

I. General Purpose Rectifier

10.0A Surface Mount Silicon Rectifier S10A~S10M

(Package: SMC (DO-214AB))

<p><u>FEATURES</u></p> <ul style="list-style-type: none"> The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 For surface mounted applications Low reverse leakage Built-in strain relief, ideal for automated placement High forward surge current capability High temperature soldering guaranteed : 250 /10 seconds at terminals <p><u>MECHANICAL DATA</u></p> <ul style="list-style-type: none"> Case : JEDEC DO-214AB molded plastic body Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 Polarity : Color band denotes cathode end Mounting Position : Any Weight : 0.220 grams 	<p>Case: SMC Dimensions in inches and (millimetres)</p>
---	---

Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	S10A	S10B	S10D	S10G	S10J	S10K	S10M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_L = 65$	I_o	10.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400.0							Amps
Maximum instantaneous forward voltage at 10.0A	V_F	1.0							Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 100$	I_R	5.0 100.0							μA μA
Typical junction capacitance (Note 1)	C_j	130.0							PF
Typical thermal resistance (Note 2)	R_{th-JA}	10.0							/W
Operating junction and storage temperature range	T_j, T_{stg}	-65 to + 150							

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 0.6x0.6" (16x16mm) copper pad areas

Ratings and Characteristic Curves of S10A~S10M

FIG. 1- FORWARD CURRENT DERATING CURVE

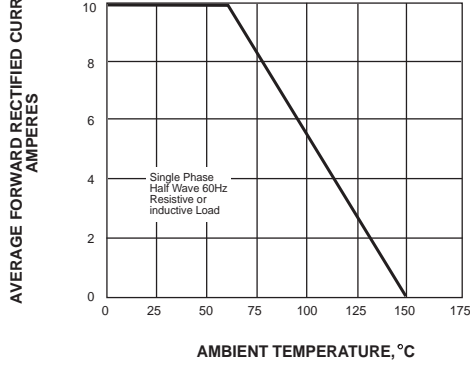


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

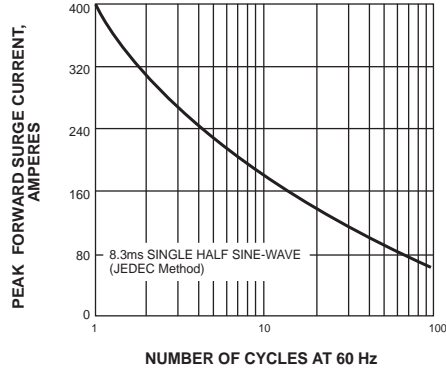


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

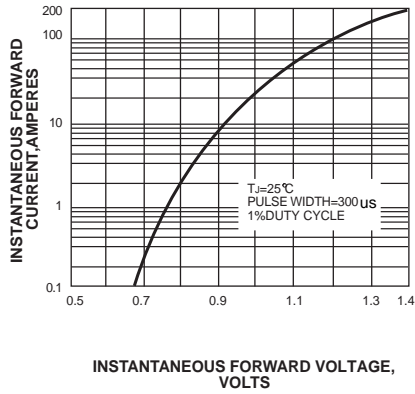


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

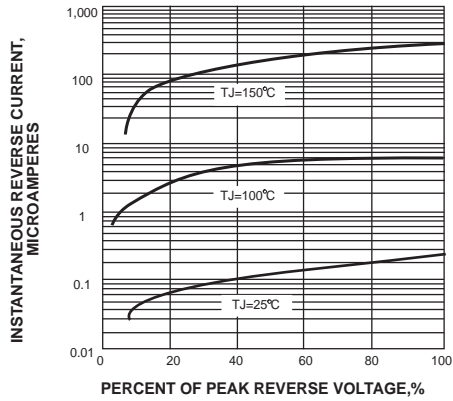


FIG. 5-TYPICAL JUNCTION CAPACITANCE

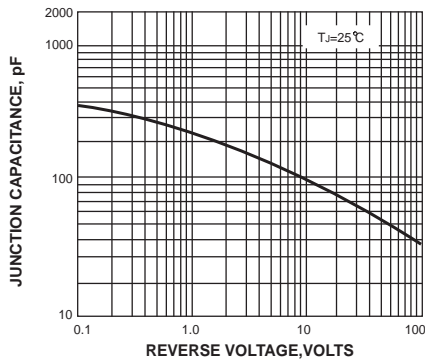


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

