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1A ULTRA FAST RECOVERY SURFACE MOUNT RECTIFIER

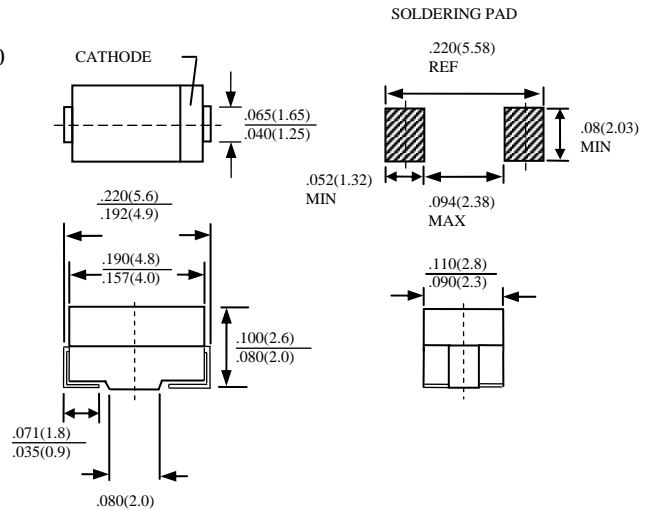
MURS105 THRU MURS160

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
- ULTRA FAST RECOVERY TIME FOR HIGH EFFICIENT
- HIGH TEMPERATURE SOLDERING : 250°C/10 SECONDS AT TERMINALS

MECHANICAL DATA

- CASE: MOLDED PLASTIC, DO-214AC (SMA), DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED
- POLARITY: INDICATED BY CATHODE BAND
- WEIGHT: 0.064 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	MURS 105	MURS 110	MURS 115	MURS 120	MURS 140	MURS 160	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	150	200	400	600	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	105	140	280	420	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	150	200	400	600	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT $T_i=75^\circ\text{C}$	I_O	1.0						A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	40				35		A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_j	15						PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta JL}$	13						°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150						°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 125						°C

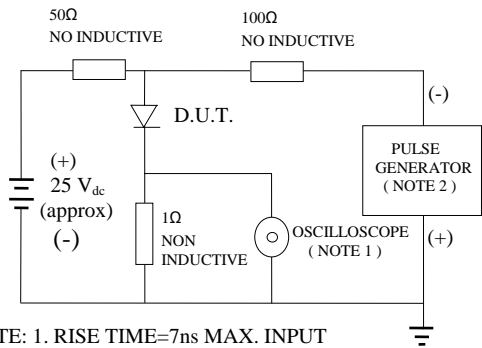
ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	MURS 105	MURS 110	MURS 115	MURS 120	MURS 140	MURS 160	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	0.875				1.25		V
MAXIMUM DC REVERSE CURRENT AT $T_A=25^\circ\text{C}$	I_R	2				5		μA
MAXIMUM DC REVERSE CURRENT AT $T_A=125^\circ\text{C}$	I_R	250						μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	25				50		nS
MARKING		U1A	U1B	U1C	U1D	U1G	U1J	

- NOTES:
1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. THERMAL RESISTANCE FROM JUNCTION TO AMBIENT AND JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3x0.3" (8.0x8.0 mm) 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 MURS105 THRU MURS160

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

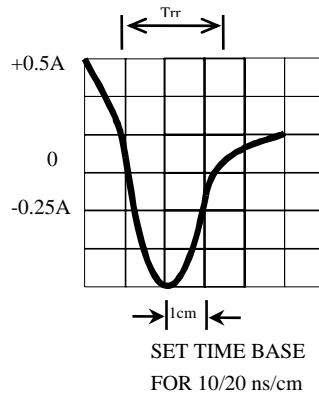


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

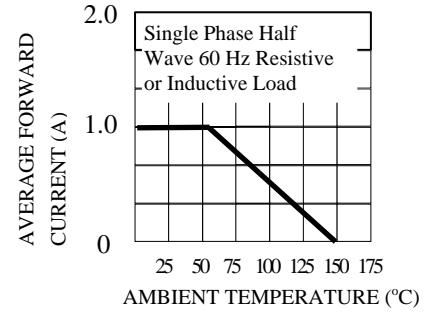


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

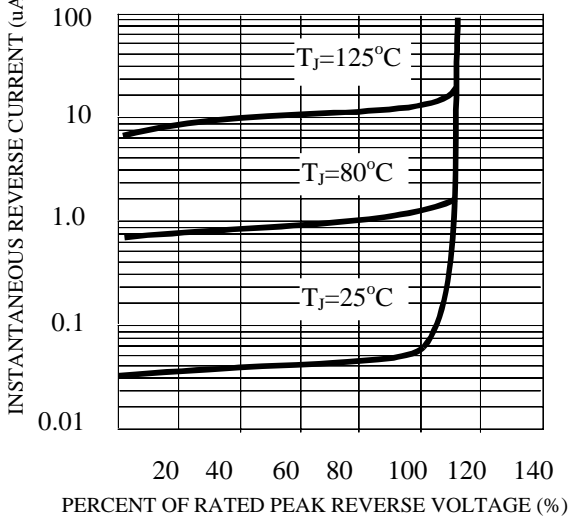


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

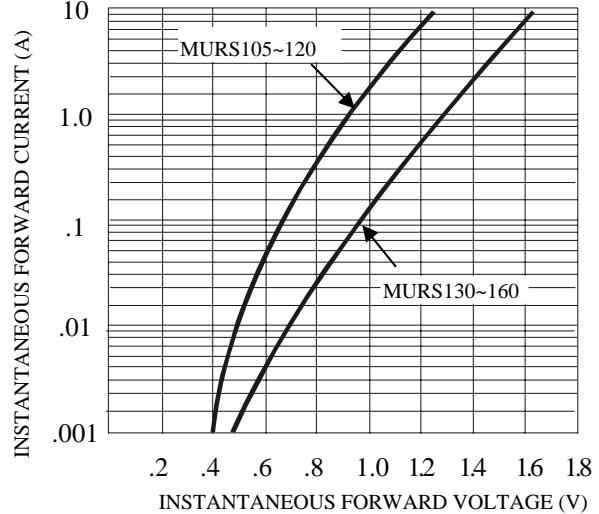


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

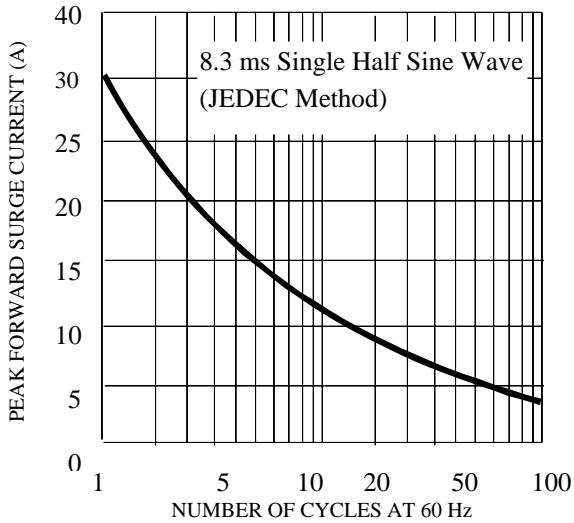


FIG. 6-TYPICAL JUNCTION CAPACITANCE

