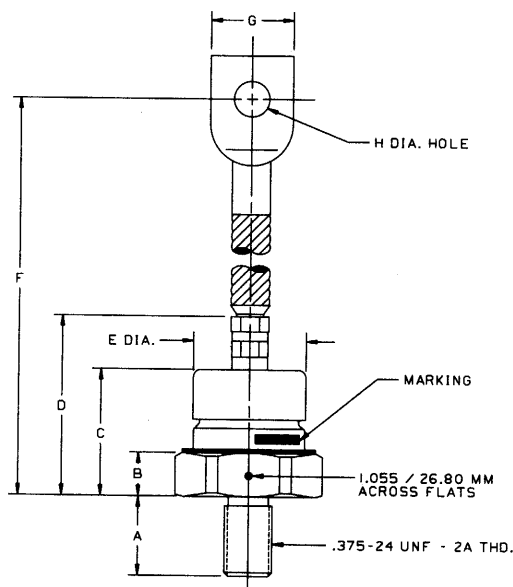


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**Silicon Rectifier**  
 150 Amperes Average  
 1600 Volts

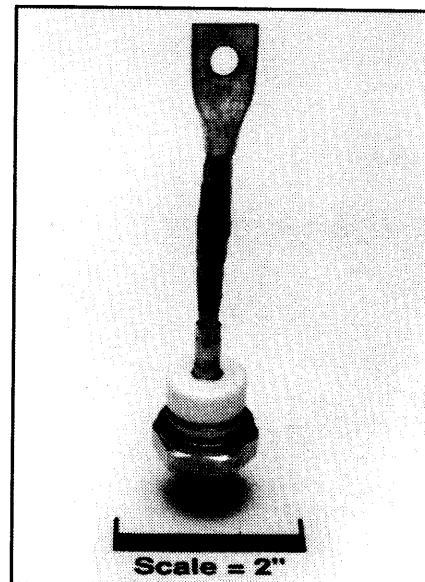


CASE NUMBER R50  
 NOMINAL DIMENSIONS

STRIKE DISTANCE = .64 INCH / 16.2 MM MIN.  
 CREEPAGE DISTANCE = .64 INCH / 16.2 MM MIN.

| SYM.   | A    | B   | C    | D    | E    | F     | G    | H    | J    | K    |
|--------|------|-----|------|------|------|-------|------|------|------|------|
| INCHES | .63  | .34 | .98  | 1.58 | .89  | 4.48  | .63  | .281 | ---- | ---- |
| MM     | 16.0 | 8.6 | 24.9 | 40.1 | 22.6 | 113.8 | 16.0 | 7.14 | ---- | ---- |

ALL DIMENSIONS ARE REFERENCE



**A180 (R)**  
**Silicon Rectifier**  
 150 Amperes Average, 1600 Volts

**A180 (R)** (Outline Drawing)

### Ordering Information:

Select the complete five or six digit part number you desire from the table, i.e. A180PM is a 1600 Volt, 150 Ampere Silicon Rectifier.

| Type | Voltage   |      | Current<br>$I_{T(av)}$ |
|------|-----------|------|------------------------|
|      | $V_{RRM}$ | Code |                        |
| A180 | 200       | B    | 150                    |
|      | 400       | D    |                        |
|      | 600       | M    |                        |
|      | 800       | N    |                        |
|      | 1000      | P    |                        |
|      | 1200      | PB   |                        |
|      | 1400      | PD   |                        |
|      | 1600      | PM   |                        |

### Features:

- ☐ Hermetic Seal

### Applications:

- ☐ Transportation Equipment
- ☐ DC Motor Control
- ☐ DC Power Supplies
- ☐ Battery Vehicles



