



# DATA SHEET

## ER100S thru ER106S

### SUPERFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 600 Volts **CURRENT** 1.0 Ampere

**A-405**

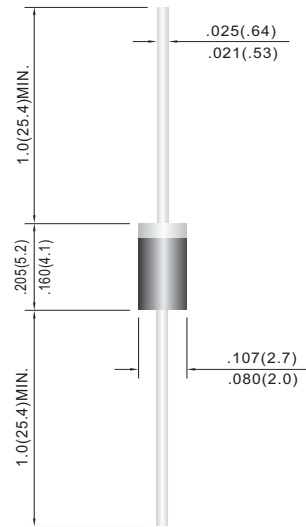
Unit: inch(mm)

#### FEATURES

- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- 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.
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: Molded plastic, A-405.  
Terminals: Axial leads, solderable to MIL-STD-202, Method 208.  
Polarity: Color Band denotes cathode end.  
Mounting Position: Any  
Weight: 0.008 ounce, 0.22 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

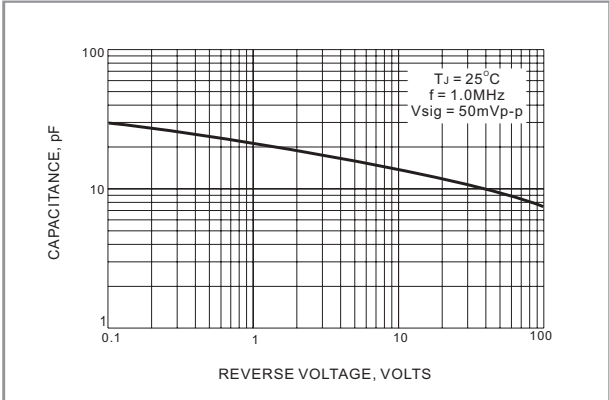
PARAMETER	SYMBOL	ER100S	ER101S	ER101AS	ER102S	ER103S	ER104S	ER106S	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V
Maximum Average Forward Current .375"(9.5mm) lead length at TA=55°C	I <sub>AV</sub>	1.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	30							A
Maximum Forward Voltage at 1.0A	V <sub>F</sub>	0.95			1.25		1.7		V
Maximum DC Reverse Current TA=25°C at Rated DC Blocking Voltage TA=100°C	I <sub>R</sub>				5.0 150				uA
Typical Junction capacitance (Note 2)	C <sub>J</sub>				17				pF
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>				35				ns
Typical Thermal Resistance	R <sub>θJA</sub>				50				°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>				-55 TO +150				°C

#### NOTES:

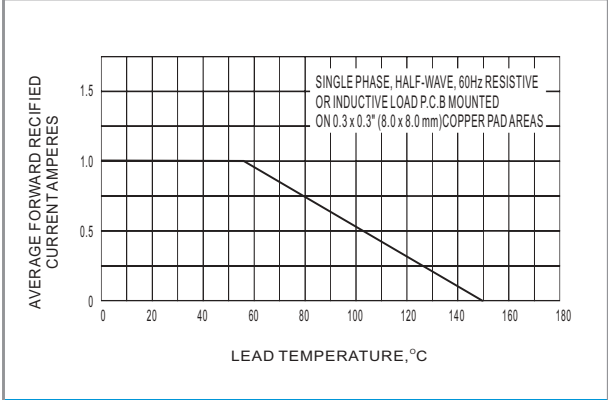
1. Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC



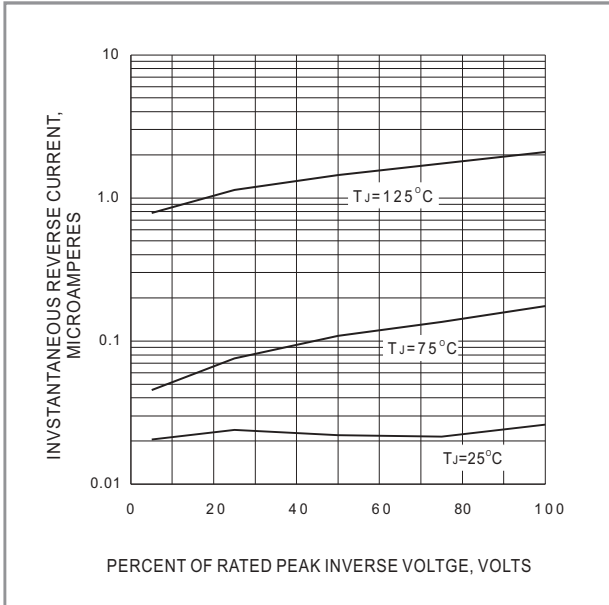
**RATING AND CHARACTERISTIC CURVES**



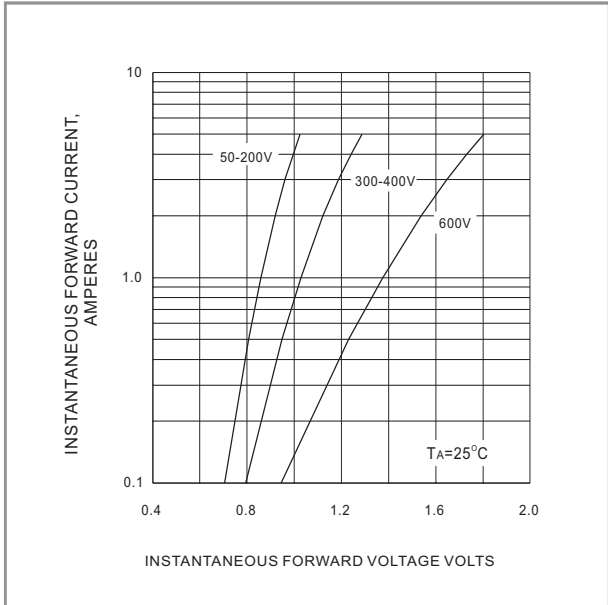
**FIG.1 TYPICAL JUNCTION CAPACITANCE**



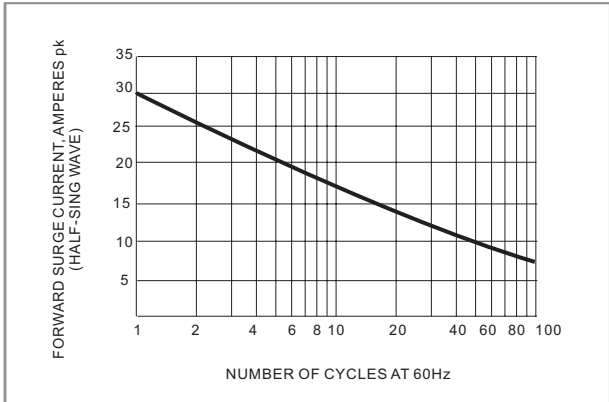
**FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**



**FIG.4 TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT**