High Power

Silicon Controlled Rectifier

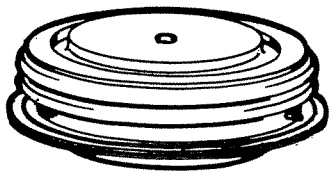
A330

1500 VOLTS 1200A Avg.

The A330 Series is General Electric's highly reliable, all-diffused Press-Pak 1200 ampere silicon rectifier diode in a new low profile, ceramic housing. This package is mechanically compatible with all 1/2" Press-Pak packages yet its 0.5" creep distance makes it suitable for use on high voltage.

FEATURES:

- Companion diode to the C430 and C431 SCR's
- High reverse blocking voltage capability
- Pressure contacts
- Package reversibility
- Rugged, glazed ceramic hermetic package with 0.5" creepage path
- 800 lb. and 2000 lb. mounting hardware available (HW1000 and HW2000 clamps)



MAXIMUM ALLOWABLE RATINGS AND SPECIFICATIONS

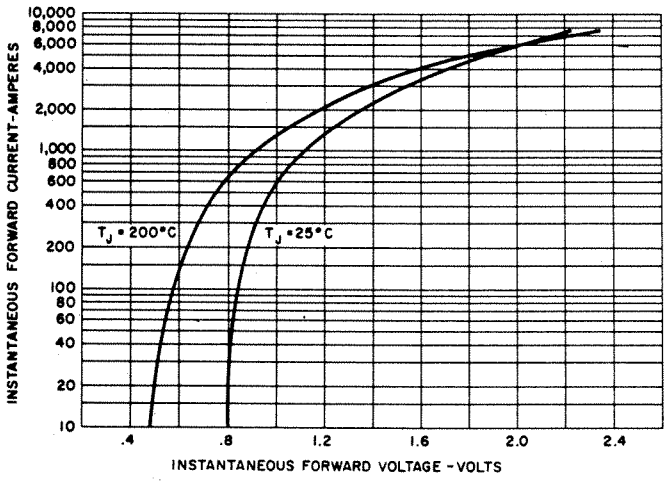
TYPES	REPETITIVE PEAK[1] REVERSE VOLTAGE V_{RRM} T_J = -40°C to +200°C	NON-REPETITIVE[2] PEAK REVERSE VOLTAGE, V_{RSM} T_J = 25°C to +200°C	DC REVERSE[3] VOLTAGE, V_R T_J = -40°C to +200°C	REPETITIVE PEAK REVERSE CURRENT I_{RRM} @ V_{RRM} T_J = 200°C
A330E	500 Volts	650 Volts	500 Volts	50 mA
A330M	600	800	600	50
A330S	700	925	700	50
A330N	800	1050	800	50
A330T	900	1175	900	50
A330P	1000	1300	1000	50
A330PA	1100	1400	1100	50
A330PB	1200	1500	1200	50
A330PC	1300	1600	1300	50
A330PD	1400	1700	1400	50
A330PE	1500	1800	1500	50

Average Forward Current, $I_{F(AV)}$ (T_C = 112°C, Single Phase, Half Sinewave, Double-Side Cooled) . . . . . 1,200 Amperes
Peak One-Cycle Surge (Non-Repetitive) Forward Current, I_{FSM} . . . . . 11,100 Amperes
Minimum I^2t Rating (for times ⩾ 1.5 msec., Non-Repetitive) . . . . . 300,000 (RMS Ampere)^2 Seconds
Minimum I^2t Rating (for times ⩾ 8.3 msec., Non-Repetitive) . . . . . 511,000 (RMS Ampere)^2 Seconds
Peak Forward Voltage Drop, V_{FM} (I_{FM} = 4000 Amps. Peak, Temp. Case = +25°C, Single Phase) . . . . . 1.7 Volts
Maximum Thermal Resistance, $R\theta_{JC}$, Double-Side Cooling, at 2000 Lbs. (8.9 KN) . . . . . 0.045°C/Watt
at 800 Lbs. (3.6 KN) . . . . . 0.06°C/Watt
Storage Temperature, T_{stg} . . . . . -40°C to +200°C
Operating Junction Temperature, T_J . . . . . -40°C to +200°C
Mounting Force Required[4] . . . . . 800 - 2000 Lbs.
3.6 - 8.9 KN

