

ULTRA FAST RECTIFIERS

VOLTAGE RANGE: 50 --- 600 V

CURRENT: 1.0 A

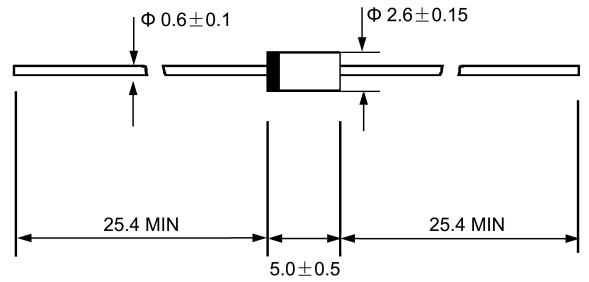
FEATURES

- ◇ Low cost
- ◇ Diffuse junction
- ◇ Ultra fast switching for high efficiency
- ◇ Low reverse leakage current
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC A-405, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.008 ounces, 0.23 grams
- ◇ Mounting position: Any

A - 405



Dimensions in 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 by 20%.

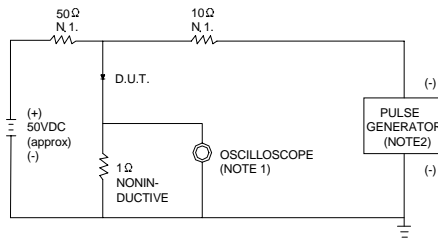
		ER 100L	ER 101L	ER 101AL	ER 102L	ER 103L	ER 104L	ER 106L	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	30.0							A
Maximum instantaneous forward voltage @ 1.0A	V_F	0.95			1.25		1.7		V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	5.0			150.0				μA
Maximum reverse recovery time (Note1)	t_{rr}	35							ns
Typical junction capacitance (Note2)	C_J	17							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50							$^\circ C/W$
Operating junction temperature range	T_J	- 55 ----- + 150							$^\circ C$
Storage temperature range	T_{STG}	- 55 ----- + 150							$^\circ C$

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

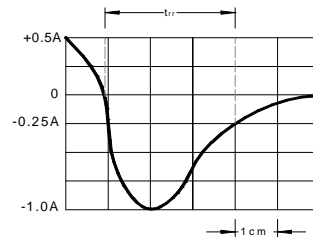
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

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



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



SET TIME BASE FOR 5 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

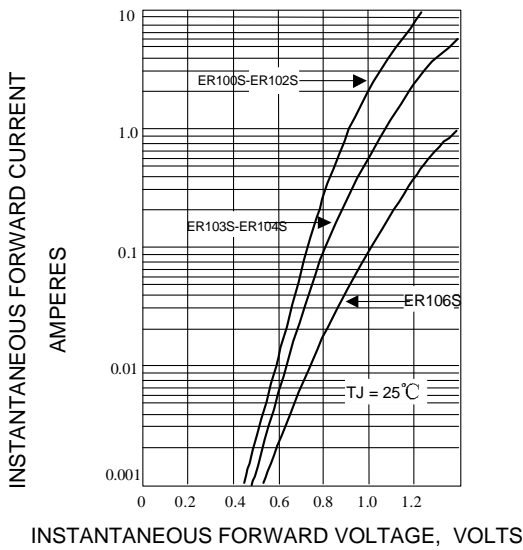


FIG.3 -- FORWARD DERATING CURVE

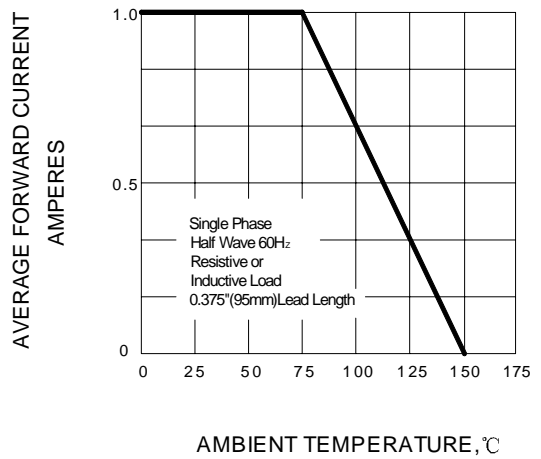


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

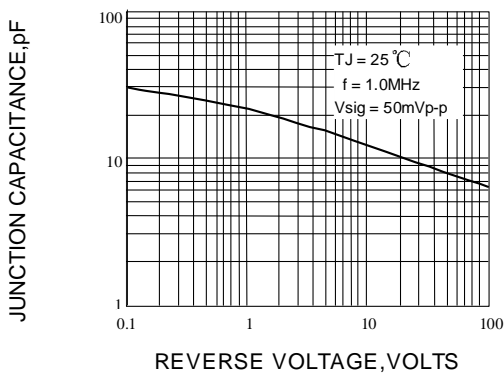


FIG.5 -- PEAK FORWARD SURGE CURRENT