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**A180 (R)**

**Silicon Rectifier**

150 Amperes Average, 1600 Volts

**Absolute Maximum Ratings**

| Characteristics                                    | Symbol       | A180 (R)     | Units       |
|----------------------------------------------------|--------------|--------------|-------------|
| RMS Forward Current                                | $I_{F(rms)}$ | 236          | Amperes     |
| Average Forward Current                            | $I_{F(av)}$  | 150          | Amperes     |
| One Cycle Surge Current                            | $I_{FSM}$    | 3400         | Amperes     |
| $I^2t$ (for Fusing), Times $\geq 1.0$ milliseconds | $I^2t$       | 22000        | $A^2sec$    |
| Storage Temperature                                | $T_{stg}$    | -40 to +200  | $^{\circ}C$ |
| Operating Temperature                              | $T_j$        | -40 to +200  | $^{\circ}C$ |
| Mounting Torque                                    |              | 90 to 100    | in-lb       |
|                                                    |              | 10.2 to 11.3 | N-m         |

**Electrical and Thermal Characteristics**

| Characteristics                                 | Symbol            | Test Conditions                                         | A180 (R) | Units            |
|-------------------------------------------------|-------------------|---------------------------------------------------------|----------|------------------|
| <b>Current - Conducting State Maximums</b>      |                   |                                                         |          |                  |
| Forward Voltage Drop                            | $V_{FM}$          | $T_C = 143^{\circ}C$ ,<br>$I_{F(av)} = 150A, 471A$ Peak | 1.3      | Volts            |
| <b>Voltage - Blocking State Maximums</b>        |                   |                                                         |          |                  |
| Repetitive Peak Reverse Voltage (Rated Limit)   | $V_{RRM}$         |                                                         | 1600     | Volts            |
| Non-rep. Trans. Peak Rev. Voltage (Rated Limit) | $V_{RSM}$         | $V \leq 5.0msec$                                        | 1800     | Volts            |
| Reverse Leakage Current, mA peak                | $I_{RRM}$         | $T_j$ at max., $V_{RRM} = \text{Rated}$                 | 20       | mA               |
| <b>Thermal</b>                                  |                   |                                                         |          |                  |
| Maximum Resistance, Junction to Case            | $R_{\theta(j-c)}$ |                                                         | 0.3      | $^{\circ}C/Watt$ |

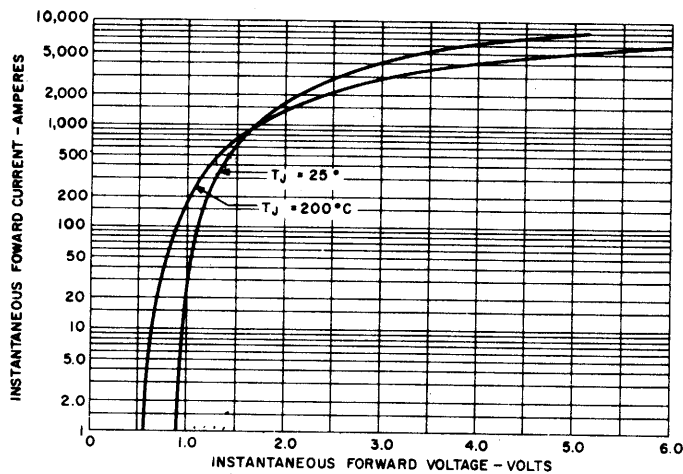


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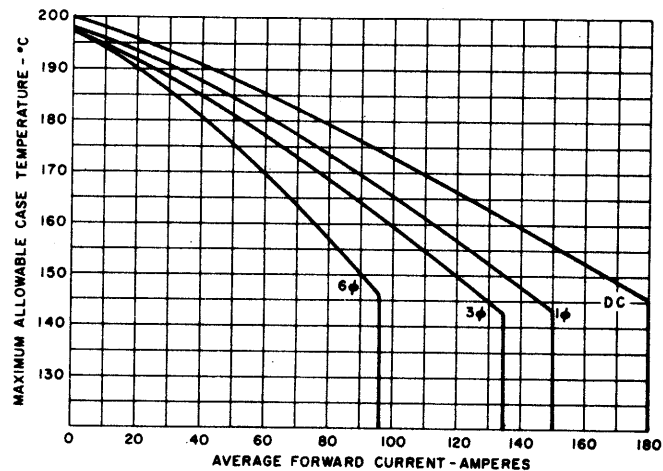
A180 (R)