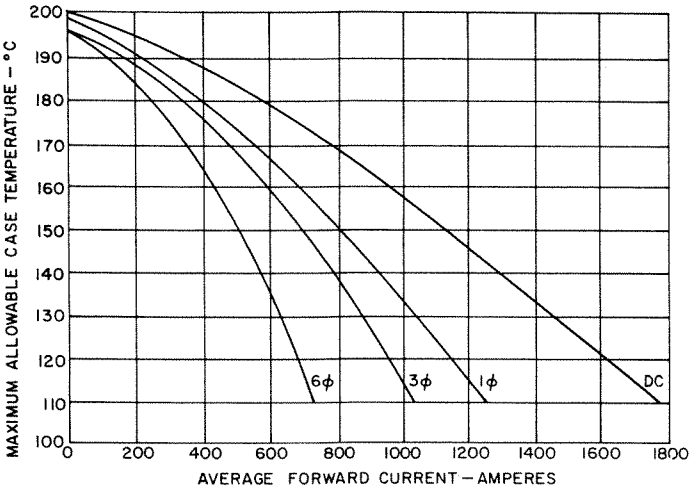
NOTES:

1 Assumes a heatsink thermal resistance of less than 1.1°C/watt.
2 Non-repetitive voltage and current ratings, as contrasted to repetitive ratings, apply for occasional or unpredictable overloads. For example, the forward surge current ratings are non-repetitive ratings that are used in fault coordination work.
3 Assumes a heatsink thermal resistance of less than 0.5°C/watt.
4 Refer to the SCR Manual, Sixth Edition, Chapter 18 for Press-Pak mounting instructions.

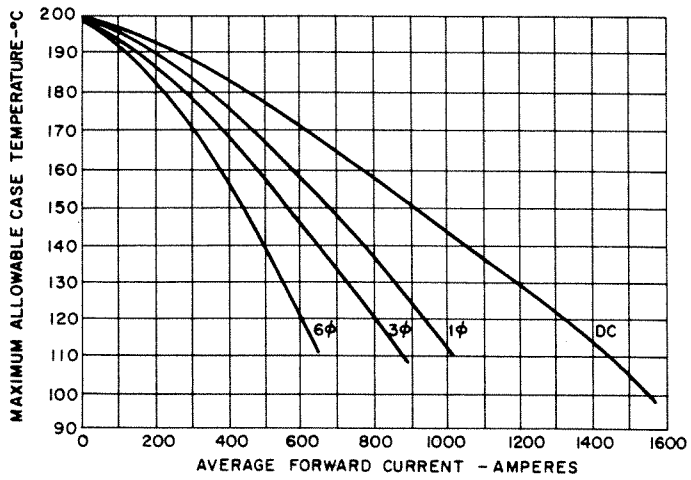
DEVICE SPECIFICATIONS



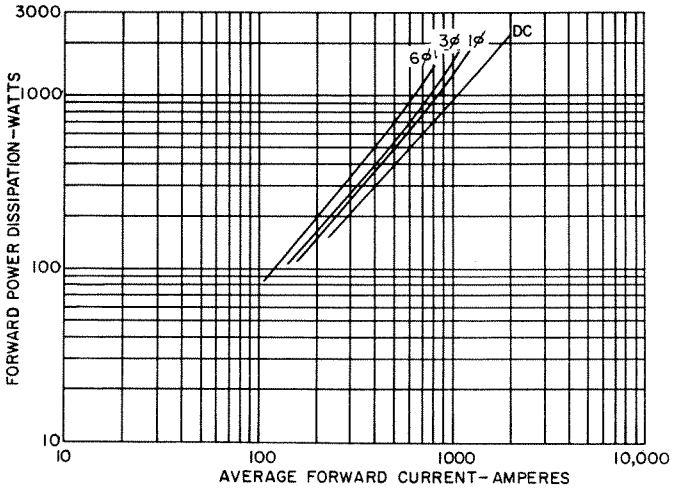
1. MAXIMUM FORWARD CHARACTERISTICS



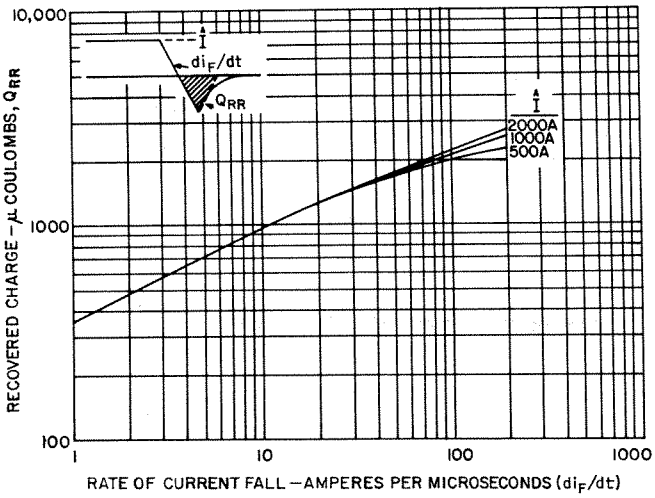
2. MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT FOR DOUBLE-SIDE COOLING AND 2000 Lb. MOUNTING



