

**D808 900-24-34**

**Key Parameters**

|             |           |    |
|-------------|-----------|----|
| $V_{RRM}$   | 2400~3400 | V  |
| $I_{F(AV)}$ | 960       | A  |
| $I_{FSM}$   | 12        | kA |
| $V_{FO}$    | 0.88      | V  |
| $r_F$       | 0.45      | mΩ |

**Applications**

High power drive  
High voltage supplies  
Motor control

**Features**

Double-side cooling  
High mean current  
High surge current

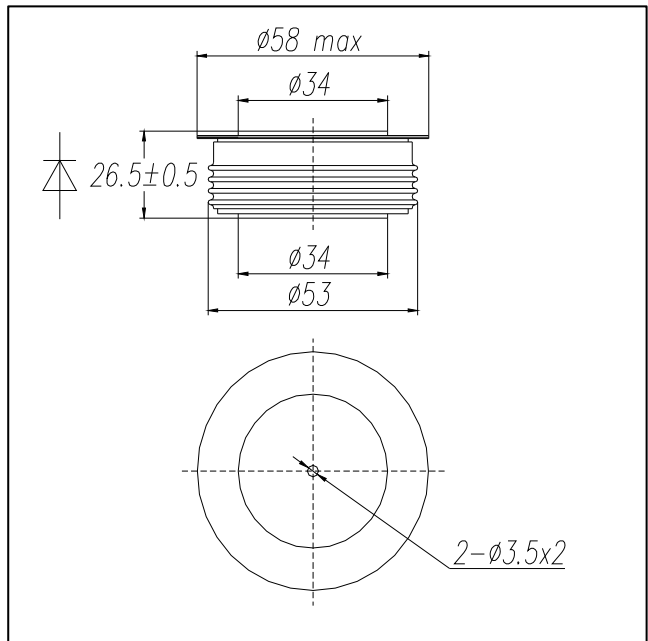
**Thermal & Mechanical Data**

| Symb.      | Parameter                              | Min | Type | Max   | Unit |
|------------|----------------------------------------|-----|------|-------|------|
| $R_{thjc}$ | Thermal Resistance<br>Junction to Case | -   | -    | 0.035 | K/W  |
| $R_{thcs}$ | Thermal Resistance<br>Case to Heatsink | -   | -    | 0.008 | K/W  |
| $T_{vj}$   | Junction Temperature                   | -40 | -    | 175   | °C   |
| $T_{stg}$  | Storage Temperature                    | -40 | -    | 175   | °C   |
| $F$        | Mounting Force                         | -   | 15   | -     | kN   |
| $m$        | Weight                                 | -   | 0.26 | -     | kg   |

**Voltage Ratings**

| Device Type | $V_{RRM}(V)$ | Test Conditions                            |
|-------------|--------------|--------------------------------------------|
| D808 900-24 | 2400         | $T_{vj} = 25, 175 \text{ } ^\circ\text{C}$ |
| D808 900-26 | 2600         | $I_{RRM} = 60 \text{ mA}$                  |
| D808 900-28 | 2800         | $V_R = V_{RRM}$                            |
| D808 900-30 | 3000         | $t_p = 10\text{ms}$                        |
| D808 900-32 | 3200         |                                            |
| D808 900-34 | 3400         | $V_{RSM} = V_{RRM} + 100 \text{ V}$        |

**Outline**



**Current Ratings**

| Symb.        | Parameter                      | Test Conditions                                                          | Min | Type | Max  | Unit                       |
|--------------|--------------------------------|--------------------------------------------------------------------------|-----|------|------|----------------------------|
| $I_{F(AV)}$  | Mean Forward Current           | Half Sine Wave, $T_C = 100 \text{ } ^\circ\text{C}$                      | -   | -    | 960  | A                          |
| $I_{F(RMS)}$ | RMS Forward Current            | $T_C = 100 \text{ } ^\circ\text{C}$                                      | -   | -    | 1507 | A                          |
| $I_{FSM}$    | Surge (non-repetitive) Current | 10ms, Half Sine Wave, $T_{vj} = 175 \text{ } ^\circ\text{C}$ , $V_R = 0$ | -   | -    | 12.0 | kA                         |
| $I^2t$       | Limiting load integral         | Sine Wave, 10ms                                                          | -   | -    | 72   | $10^4 \text{ A}^2\text{s}$ |

