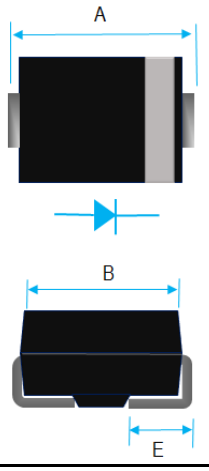
RS1A THRU RS1M SPECIFICATIONS

Rev. A

1A SURFACE MOUNT FAST RECOVERY RECTIFIERS



Dim.	Value Inch[mm] Min.	Max.
A	0.188[4.78]	0.220[5.60]
B	0.157[3.99]	0.181[4.60]
C	0.090[2.30]	0.114[2.90]
D	0.078[1.98]	0.100[2.60]
E	0.030[0.76]	0.060[1.52]
F	0.040[1.25]	0.065[1.65]

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION: 94V-0
2. GLASS PASSIVATED CHIP JUNCTION
3. BUILT-IN STRAIN RELIEF
4. LOW PROFILE
5. FAST SWITCHING
6. CASE: MOLDED PLASTIC, DO-214AC (SMA)
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. POLARITY: INDICATED BY CATHODE BAND
9. WEIGHT : 0.064 GRAMS
10. RoHS

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED. STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO +150°C. SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

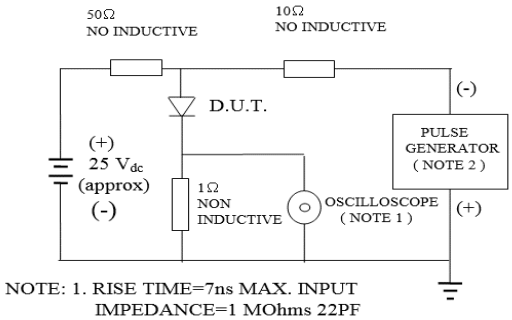
RATINGS	SYMBOL	VALUE	UNITS
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT @ TL=90°C	IO	1	A
PEAK FWD SURGE CURRENT, 8.3ms HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	IFSM	30	A
TYPICAL JUNCTION CAPACITANCE(NOTE1)	CJ	15	pF
TYPICAL THERMAL RESISTANCE (NOTE 2)	Rqja	30	°C/W
MAXIMUM FORWARD VOLTAGE	VF	1.3	V
MAXIMUM REVERSE CURRENT @ 25°C	IR	5	uA

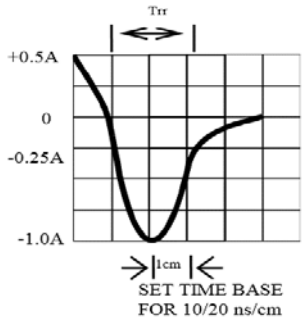
1. MEASURED @ 1.0 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 V
2. THERMAL RESISTANCE FROM JUNCTION TO TERMINAL 5.0mm2 (.013 mm THICK) LAND AREAS
3. REVERSE RECOVERY TEST CONDITIONS: IF=0.5A, IR=1.0A, IRR=0.25A
4. MAXIMUM FORWARD VOLTAGE AT Io DC

PART NUMBER	MAX RECURRENT PK REV VOLTAGE V_{RRM} (V)	MAX RMS VOLTAGE V_{RMS} (V)	MAX DC BLOCKING VOLTAGE V_{DC} (V)	MARKING	MAX REV RECOVERY TIME T_{RR} (nS)
RS1A	50	35	50	RS1A	150
RS1B	100	70	100	RS1B	150
RS1D	200	140	200	RS1D	150
RS1G	400	280	400	RS1G	150
RS1J	600	420	600	RS1J	250
RS1K	800	560	800	RS1K	500
RS1M	1000	700	1000	RS1M	500