Silicon Rectifier

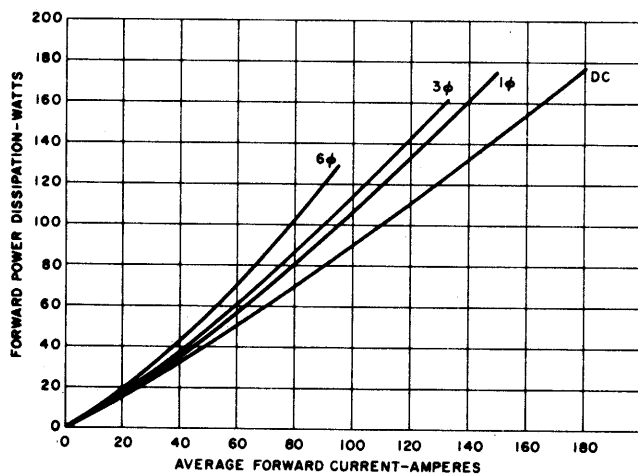
150 Amperes Average, 1600 Volts



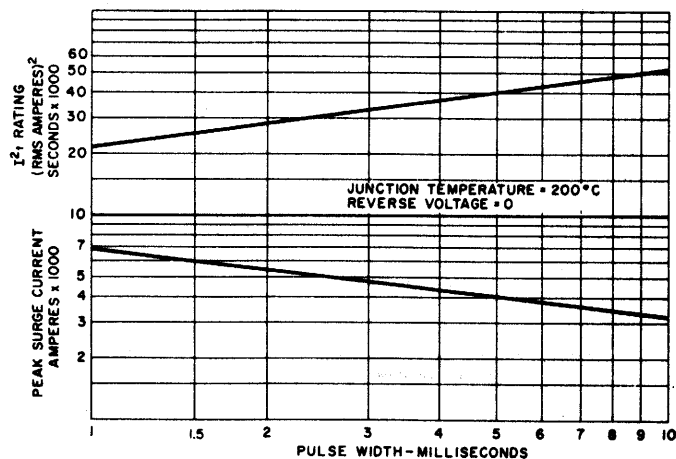
MAXIMUM FORWARD CHARACTERISTICS



MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT



AVERAGE FORWARD POWER DISSIPATION VS. AVERAGE FORWARD CURRENT

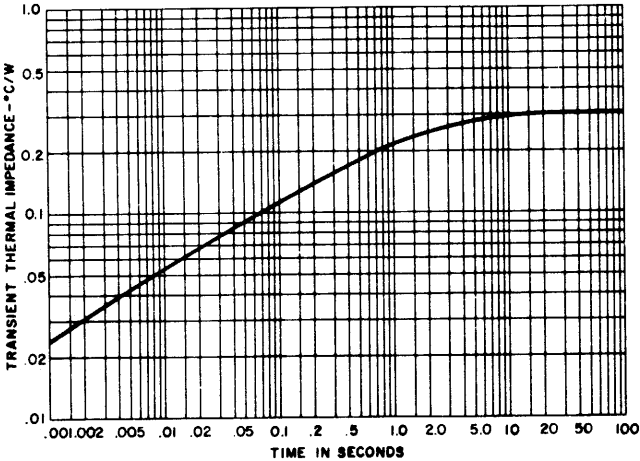


SUB-CYCLE SURGE FORWARD CURRENT AND  $I^2t$  RATING VS. PULSE TIME FOLLOWING RATED LOAD CONDITIONS



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A180 (R)  
Silicon Rectifier  
150 Amperes Average, 1600 Volts



TRANSIENT THERMAL IMPEDANCE —  
JUNCTION-TO-CASE