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3A FAST RECOVERY SURFACE MOUNT RECTIFIER

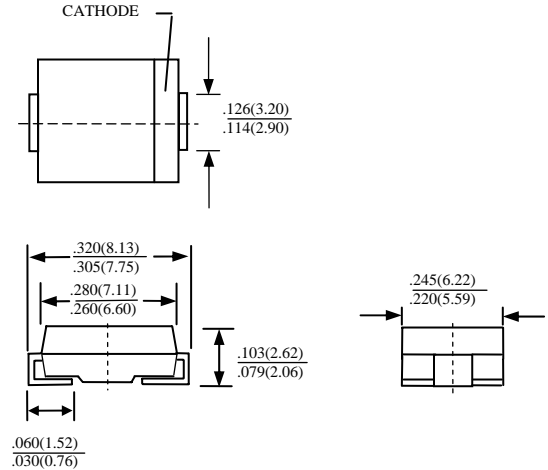
RS3A THRU RS3M

FEATURES

- LOW PROFILE PACKAGE
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY 94V-0
- IDEAL FOR SURFACE MOUNTED APPLICATION
- GLASS PASSIVATED CHIP JUNCTION
- BUILT-IN STRAIN RELIEF DESIGN
- FAST SWITCHING FOR HIGH EFFICIENT
- HIGH TEMPERATURE SOLDERING : 250°C/10 SECONDS AT TERMINALS

MECHANICAL DATA

- CASE: JEDEC DO-214AA MOLDED PLASTIC BODY, DO-214AB (SMC) DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINAL: SOLDER PLATED, SOLDERABLE PER MIL-STD-750 METHOD 2026
- POLARITY: COLOR BAND DENOTES CATHODE
- WEIGHT: 0.21 GRAMS



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%

RATINGS	SYMBOL	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	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 $T_L=75^\circ\text{C}$	I_O	3.0								A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	100								A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	28								PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jL}$	15								°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150								°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150								°C

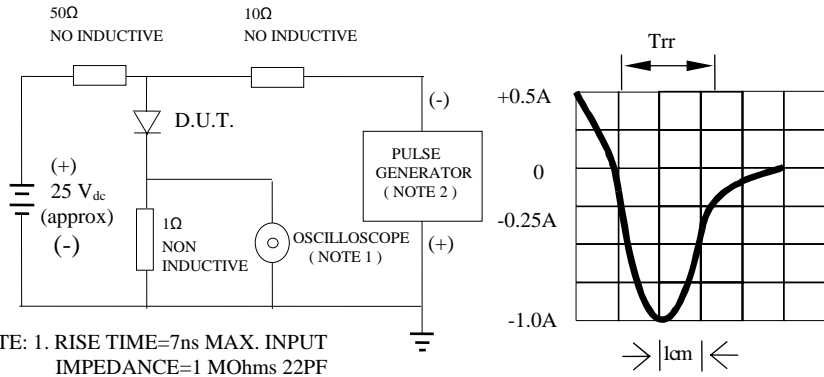
ELECTRICAL CHARACTERISTICS (AT $T_A=25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNITS	
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3								V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	10								μA
MAXIMUM REVERSE CURRENT AT 125°C	I_R	250								μA
MAXIMUM REVERSE RECOVERY TIME(NOTE 3)	T_{RR}	150			250		500		nS	
MARKING		RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M		

- NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. THERMAL RESISTANCE FROM JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3×0.3"(8.0×8.0mm) COPPER PAD AREAS
 3. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE RS3A THRU RS3M

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF
2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

SET TIME BASE FOR 10/20 ns/cm

Fig. 2-MAXIMUM FORWARD CURRENT DERATING CURVE

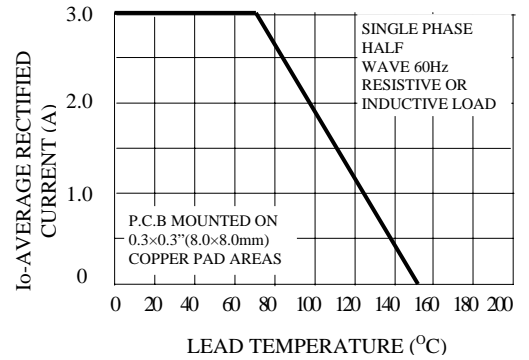


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

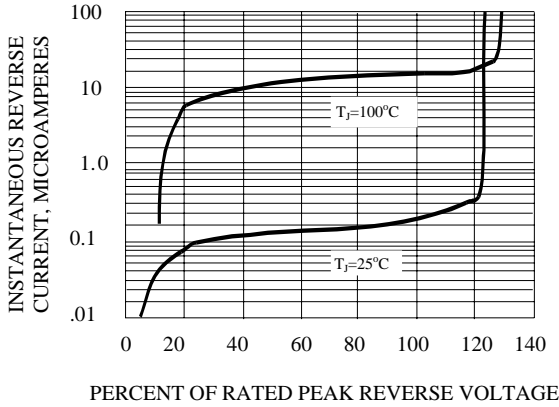


Fig. 4-MAXIMUM FORWARD SURGE CURRENT

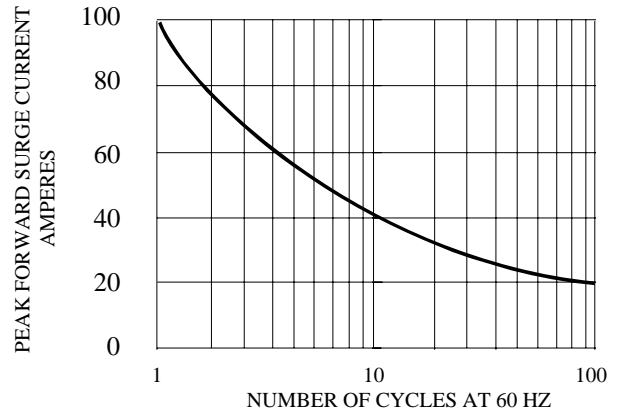


FIG. 5-TYPICAL JUNCTION CAPACITANCE

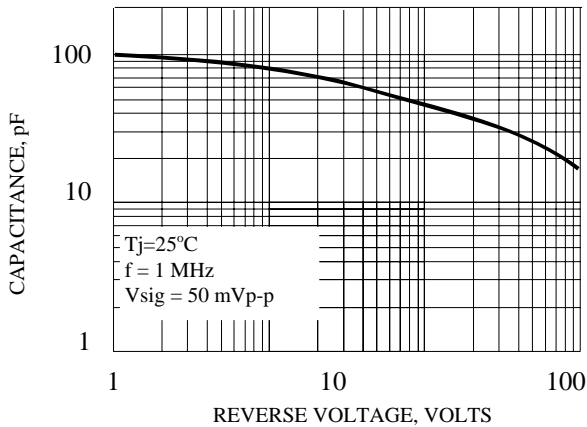


FIG. 6-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