RATING AND CHARACTERISTIC CURVES

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

Fig. 2-MAXIMUM CURRENT DERATING CURVE

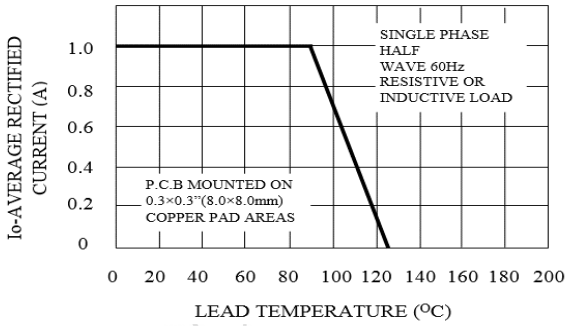


FIG. 3-TYPICAL JUNCTION CAPACITANCE

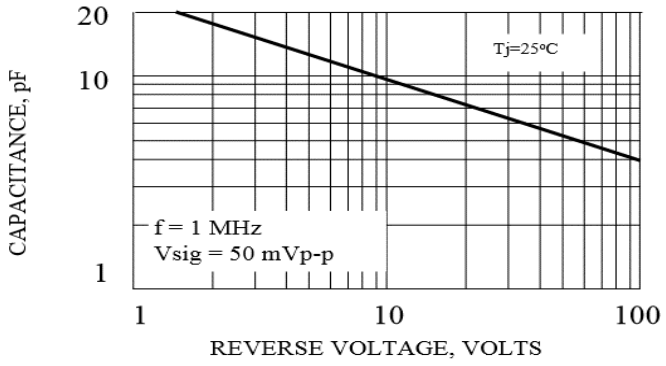


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

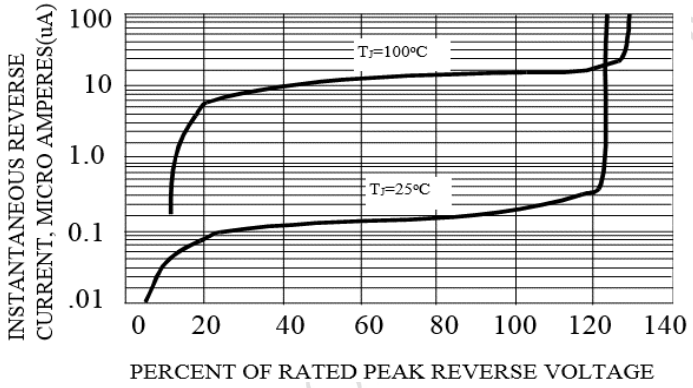


Fig. 5-MAXIMUM FORWARD SURGE CURRENT

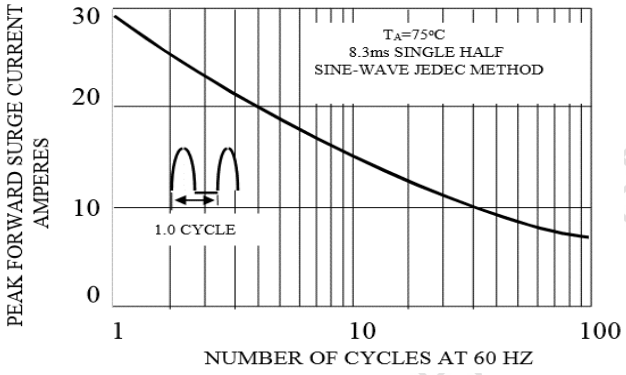
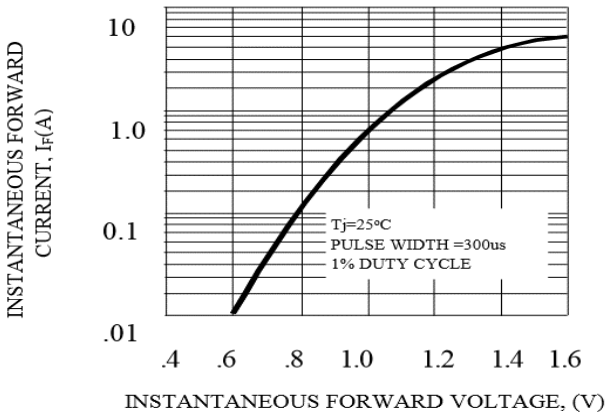



FIG. 6-TYPICAL INSTANTANEOUS ARD CHARACTERISTICS