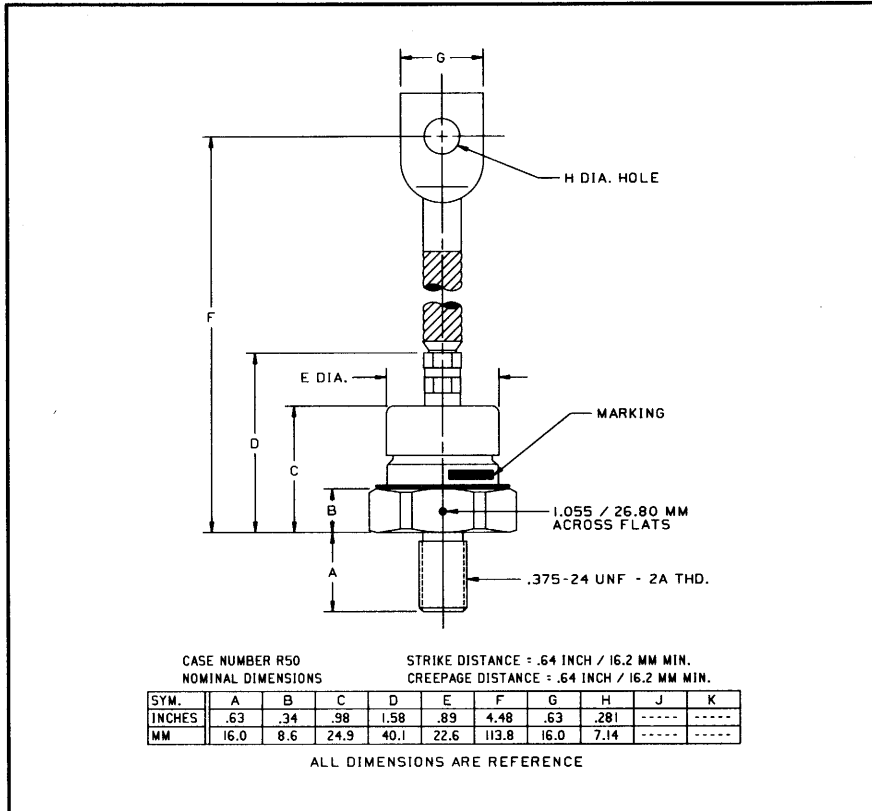


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Silicon Rectifier
 100 Amperes Average
 1600 Volts



A170 (R)
Silicon Rectifier
 100 Amperes Average, 1600 Volts

A170 (R) (Outline Drawing)

Ordering Information:

Select the complete five or six digit part number you desire from the table, i.e. A170PM is a 1600 Volt, 100 Ampere Silicon Rectifier.

| Type | Voltage | | Current |
|------|-----------|------|-------------|
| | V_{RRM} | Code | $I_{T(av)}$ |
| A170 | 200 | B | 100 |
| | 400 | D | |
| | 600 | M | |
| | 800 | N | |
| | 1000 | P | |
| | 1200 | PB | |
| | 1400 | PD | |
| | 1600 | PM | |

Features:

- 1600V V_{RRM}
- Hermetic Seal

Applications:

- Transportation Equipment
- DC Motor Control
- DC Power Supplies



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A170 (R)
Silicon Rectifier
 100 Amperes Average, 1600 Volts

