ER300 THRU ER308

3.0 Ampere SUPERFAST RECOVERY RECTIFIERS

FEATURES

- Superfast recovery times-epitaxial construction.
- Low forward voltage, high current capability.
- Exceeds environmental standards of MIL-S-19500/228.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Terminals: Axial leads, solderable to MIL-STD-750,Method 2026
- Polarity: Color Band denotes cathode end
- Mounting Position: Any

* Weight: 1.04 grams

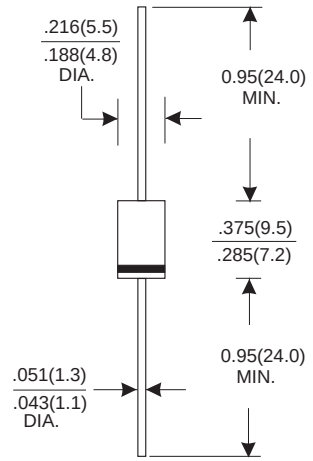
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

3.0 Amperes

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	ER300	ER301	ER301A	ER302	ER303	ER304	ER306	ER306A	ER308	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	700	800	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	490	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	700	800	V
Maximum Average Forward Current .375"(9.5mm) lead length at T_A=55°C	$I_{F(AV)}$	3.0									A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	125									A
Maximum Forward Voltage at 3.0A DC	V_F	0.95				1.25		1.70	2.0	2.5	V
Maximum DC Reverse Current at T_J=25°C Rated DC Blocking Voltage T_J=125°C	I_R	1.0 300									μA
Maximum Reverse Recovery Time(Note 1)	t_{rr}	35									ns
Typical Junction capacitance (Note 2)	C_J	35									pF
Typical Junction Resistance(Note 3)	$R_{\theta JA}$	20									°C / W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150									°C

NOTES:1. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{rr}=.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

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RATING AND CHARACTERISTIC CURVES (ER300~ER308)

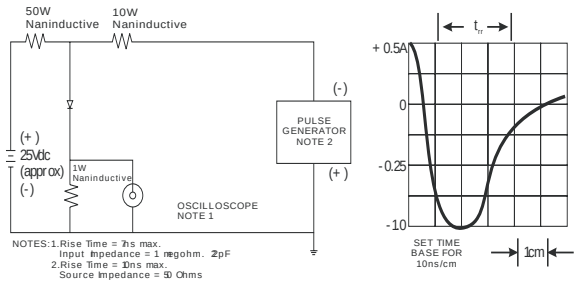


FIG.1 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

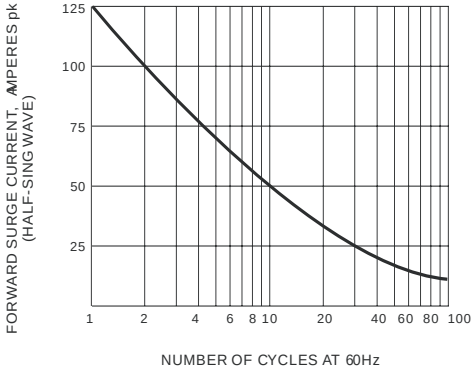


FIG.2 MAXIMUM NON-REPEITIVE SURGE CURRENT

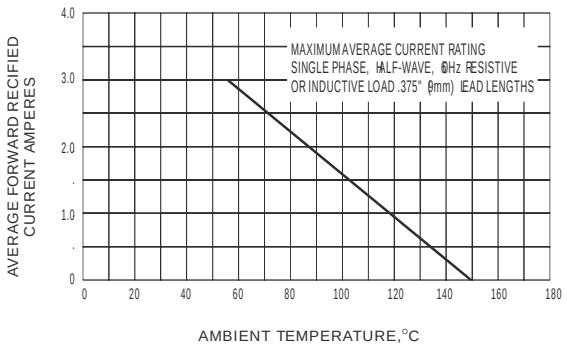


FIG.3 MAXIMUM AVERAGE FORWARD CURRENT RATING

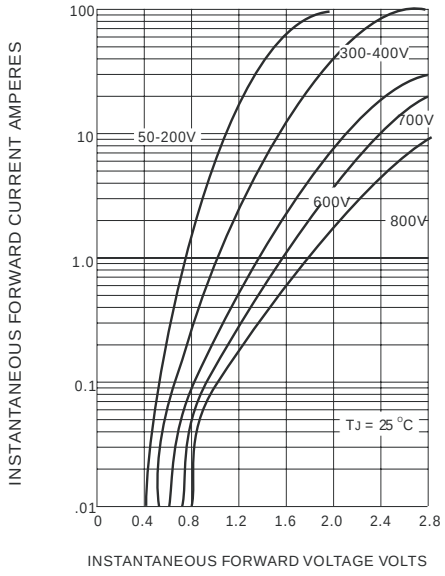


FIG.4 TYPICAL JUNCTION CAPACITANCE

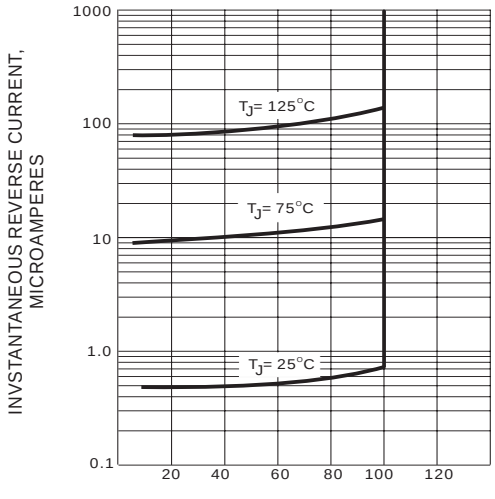


FIG.5 TYPICAL REVERSE CHARACTERISTICS

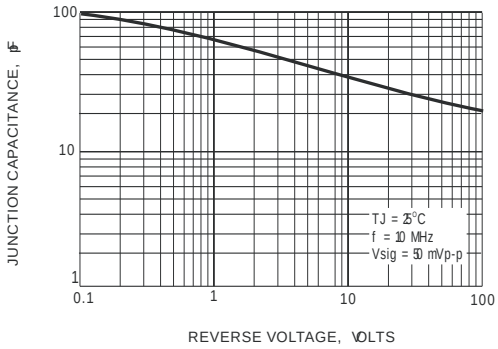


FIG. 6 TYPICAL JUNCTION CAPACITANCE

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