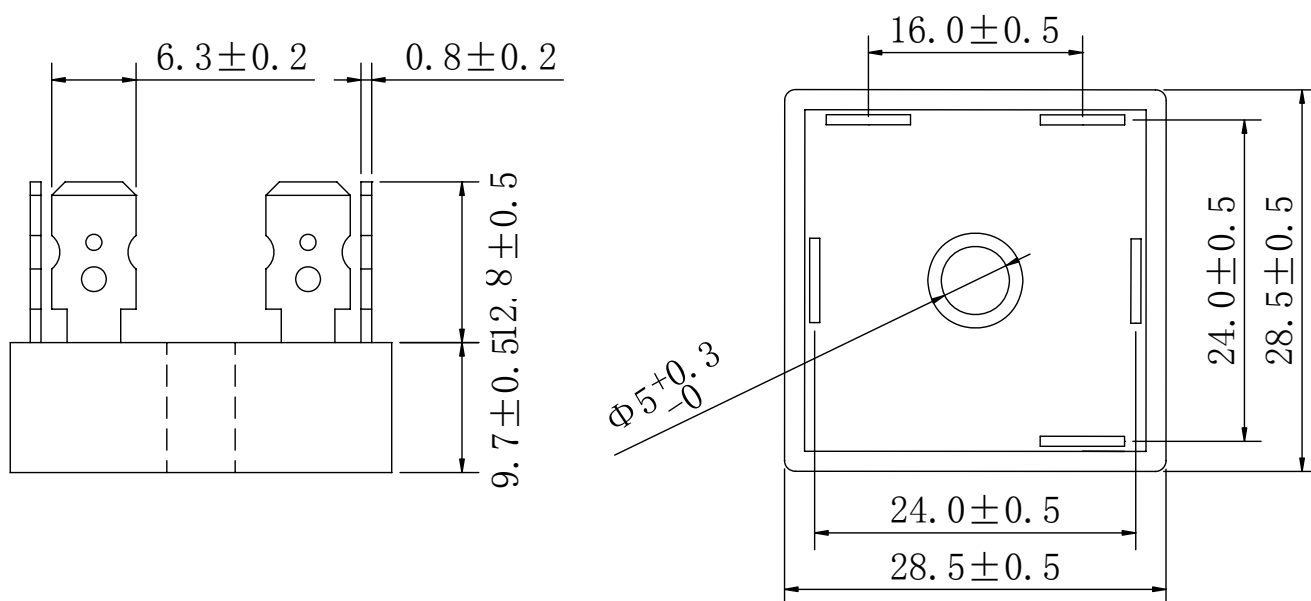
**Fig. 3 Max Non-Repetitive Peak Surge Current**



**Fig. 4. Transient thermal impedance**

## Package Outline Information

CASE: MT



Dimensions in mm