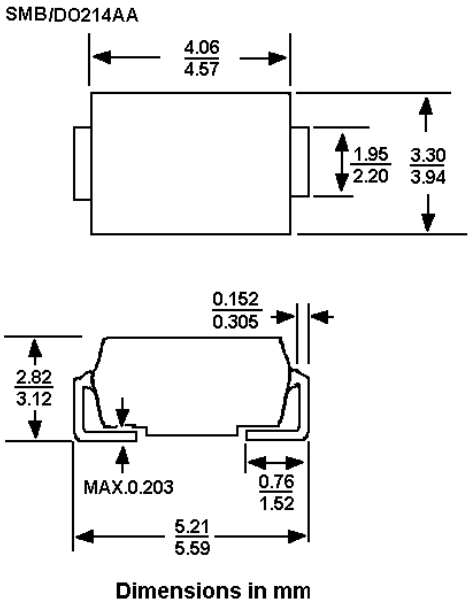
S3A THRU S3M

SURFACE MOUNT GENERAL RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 3.0 Amperes



Dimensions in mm

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Low reverse leakage
- For surface mount application
- High forward surge current capability
- Built-in strain relief, ideal for automated placement

Mechanical Data

- Case: JEDEC DO-214AA, molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
  High temperature solder: 250? /10 seconds at terminals
- Polarity: Color band denotes cathode end
- Mounting position: Any

Absolute Maximum Ratings
Rating at 25oC ambient temperature unless otherwise specified. Single-phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_L = 110 ^{O}C	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	50							^{O}C/W
Operating junction and storage temperature range	T_J ,T_S	-65 to +175							^{O}C

Notes : 1) P.C.B. mounted with 0.2 ×0.2” (5.0 ×5.0mm) copper pad areas

Characteristics at T $_{amb}$ = 25 ^{O}C

	Symbol	Min.	Typ.	Max.	Unit
Maximum instantaneous forward voltage at 3.0A	V_F	-	-	1.2	V
Maximum DC reverse current at T_A = 25?	I_R	-	-	5	μ A
At rated DC blocking voltage at T_A = 100?	I_R	-	-	100	μ A
Typical junction Capacitance at V_R = 4V, f = 1 MH_Z	C_J	-	60	-	pF

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FIG.1-FORWARD CURRENT DERATING CURVE

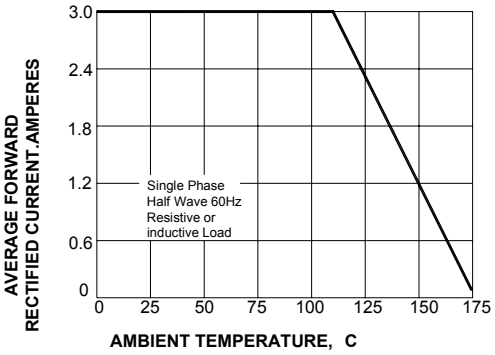

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

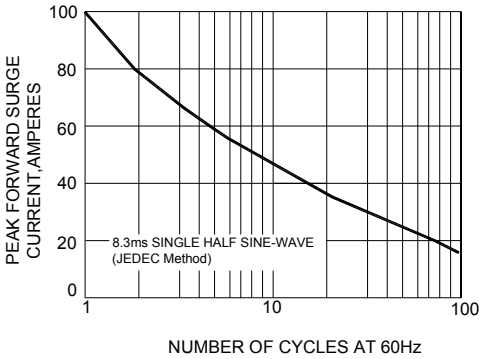

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

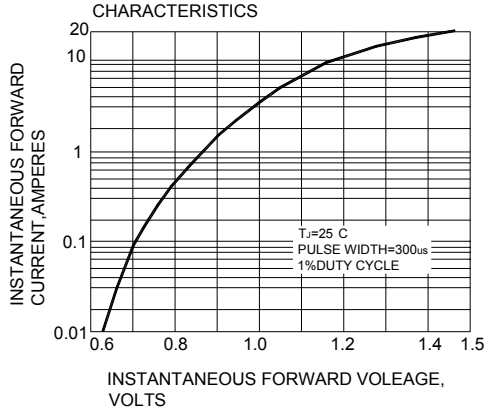

FIG.4-TYPICAL REVERSE CHARACTERISTICS

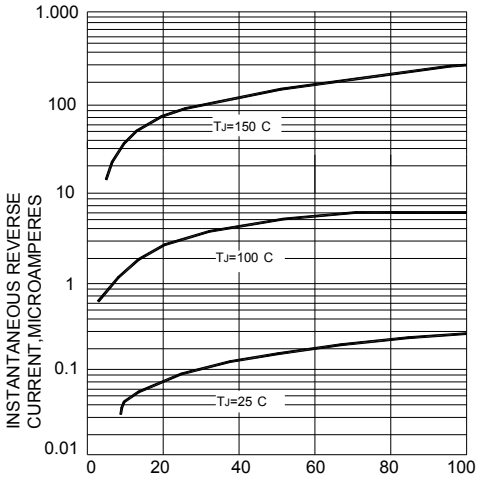

FIG.5-TYPICAL JUNCTION CAPACITANCE

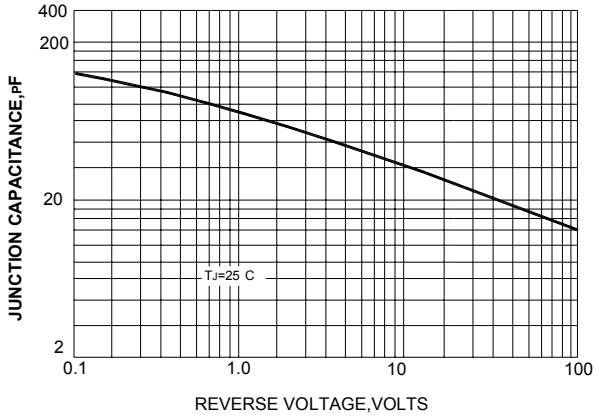

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE