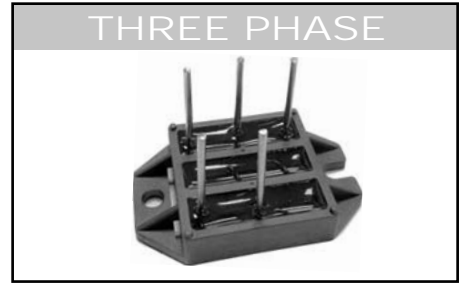




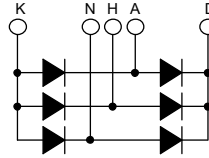
THREE PHASE STANDARD RECOVERY BRIDGE 86A

Preliminary



Features

- High Surge Capability
- Types up to 1600V  $V_{RRM}$
- Isolation Type Package

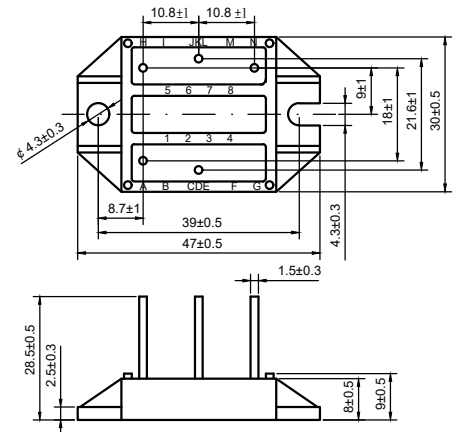


Dimensions in mm (1 mm = 0.0394")

Maximum Ratings

- Junction Operating Temperature : -40°C to +150°C
- Storage Temperature : -40°C to +125°C

| Part Number    | Maximum Recurrent Peak Reverse Voltage | Maximum DC Blocking Voltage |
|----------------|--|-----------------------------|
| DAR3PV086-160W | 1600V                                  | 1600V                       |



Electrical Characteristics @ 25°C Unless Otherwise Specified

| Definition   | Conditions  | Symbol         | min.         | typ. | max.         | Unit   |
|--|---|----------------|--------------|------|--------------|--|
| Bridge output current  | $T_c = 90^\circ\text{C}$ , per module $T_{vj} = 150^\circ\text{C}$  | $I_{DAV}$      |              |      | 90           | A  |
| Max. forward surge current                                     | $t = 10\text{ ms}$ ; (50 Hz), $T_{vj} = 45^\circ\text{C}$<br>sine $t = 8,3\text{ ms}$ ; (60 Hz), sine $V_R = 0\text{ V}$  | $I_{FSM}$      |              |      | 550<br>595   | A<br>A   |
|  | $t = 10\text{ ms}$ ; (50 Hz), $T_{vj} = 150^\circ\text{C}$<br>sine $t = 8,3\text{ ms}$ ; (60 Hz), sine $V_R = 0\text{ V}$ |                |              |      | 470<br>505   | A<br>A   |
| Value for fusing   | $t = 10\text{ ms}$ ; (50 Hz), sine $T_{vj} = 45^\circ\text{C}$<br>$t = 8,3\text{ ms}$ ; (60 Hz), sine $V_R = 0\text{ V}$  | $I^2t$         |              |      | 1.52<br>1.48 | $\text{kA}^2\text{s}$<br>$\text{kA}^2\text{s}$ |
|  | $t = 10\text{ ms}$ ; (50 Hz), sine $T_{vj} = 150^\circ\text{C}$<br>$t = 8,3\text{ ms}$ ; (60 Hz), sine $V_R = 0\text{ V}$ |                |              |      | 1.11<br>1.06 | $\text{kA}^2\text{s}$<br>$\text{kA}^2\text{s}$ |
| Reverse current  | $V_R = 1600\text{ V}$ $T_{vj} = 25^\circ\text{C}$<br>$V_R = 1600\text{ V}$ $T_{vj} = 150^\circ\text{C}$                   | $I_R$          |              |      | 40<br>1.5    | $\mu\text{A}$<br>mA                            |
| Forward voltage drop   | $I_F = 80\text{ A}$ $T_{vj} = 25^\circ\text{C}$   | $V_F$          |              |      | 1.5          | V  |
| Threshold voltage for power loss calculation only              | $T_{vj} = 150^\circ\text{C}$  | $V_{F0}$       |              |      | 0.8          | V  |
|  |   | $r_F$          |              |      | 7.8          | m $\Omega$                                     |
| Total power dissipation  | $T_c = 25^\circ\text{C}$  | $P_{tot}$      |              |      | 135          | W  |
| Junction capacitance   | $V_R = 400\text{ V}$ ; $f = 1\text{ MHz}$ $T_{vj} = 25^\circ\text{C}$   | $C_J$          |              | 20   |              | pF   |
| Creepage distance on surface and Striking distance through air | terminal to terminal<br>terminal to backside  | $d_{Spp/App}$  | 6.0          |      |              | mm   |
|  |   | $d_{Spb/Appb}$ | 10.0         |      |              | mm   |
| Isolation voltage  | 50/60 Hz, RMS; $I_{ISOL} \leq 1\text{ mA}$ $t = 1\text{ second}$<br>$t = 1\text{ minute}$                                 | $V_{ISOL}$     | 3000<br>2500 |      |              | V<br>V   |
| Thermal resistance junction to case                            |   | $R_{thJC}$     |              |      | 0.9          | K/W  |
| Thermal resistance case to heatsink                            |   | $R_{thCH}$     |              | 0.4  |              | K/W  |
| Mounting torque  |   | $M_D$          | 1.4          |      | 2            | Nm   |



