



INTERNATIONAL SEMICONDUCTOR, INC.

SILICON POWER RECTIFIERS

VOLTAGE - 200 to 1600 Volts

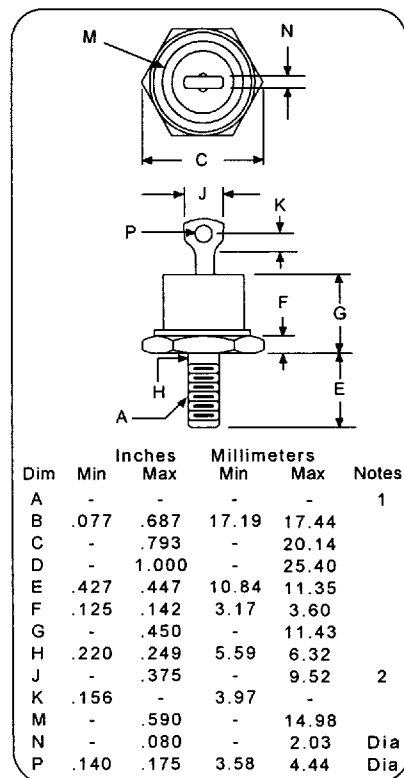
CURRENT - 70 Ampere Avg.

S3520 thru R35160

MECHANICAL CHARACTERISTICS

Base	Steel stud and base with a 1/4-28 UNF-2A thread for through mounting on a heat sink. Nickel plating prevents corrosion.
Header	Glass to metal construction.
Weight	Approximately 0.5 ounces (14 grams)
Mounting Position	May be mounted in any position
Mounting Torque	30 inch-pounds maximum
Dimensions	In accordance with JEDEC DO-203AB (DO-5) outline

- Notes:**
- Standard Polarity: Stud is Cathode (Denoted by Prefix "S")
Reverse Polarity: Stud is Anode (Denoted by Prefix "R")
 - Full Threads Within 2 1/2 Threads



DO-5

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified
Single phase, half wave, 60 Hz, resistive or inductive load
For capacitive load, derate current by 20%

	SYMBOL	S3520 R3520	S3540 R3540	S3560 R3560	S3580 R3580	S35100 R35100	S35120 R35120	S35140 R35140	S35160 R35160	UNITS
Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	600	800	1000	1200	1400	V
Maximum RMS Input Voltage	V_{RMS}	140	280	420	420	560	700	840	980	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	600	800	1000	1200	1400	V
Maximum Average Forward Current at $T_c = 152^\circ\text{C}$, Half Sine Wave	$I_{(AV)}$	70								A
Maximum Forward Surge Current 8.3 ms single half sine wave superimposed on rated load	I_{FSM}	1050								A
Maximum Peak Forward Voltage at $I_{FM}=200$ Amps and $T_j=25^\circ\text{C}$	V_F	1.25								V
Maximum Peak Reverse Current at $T_j=25^\circ\text{C}$ at $T_j=150^\circ\text{C}$	I_{RM} I_{RM}	50 3.0								 uA mA
Max Recommended Operating Frequency	f	10								kHz
Thermal Resistance Typical/Maximum	$R_{\theta JC}$	0.55/0.65								$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_j	-65 to +200								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +200								$^\circ\text{C}$
Maximum Mounting Torque		30								in-lb
Weight		0.5/14								oz/gr

