FAST RECOVERY RECTIFIER

VOLTAGE RANGE: 1500 --- 600 V
CURRENT: 0.7 A

FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Freon,Alcohol,Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case:JEDEC DO-41,molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-750,Method 2026
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces,0.34 grams
- ◇ Mounting position: Any

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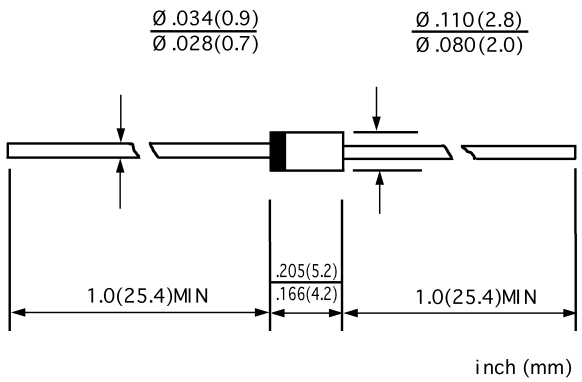

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

		ES1F	ES1Z	ES1	ES1A	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	1500	200	400	600	V
Maximum RMS voltage	V_{RMS}	1050	140	280	420	V
Maximum DC blocking voltage	V_{DC}	1500	200	400	600	V
Maximum average forw ard rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	0.5	0.7			A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T_J=125℃	I_{FSM}	20.0	30.0			A
Maximum instantaneous forw ard voltage @ 0.5/0.7A	V_F	2.0	2.5			V
Maximum reverse current @T_A=25℃	I_R	10.0		5.0		μA
at rated DC blocking voltage @T_A=100℃		100.0				
Maximum reverse recovery time (Note1)	t_{rr}	350				ns
Typical junction capacitance (Note2)	C_J	15				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50				℃/W
Operating junction temperature range	T_J	-55----+150				℃
Storage temperature range	T_{STG}	-55---- +150				℃

NOTE:1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.

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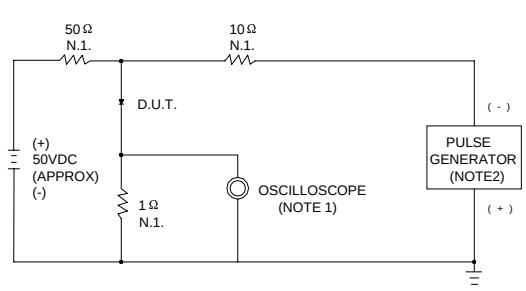
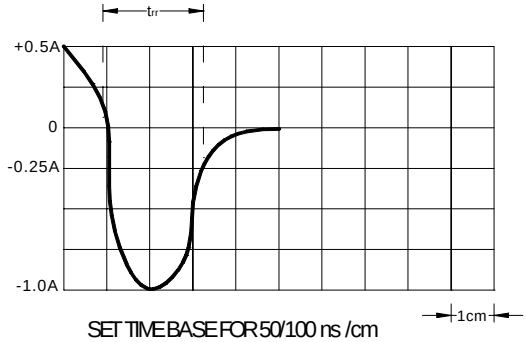
FIG.1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ. 22PF
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50Ω

SET TIME BASE FOR 50/100 ns /cm

FIG.2 – FORWARD DERATING CURVE

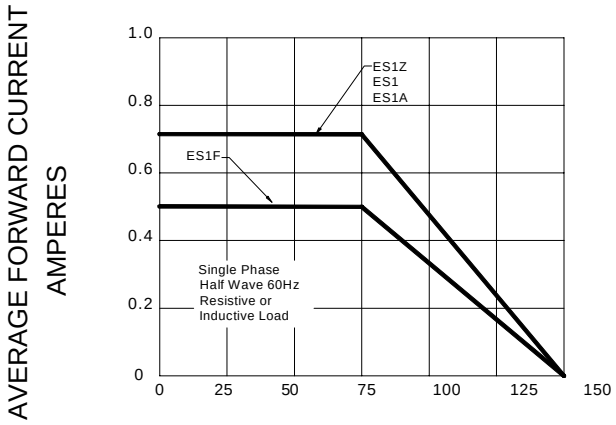


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

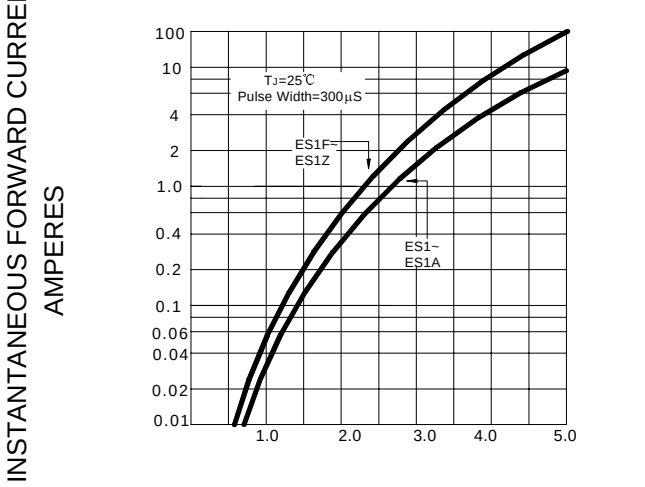


FIG.4– PEAK FORWARD SURGE CURRENT

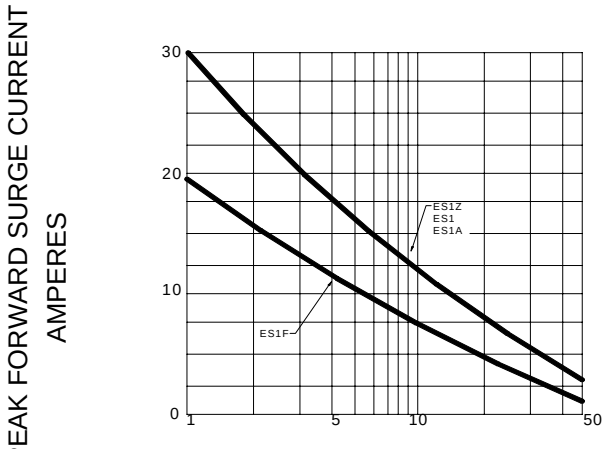


FIG.5– TYPICAL JUNCTION CAPACITANCE