Figure .1- Typical Forward Characteristics

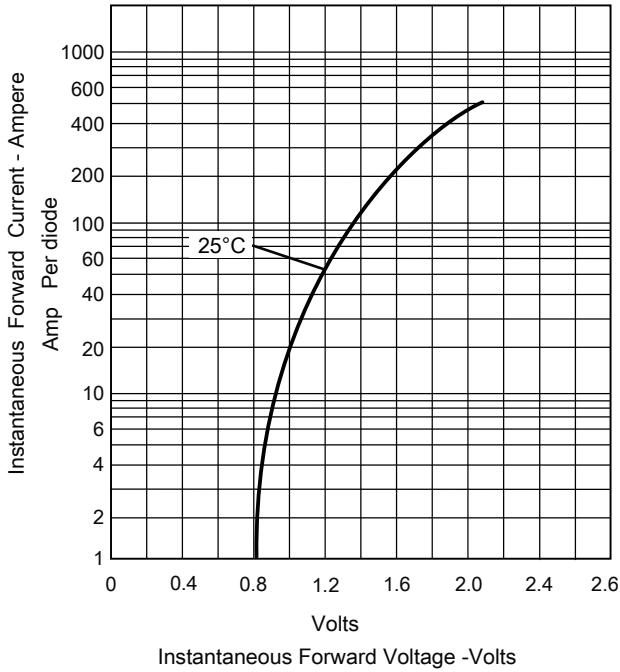


Figure .2-Bridge Output Current Curve

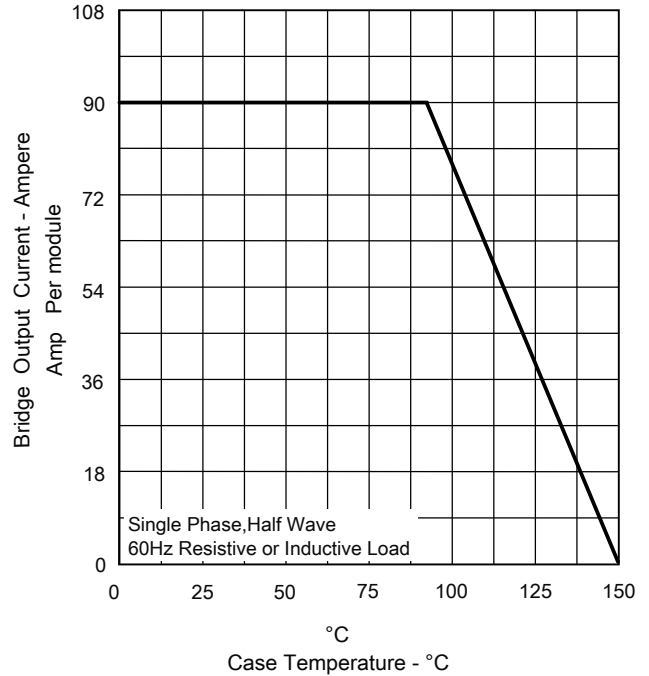


Figure .3- Peak Forward Surge Current