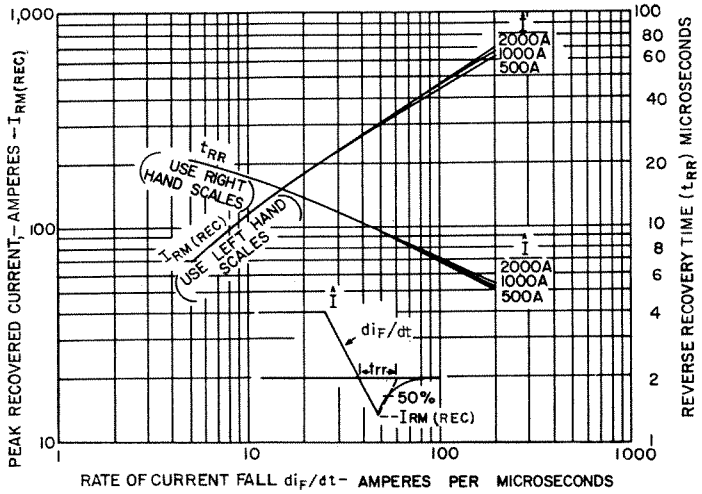
3. MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT FOR DOUBLE-SIDE COOLING AND 800 Lb. MOUNTING



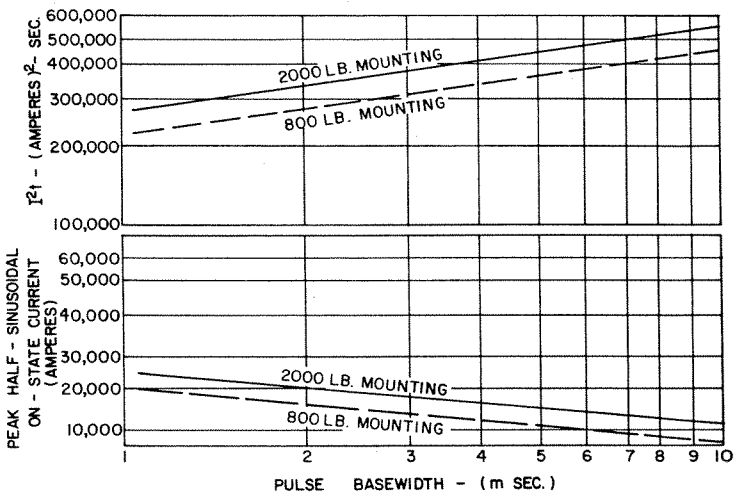
4. AVERAGE FORWARD POWER DISSIPATION VS. AVERAGE FORWARD CURRENT



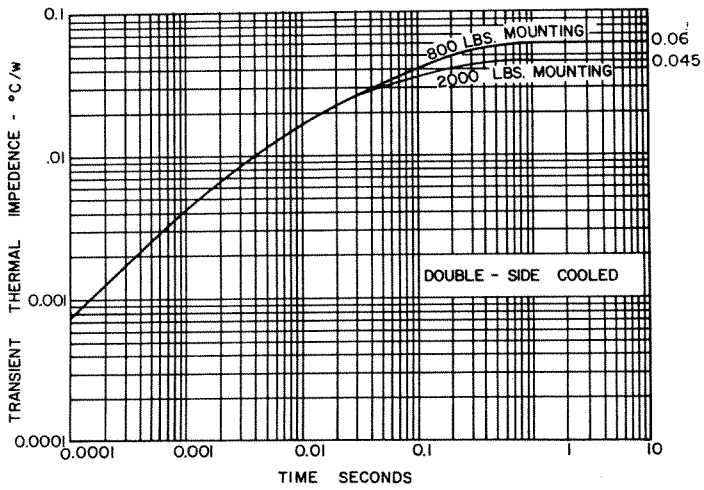
5. MAXIMUM REVERSE RECOVERY CHARGE AT T_J = 200°C



6. MAXIMUM REVERSE RECOVERY CURRENT AND TIME AT T_J = 200°C



7. NON-REPETITIVE SUBCYCLE SURGE CURRENT AND I^2t RATINGS



8. TRANSIENT THERMAL IMPEDANCE – JUNCTION-TO-CASE