

**ES1A
THRU
ES1J**

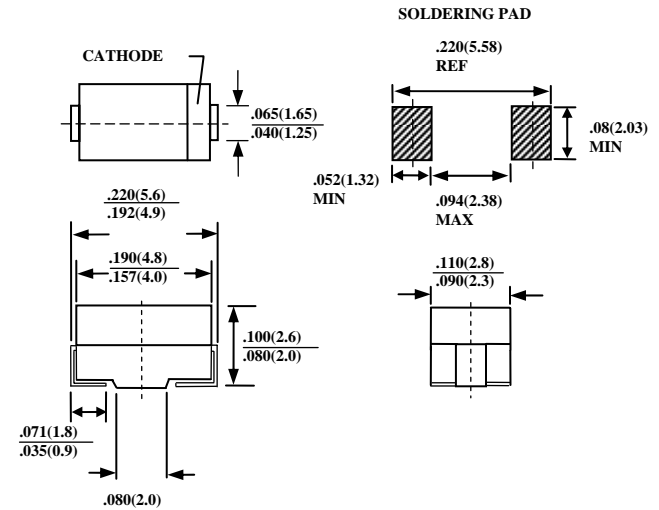
1A SURFACE MOUNT FAST EFFICIENT RECOVERY RECTIFIERS

FEATURES

- FOR SURFACE MOUNTED APPLICATIONS
- LOW PROFILE PACKAGE
- BUILT-IN STRAIN RELIEF
- EASY PICK AND PLACE
- GLASS PASSIVATED CHIP JUNCTION
- PLASTIC MATERIAL USED CARRIES UNDERWRITERS
LABORATORY CLASSIFICATION 94 V-0
- HIGH TEMPERATURE SOLDERING : 250 /10 SECONDS AT
TERMINALS

MECHANICAL DATA

- CASE : MOLDED PLASTIC
- TERMINALS : SOLDER PLATED
- POLARITY : INDICATED BY CATHODE BAND
- WEIGHT : 0.064 GRAMS



CASE : DO-214AC (SMA)
DIMENSIONS IN INCHES AND (MILLIMETERS)

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	ES1A	ES1B	ES1D	ES1E	ES1G	ES1J	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	300	400	600	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	210	280	420	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	300	400	600	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT $T_L=90^\circ\text{C}$	I_o	1.0						A
MAXIMUM OVERLOAD SURGE 8.3ms SINGLE HALF SINE-WAVE	I_{FSM}	30						A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_j	15			10			PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	θ_{JL}	30						$^\circ\text{C/W}$
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150						
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 125						

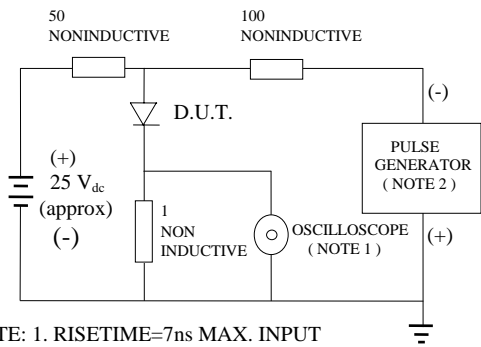
ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	ES1A	ES1B	ES1D	ES1E	ES1G	ES1J	UNITS
MAXIMUM FORWARD VOLTAGE AT 1.0A AND 25	V_F	0.98			1.25		1.75	V
MAXIMUM REVERSE CURRENT AT 25	I_R	10						μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	25						nS
MARKING		ES1A	ES1B	ES1D	ES1E	ES1G	ES1J	

- NOTE : 1. MEASURED AT 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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE ES1A THRU ES1J