252 Cox Street, Roselle, NJ, USA, 07203-1704 ■ 908 245-2233

Toll-Free (800) 392-2474

■ 9000378 0000894 7TD ■

Fax: (908) 245-5541

433

SILICON POWER RECTIFIERS

S3520 thru R35160

RATING and CHARACTERISTIC CURVES

FIG. 2 - MAXIMUM FORWARD CURRENT DERATING CURVE

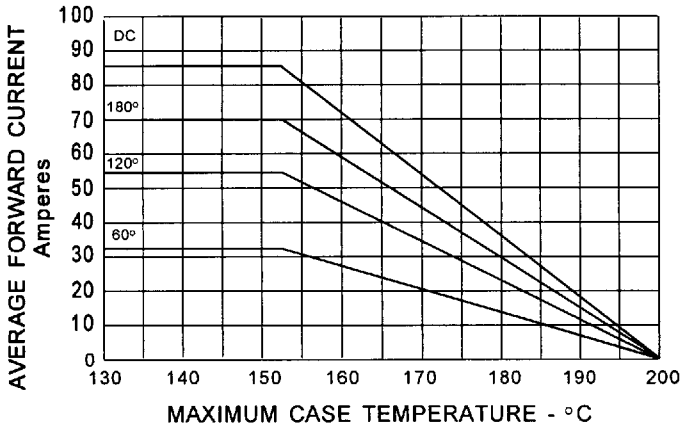


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

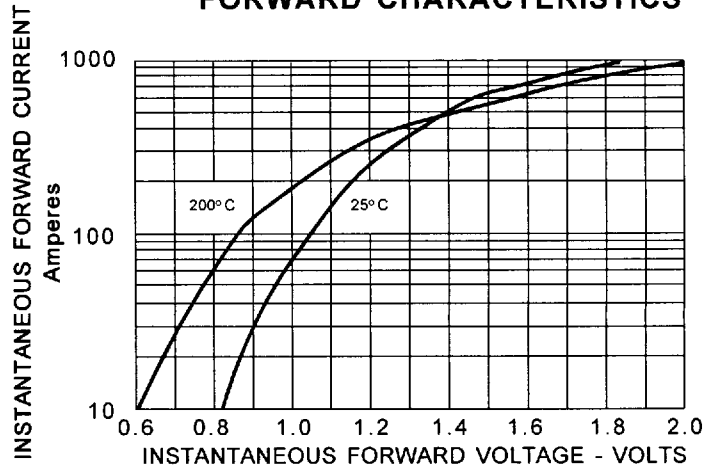


FIG. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

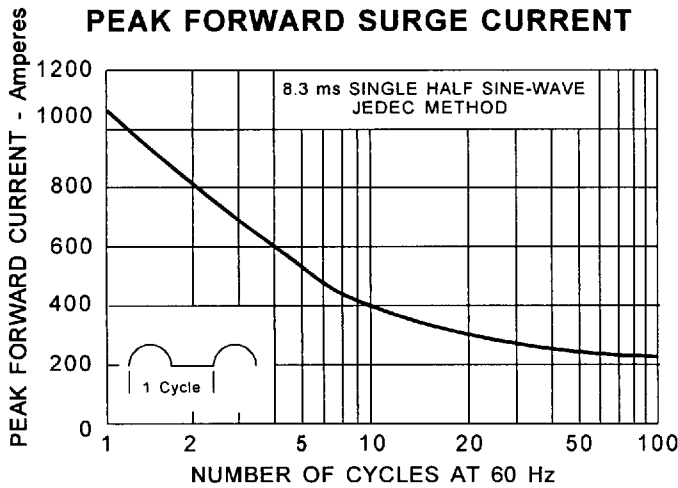


FIG. 5 - MAXIMUM FORWARD POWER DISSIPATION

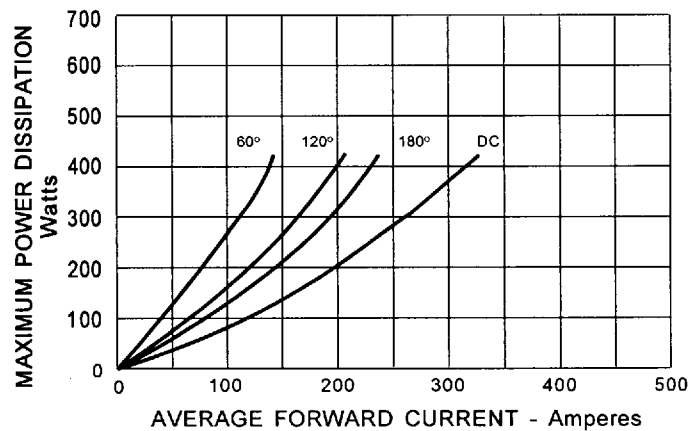


FIG. 5 - TRANSIENT THERMAL IMPEDANCE

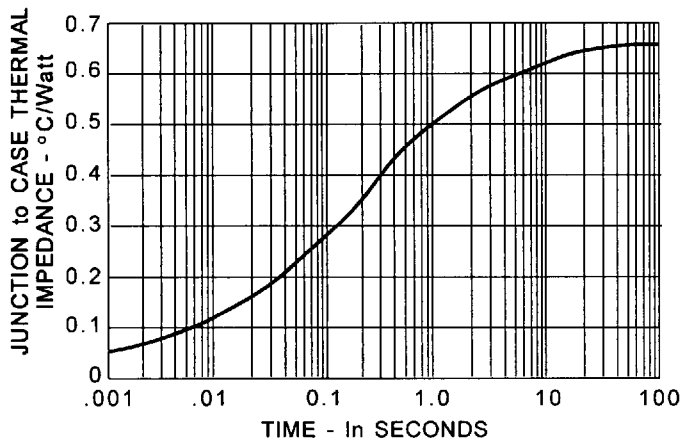
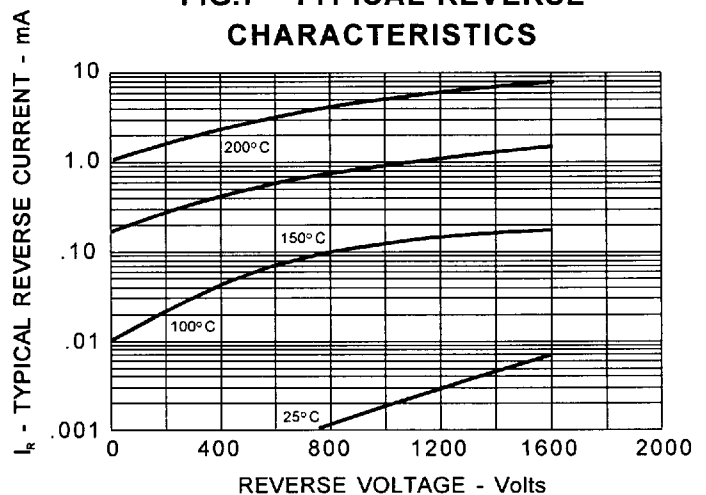


FIG. 7 - TYPICAL REVERSE CHARACTERISTICS



INTERNATIONAL SEMICONDUCTOR, INC.

■ 9000378 0000895 637 ■

434