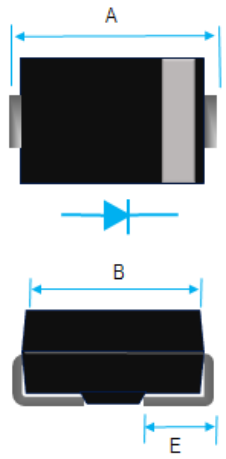
ES2A THRU ES2J SPECIFICATIONS

Rev. A

2A SURFACE MOUNT FAST EFFICIENT RECOVERY RECTIFIERS



Dim.	Value Inch[mm] Min.	Max.
A	0.197[5.00]	0.220[5.59]
B	0.160[4.06]	0.180[4.57]
C	0.130[3.30]	0.155[3.94]
D	0.079[2.00]	0.097[2.47]
E	0.030[0.76]	0.060[1.52]
F	0.075[1.91]	0.086[2.18]

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION: 94V-0
2. GLASS PASSIVATED CHIP JUNCTION
3. BUILT-IN STRAIN RELIEF
4. LOW PROFILE
5. CASE: DO-214AA(SMB) MOLDED PLASTIC
6. DIMENSIONS IN INCHES AND (MILLIMETERS)
7. POLARITY: INDICATED BY CATHODE BAND
8. WEIGHT: 0.093 GRAMS
9. LEADS: SOLDERABILITYPER PER MIL-STD-750 METHOD 2026
10. RoHS

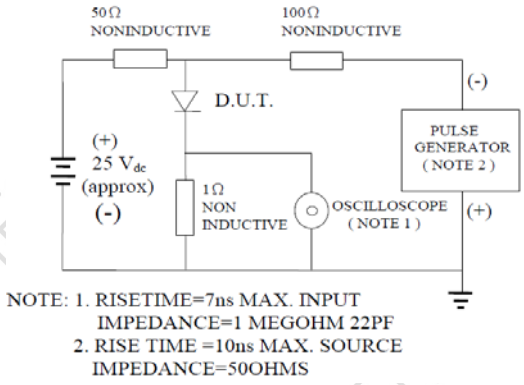
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO +150°C. SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

RATINGS	SYMBOL	VALUE	UNITS
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT @ TL=90°C	I_O	2	A
PEAK FWD SURGE CURRENT, 8.3ms HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	50	A
TYPICAL JUNCTION CAPACITANCE (NOTE3)	C_J	25	pF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	20	℃/W
MAXIMUM REVERSE CURRENT @ 25℃	I_R	10	uA
MAXIMUM REVERSE CURRENT @ 100℃	I_R	150	uA
MAXIMUM REVERSE RECOVERY TIME (NOTE1)	T_{RR}	25	nS

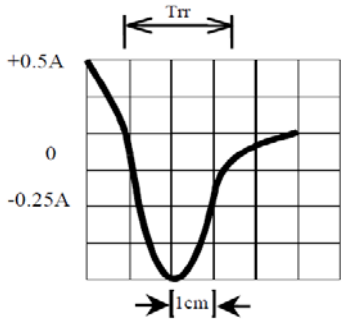
1. REVERSE RECOVERY TIME TEST CONDITION, I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. THERMAL RESISTANCE FROM JUNCTION TO AMBIENT AND JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3×0.3”(8.0×8.0mm) COPPER PAD AREAS
3. MEASURED @ 1 MHZ AND APPLIED REVERSE VOLTAGE 0F 4.0 VOLTS
4. MAXIMUM FORWARD VOLTAGE @ I_o

PART NUMBER	MAX RECURRENT PK REV VOLTAGE V_{RRM} (V)	MAX RMS VOLTAGE V_{RMS} (V)	MAX DC BLOCKING VOLTAGE V_{DC} (V)	MAX FWD VOLTAGE V_F (V)	MARKING
ES2A	50	35	50	0.98	ES2A
ES2B	100	70	100	0.98	ES2B
ES2D	200	140	200	0.98	ES2D
ES2E	300	210	300	1.3	ES2E
ES2G	400	280	400	1.3	ES2G
ES2J	600	420	600	1.75	ES2J

RATING AND CHARACTERISTIC CURVES



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



SET TIME BASE
FOR 10/20 ns/cm

FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

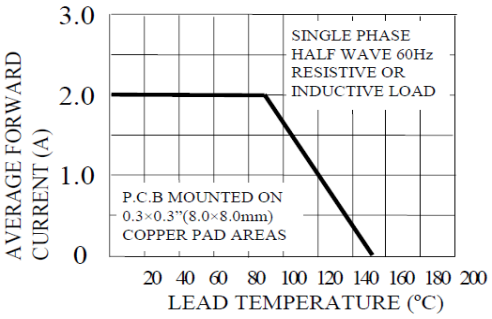


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

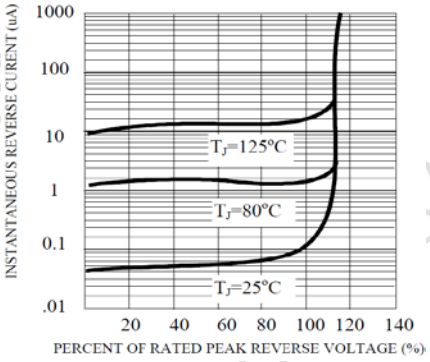


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

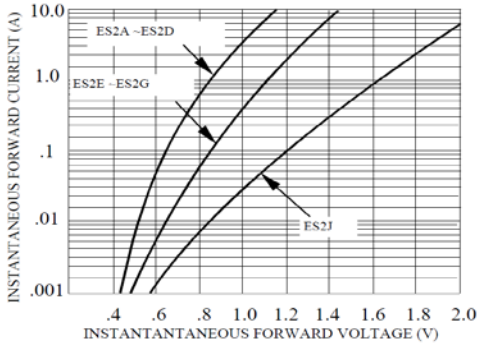


FIG. 5-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

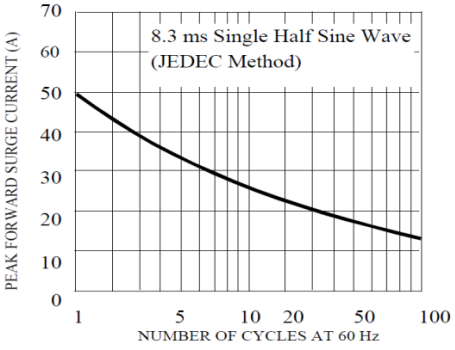


FIG. 6-TYPICAL JUNCTION CAPACITANCE