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



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

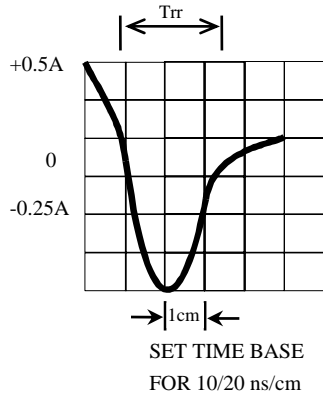


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

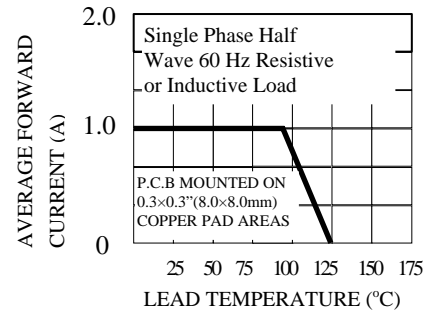


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

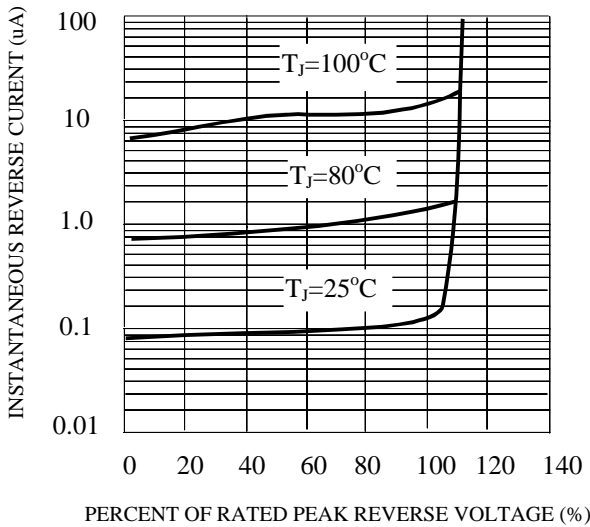


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

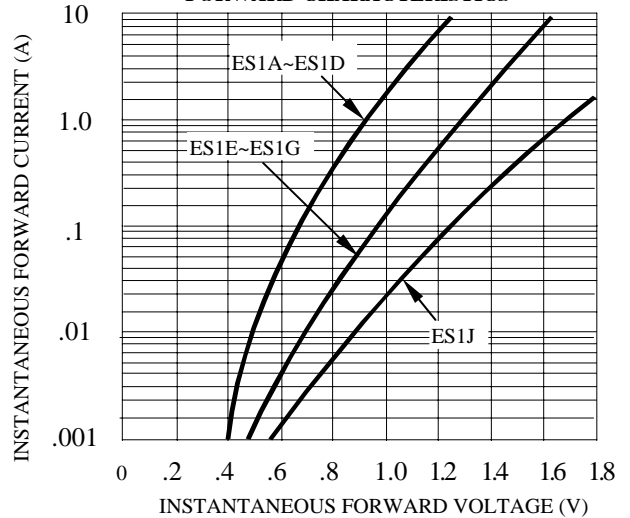


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

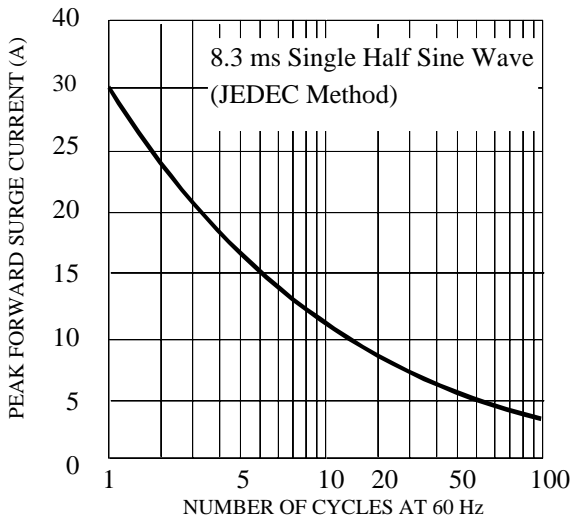


FIG. 6-TYPICAL JUNCTION CAPACITANCE

