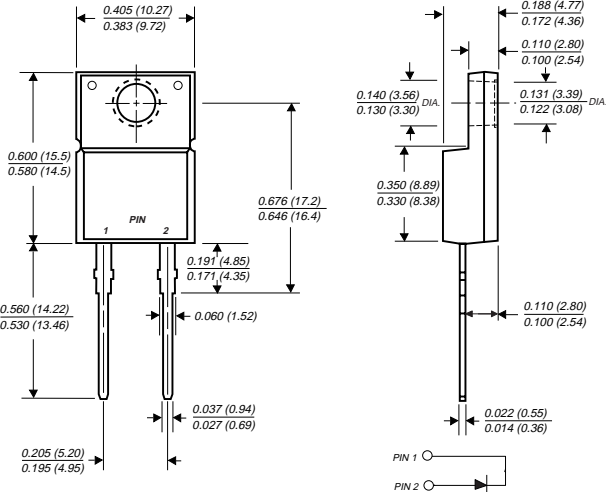


# BY229X SERIES

## FAST SWITCHING PLASTIC RECTIFIER

Reverse Voltage - 50 to 600 Volts      Forward Current - 8.0 Amperes

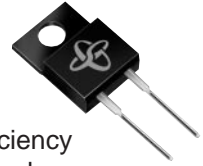
### ITO-220AC



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low leakage, high voltage
- ◆ High surge current capability
- ◆ Superfast recovery time, for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds



### MECHANICAL DATA

**Case:** JEDEC ITO-220AC fully overmolded plastic body over passivated chip

**Terminals:** Plated lead solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Weight:** 0.064 ounce, 1.81 grams

**Mounting Torque:** 5 in. - lbs. max.

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

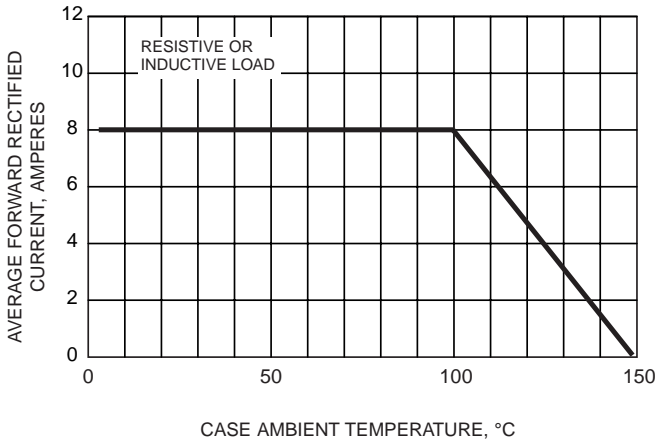
	SYMBOLS	BY229X -200	BY229X -400	BY229X -600	BY229X -800	UNITS
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	200	400	600	800	Volts
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	560	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	800	Volts
Maximum average forward rectified current at T <sub>C</sub> =100°C	I <sub>(AV)</sub>	8.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100				Amps
Maximum instantaneous forward voltage at 20A	V <sub>F</sub>	1.85				Volts
Maximum DC reverse current at rated DC blocking voltage T <sub>J</sub> =25°C at T <sub>J</sub> =125°C	I <sub>R</sub>	10.0 300				µA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	145				ns
Maximum recovered stored charge (NOTE 2)	Q <sub>rr</sub>	700				nC
Maximum slope of reverse recovery current (NOTE 2)	di <sub>r</sub> /dt	60				A/µs
Maximum thermal resistance (NOTE 3)	R <sub>θJC</sub>	4.8				°C/W
Typical thermal resistance, junction to air	R <sub>θJA</sub>	20				°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-40 to +150				°C
RMS Isolation voltage from terminals to heatsink with RH ≤ 30%	V <sub>ISOL</sub>	4500 (NOTE 4) 3500 (NOTE 5) 1500 (NOTE 6)				Volts