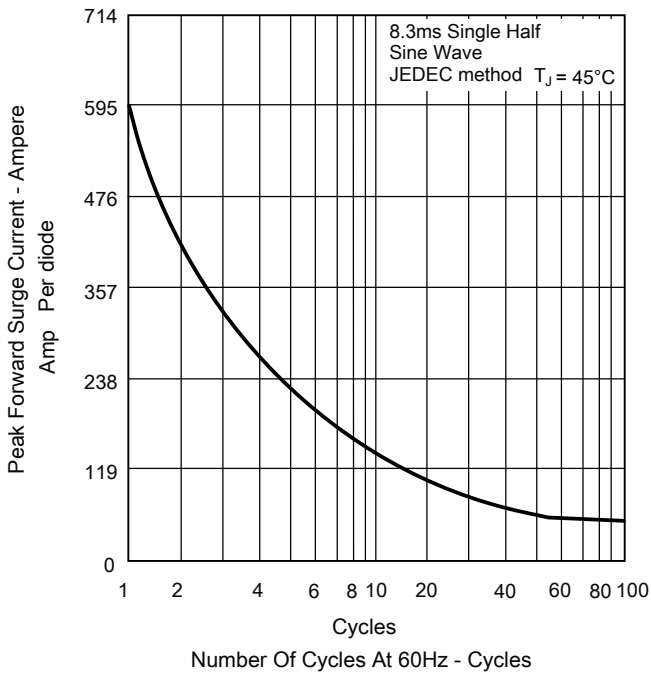
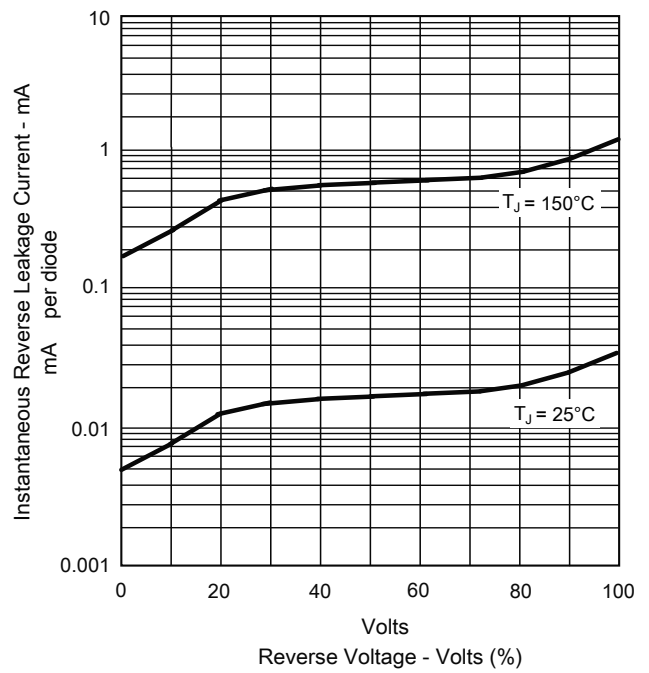


Figure .4 -Typical Reverse Characteristics





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