Absolute Maximum Ratings

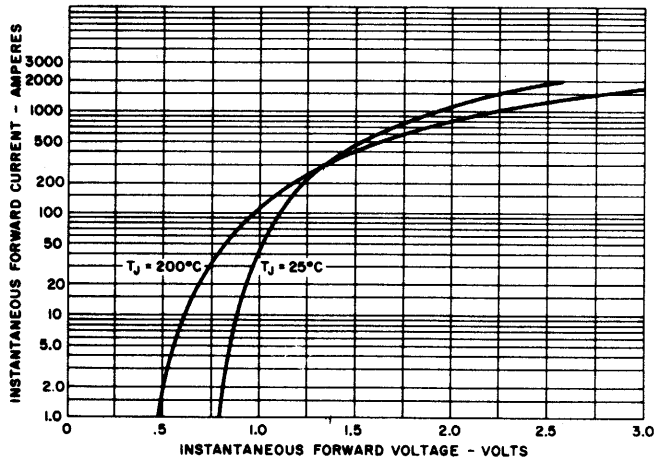
| Characteristics | Symbol | A170 (R) | Units |
|--|--------------|--------------|-------------|
| RMS Forward Current | $I_{F(rms)}$ | 157 | Amperes |
| Average Forward Current | $I_{F(av)}$ | 100 | Amperes |
| One Cycle Surge Current | I_{FSM} | 2500 | Amperes |
| I^2t (for Fusing), Times ≥ 1.0 milliseconds | I^2t | 15500 | 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 |
| | | 10.1 to 11.3 | N-m |

Electrical and Thermal Characteristics

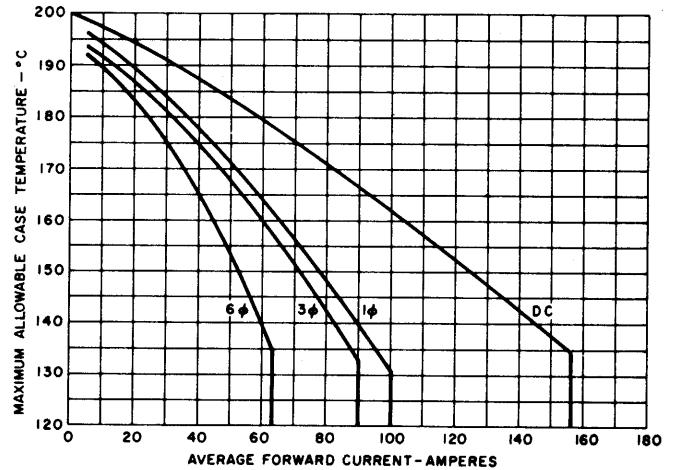
| Characteristics | Symbol | Test Conditions | A170 (R) | Units |
|---|-------------------|---|----------|------------------|
| Current - Conducting State Maximums | | | | |
| Forward Voltage Drop | V_{FM} | $T_C = 130^{\circ}C$, $I_{F(av)} = 100A, 314A$ Peak | 1.3 | Volts |
| Voltage - Blocking State Maximums | | | | |
| 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 |
| Thermal | | | | |
| Maximum Resistance, Junction to Case | $R_{\theta(j-c)}$ | | 0.4 | $^{\circ}C/Watt$ |
| 1 ϕ and 3 ϕ (50 to 400 Hz) | | | 0.55 | $^{\circ}C/Watt$ |
| 6 ϕ (50 to 400 Hz) | | | 0.72 | $^{\circ}C/Watt$ |

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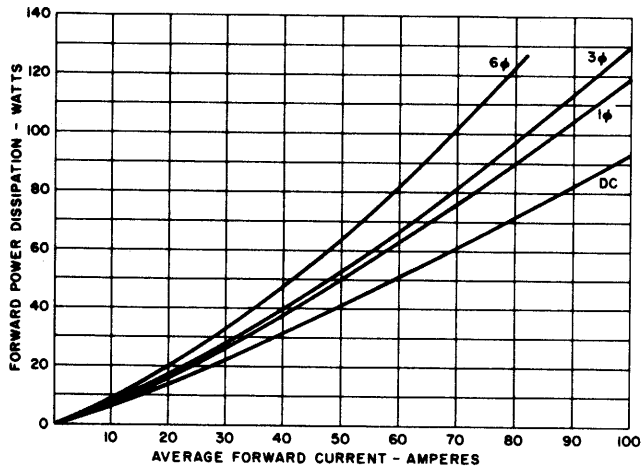
A170 (R)
Silicon Rectifier
 100 Amperes Average, 1600 Volts