**NOTES:**

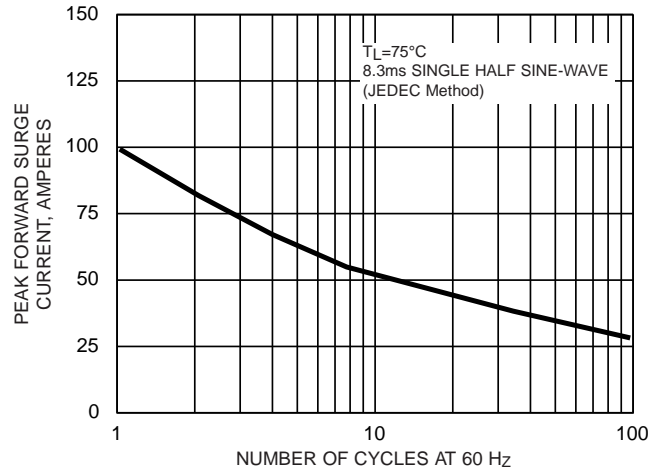
- (1) Reverse recovery test conditions: I<sub>F</sub>=1A, V<sub>R</sub>=30V, di/dt=50A/µs, I<sub>rr</sub>=10% I<sub>RM</sub>
- (2) Q<sub>rr</sub> test conditions: I<sub>F</sub>=2A, V<sub>R</sub>=30V, di/dt=20A/µs
- (3) Thermal resistance from junction to case mounted on heatsink with heatsink compound
- (4) Clip mounting, where lead does not overlap heatsink with 0.110" offset.
- (5) Clip mounting, where leads do overlap heatsink.
- (6) Screw mounting, where washer diameter is ≤ 4.9 mm (0.19").

# RATINGS AND CHARACTERISTIC CURVES BY229X SERIES

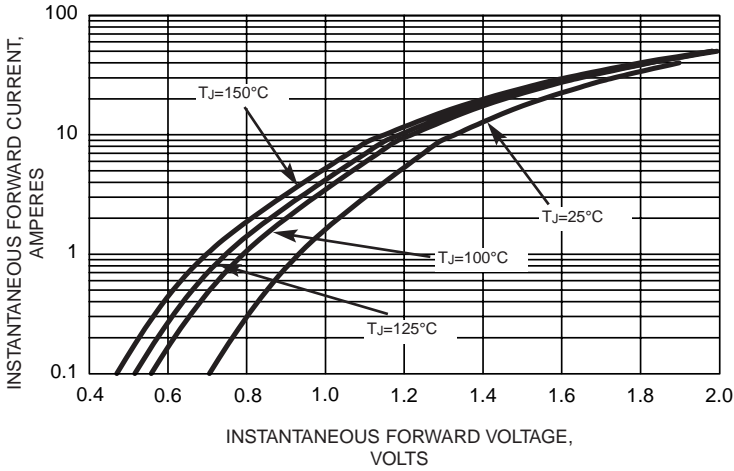
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVES**



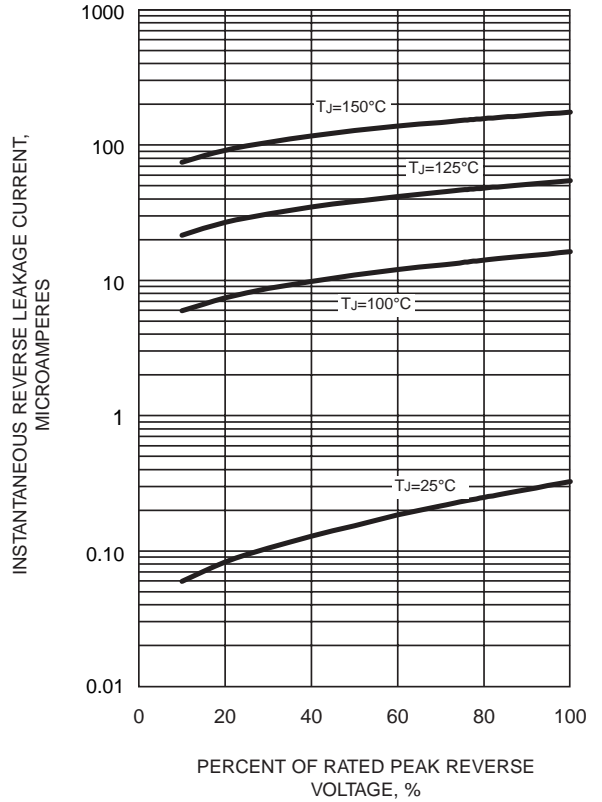
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

