



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: frontiersales@frontierusa.com

Web: <http://www.frontierusa.com>

2A FAST RECOVERY SURFACE MOUNT RECTIFIER

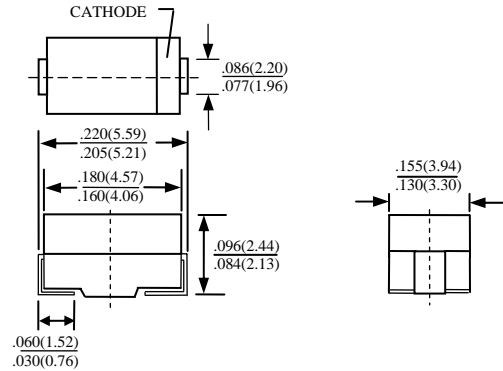
RS2A THRU RS2M

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 TERMINAL

MECHANICAL DATA

- CASE: JEDEC DO-214AA MOLDED PLASTIC BODY, DO-214AA (SMB DIMENSIONS IN INCHES AND (MILLIMETERS))
- TERMINAL: SOLDER PLATED, SOLDERABLE PER MIL-STD-750 METHOD 2026
- POLARITY: COLOR BAND DENOTES CATHODE
- WEIGHT: 0.093 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	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	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 $T_L=90^\circ\text{C}$	I_O	2.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	50							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_j	40							PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jL}$	18							°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150							°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150							°C

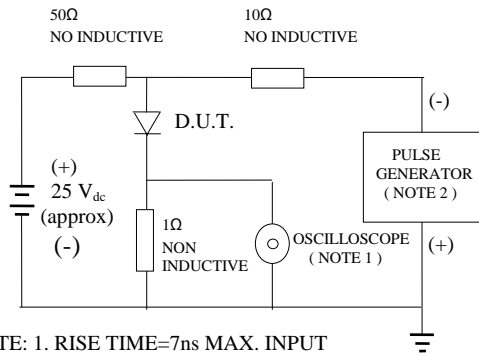
ELECTRICAL CHARACTERISTICS (AT $T_A=25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3							V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	5							μA
MAXIMUM REVERSE CURRENT AT 100°C	I_R	50							μA
MAXIMUM REVERSE RECOVERY TIME(NOTE 3)	T_{RR}	150			250		500		nS
MARKING		RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	

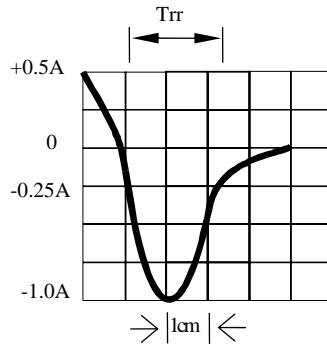
- NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. THERMAL RESISTANCE FROM JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3x0.3"(8.0x8.0mm) COPPER PAD AREAS
 3. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

RATINGS AND CHARACTERISTIC CURVE RS2A THRU RS2M

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

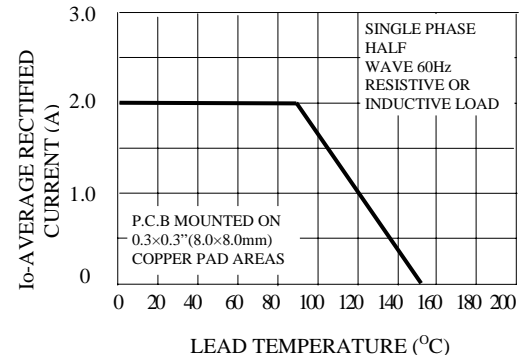


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

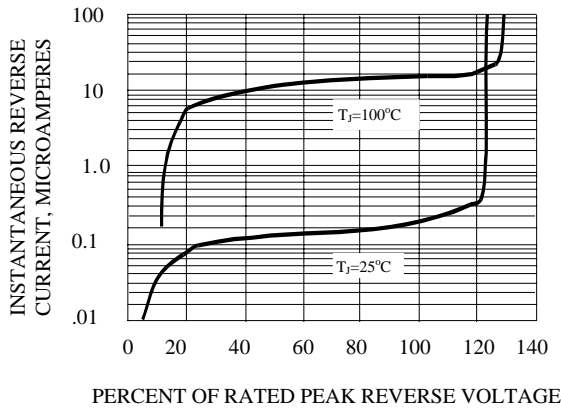


Fig. 4-MAXIMUM FORWARD SURGE CURRENT

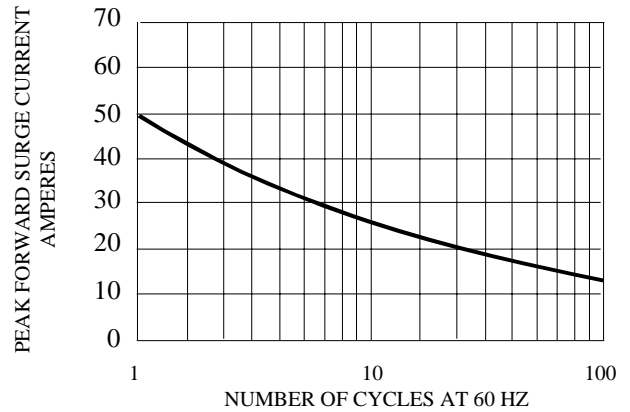


FIG. 5-TYPICAL JUNCTION CAPACITANCE

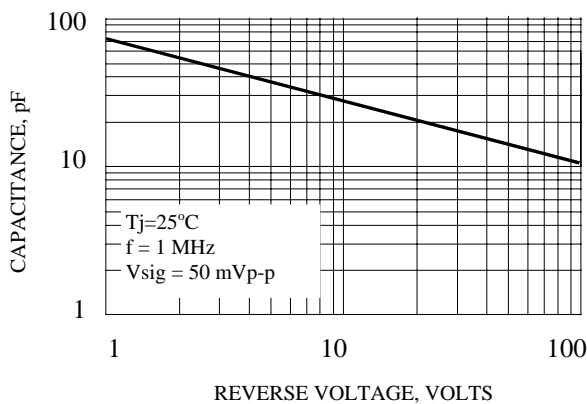


FIG. 6-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