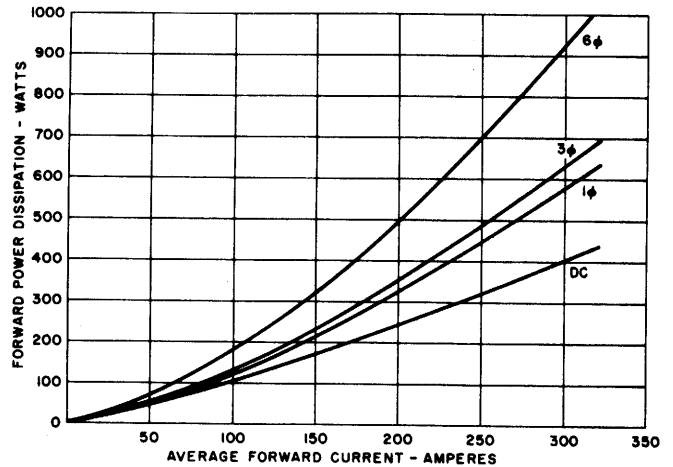
MAXIMUM FORWARD CHARACTERISTICS



MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT



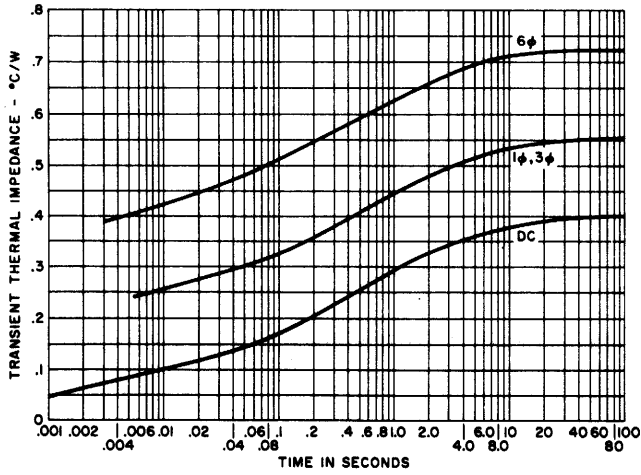
AVERAGE FORWARD POWER DISSIPATION VS. AVERAGE FORWARD CURRENT



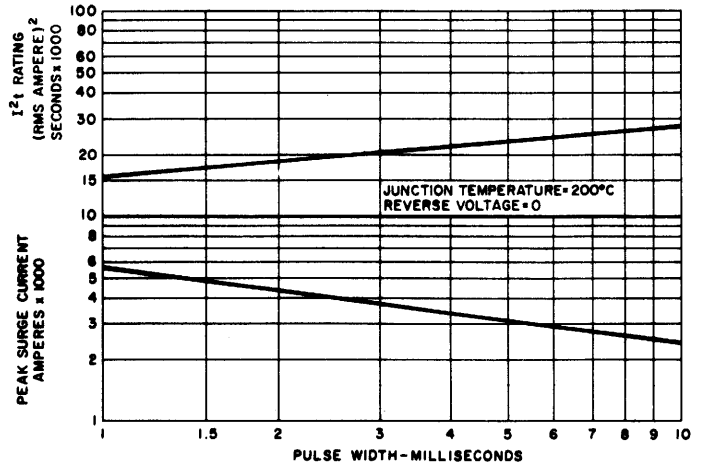
AVERAGE FORWARD POWER DISSIPATION VS. AVERAGE FORWARD CURRENT, HIGH LEVEL

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A170 (R)
 Silicon Rectifier
 100 Amperes Average, 1600 Volts



TRANSIENT THERMAL IMPEDANCE –
 JUNCTION-TO-CASE



SUB-CYCLE SURGE FORWARD CURRENT
 AND I²t RATING VS. PULSE TIME
 FOLLOWING RATED LOAD CONDITIONS