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**Characteristics**

| Symb.     | Parameter                       | Test Conditions                                                    | Min | Type | Max  | Unit          |
|-----------|---------------------------------|--------------------------------------------------------------------|-----|------|------|---------------|
| $V_{FM}$  | Peak Forward Voltage            | $I_{FM} = 1500 \text{ A}$ , $T_{vj} = 25 \text{ }^{\circ}\text{C}$ | -   | -    | 1.70 | V             |
| $I_{RRM}$ | Reverse Repetitive Peak Current | $T_{vj} = 175 \text{ }^{\circ}\text{C}$ , $V_{RRM}$                | -   | -    | 60   | mA            |
| $V_{FO}$  | Threshold Voltage               | $T_{vj} = 175 \text{ }^{\circ}\text{C}$                            | -   | -    | 0.88 | V             |
| $r_F$     | Slope Resistance                | $T_{vj} = 175 \text{ }^{\circ}\text{C}$                            | -   | -    | 0.45 | m $\Omega$    |
| $Q_r$     | Reverse Recovery Charge         | $T_{vj} = 175 \text{ }^{\circ}\text{C}$                            | -   | 3000 | -    | $\mu\text{C}$ |

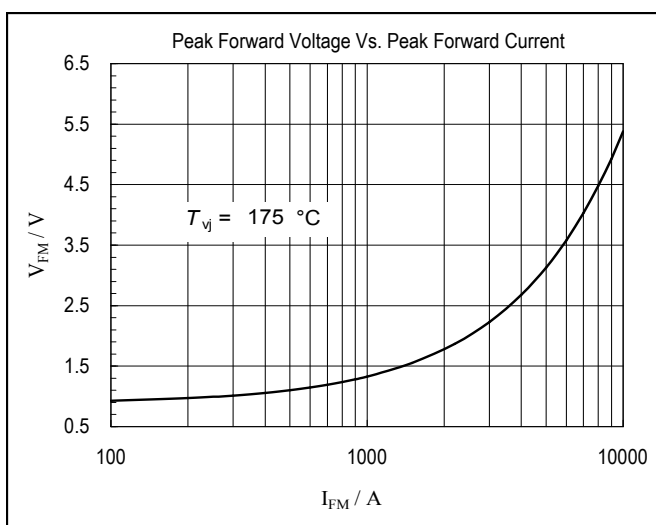


Fig1. Peak Forward Voltage Vs. Peak Forward Current

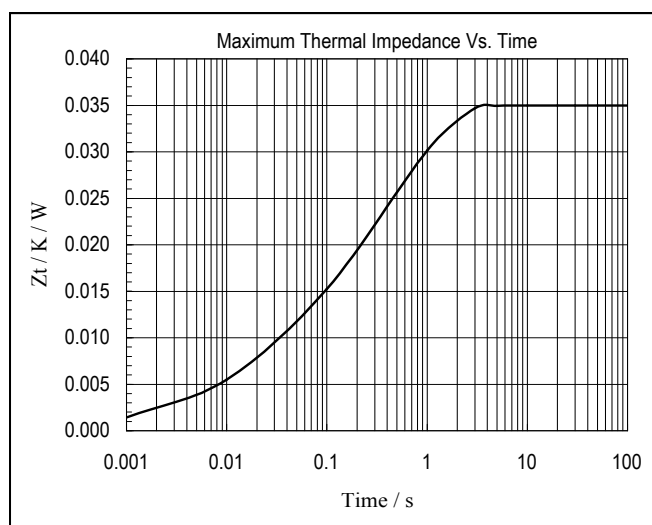


Fig2. Maximum Thermal Impedance Vs. Time

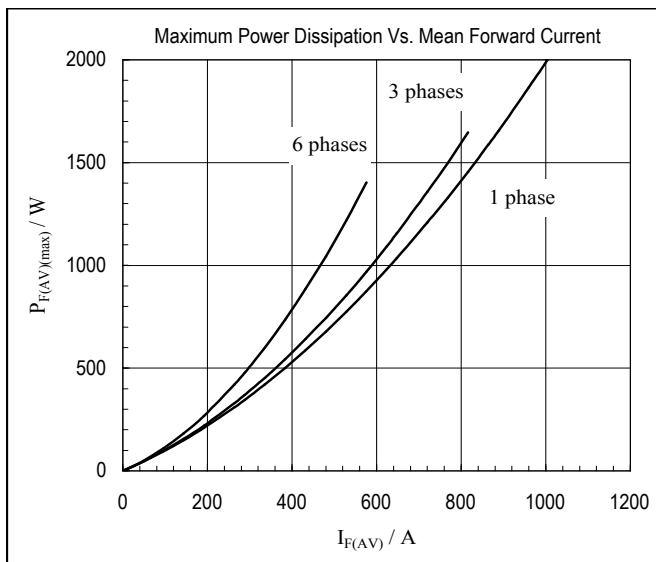


Fig3. Maximum Power Dissipation Vs. Mean Forward Current

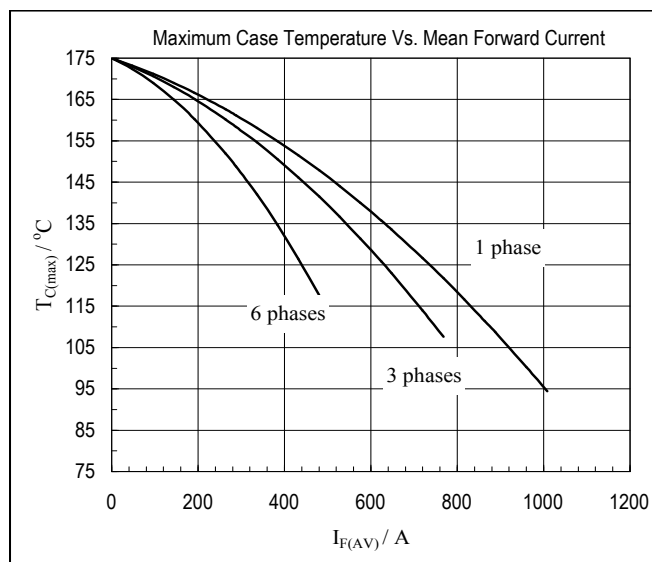


Fig4. Maximum Case Temperature Vs. Mean Forward Current

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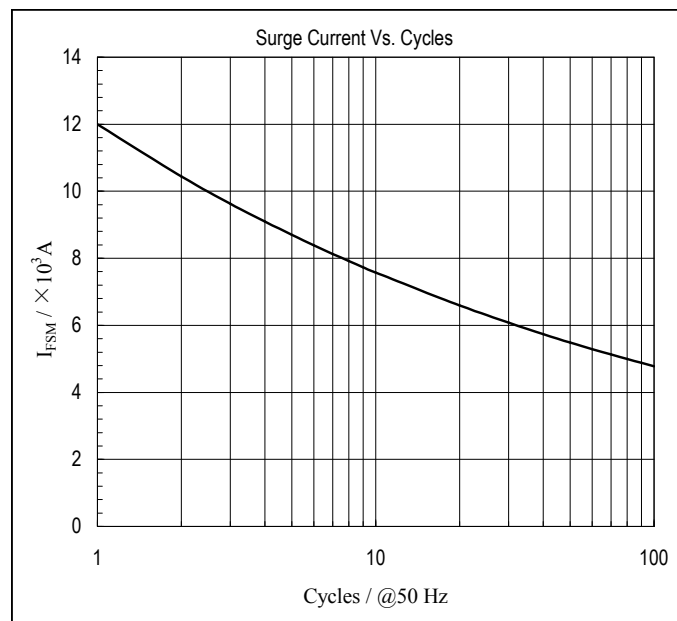


Fig5. Surge Current Vs. Cycles

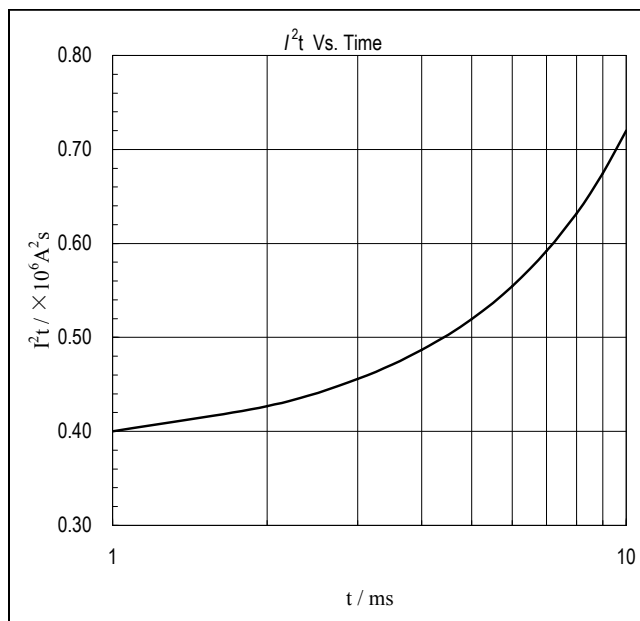


Fig6.  $I^2t$  Vs. Time