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SURFACE MOUNT **FAST RECOVERY RECTIFIERS**	**REVERSE VOLTAGE - 50 to 1000 Volts** **FORWARD CURRENT - 1.0 Amperes**

FEATURES

● Fast switching for high efficiency

● Low cost

● Diffused junction

● Low reverse leakage current

● Low forward voltage drop

● High current capability

● The plastic material carries UL recognition 94V-0

A-SMA

.051(1.30) / .039(1.00)

.114(2.90) / .098(2.50)

.181(4.60) / .157(4.00)

.012(.305) / .006(.152)

.103(2.62) / .079(2.00)

.060(1.52) / .030(0.76)

.208(5.28) / .188(4.80)

.008(.203) / .002(.051)

MECHANICAL DATA

●Case： Molded Plastic

●Polarity: Indicated by cathode band

●Weight: 0.002 ounces,0.064 grams

●Mounting position: Any
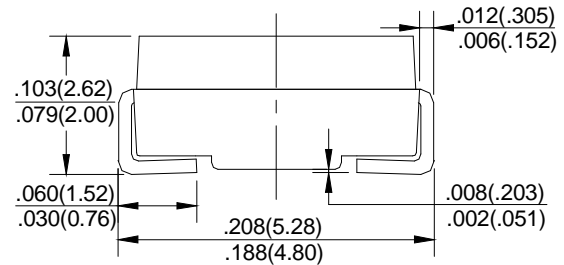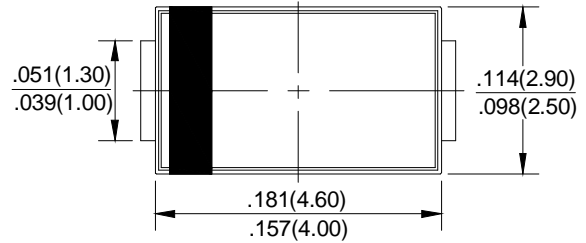
Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	RS1AA	RS1BA	RS1DA	RS1GA	RS1JA	RS1KA	RS1MA	UNIT
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 @T_A=75 ℃	$I_{(AV)}$	1.0							A
Peak Forward Surage Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I_{FSM}	30							A
Peak Forward Voltage at 1.0A DC	V_F	1.3							V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Blocking Voltage @T_J=100℃	I_R	5.0 100							uA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	150				250	500		nS
Tyical Junction Capacitance (Note2)	C_J	25				15			pF
Tyical Thermal Resistance (Note3)	$R_{θJA}$	25							℃/W
Operating Temperature Range	T_J	-50 to +125							℃
Storage Temperature Range	T_{STG}	-50 to +150							℃

NOTES: 1.Measured with I_F=0.5A,I_R=1A,I_{RR}=0.25A

　　　　2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

　　　　3.Thermal resistance junction of ambient.
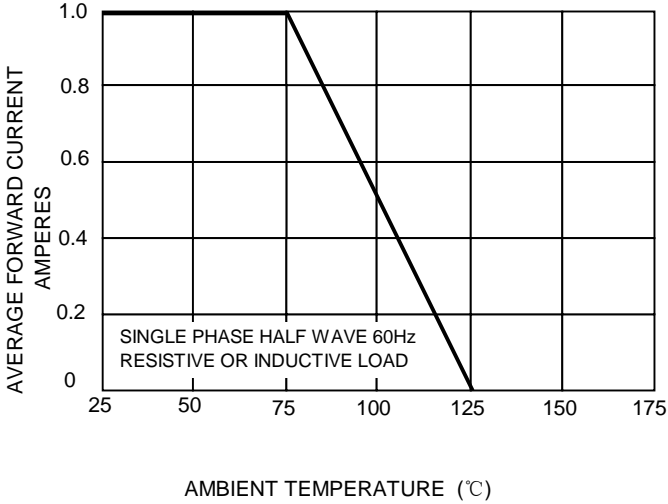
FIG. 1 – FORWARD CURRENT DERATING CURVE

AVERAGE FORWARD CURRENT
AMPERES

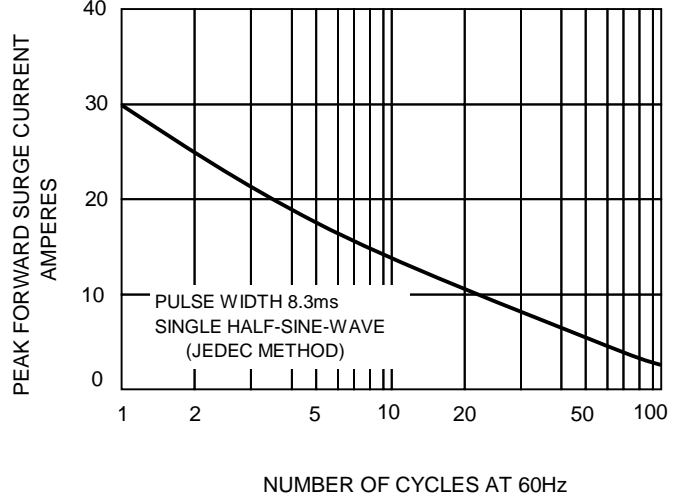SINGLE PHASE HALF WAVE 60Hz
RESISTIVE OR INDUCTIVE LOAD

AMBIENT TEMPERATURE（℃）

FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

PEAK FORWARD SURGE CURRENT
AMPERES

PULSE WIDTH 8.3ms
SINGLE HALF-SINE-WAVE
(JEDEC METHOD)

NUMBER OF CYCLES AT 60Hz

FIG.3 – TYPICAL JUNCTION CAPACITANCE
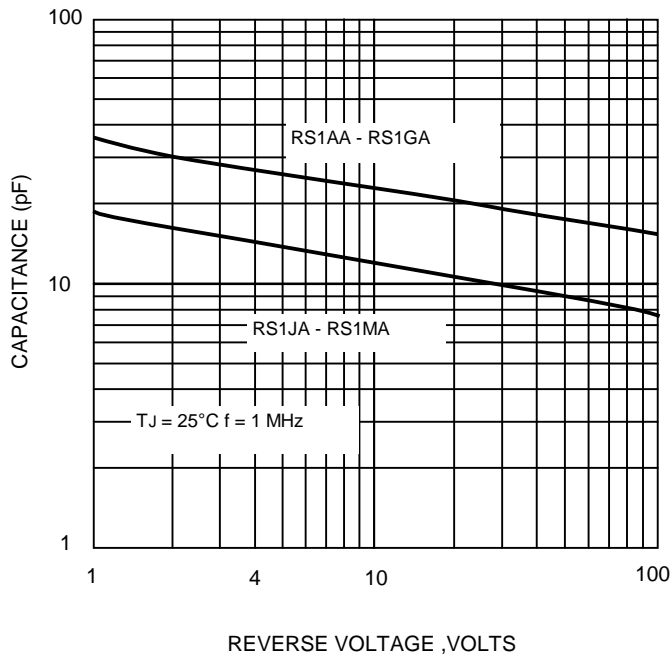
CAPACITANCE (pF)

RS1AA - RS1GA

RS1JA - RS1MA

TJ = 25°C f = 1 MHz

REVERSE VOLTAGE ,VOLTS

FIG.4-TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT
AMPERES

TJ = 25°C

PULSE WIDTH 300us

INSTANTANEOUS FORWARD VOLTAGE ,VOLTS