

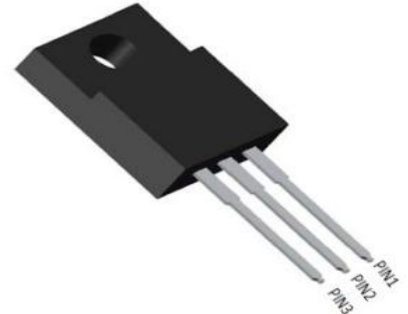
## Ultra-Fast Recovery Rectifier Diodes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Super fast recovery times, high voltage.
- Epitaxial chip construction.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: ITO-220AB Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.056 ounces, 1.6 grams.



### MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

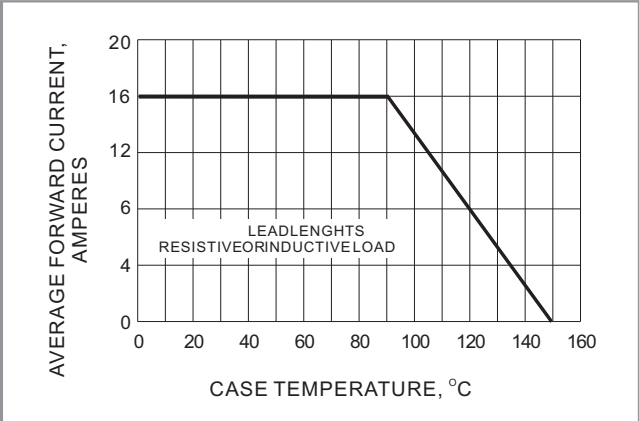
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	ER1600FCT	ER1601FCT	ER1601AFCT	ER1602FCT	ER1603FCT	ER1604FCT	ER1606FCT	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 Current at $T_c = 90^\circ\text{C}$	$I_{F(AV)}$	16							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	125							A
Maximum Forward Voltage at 8A	$V_F$	0.95				1.3		1.7	V
Maximum DC Reverse Current at $T_j = 25^\circ\text{C}$ Rated DC Blocking Voltage $T_j = 100^\circ\text{C}$	$I_R$	1 500							$\mu\text{A}$
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	35							ns
Typical Junction Capacitance (Note 1)	$C_j$	62							pF
Typical Thermal Resistance	$R_{\theta JC}$	3							$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-50 to +150							$^\circ\text{C}$

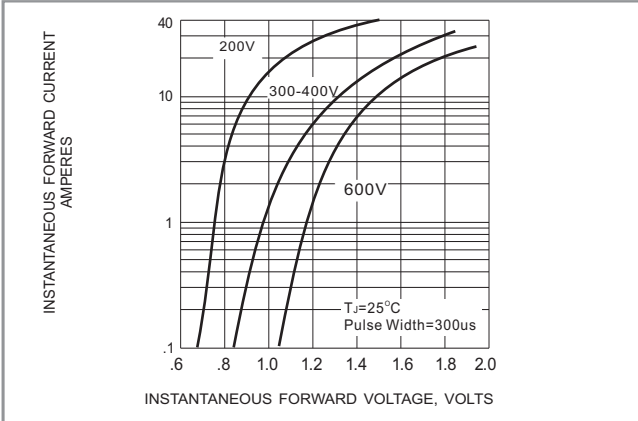
#### NOTES :

1. Measured at 1 MHz and applied reverse voltage of 4 VDC.
2. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .
3. Both Bonding and Chip structure are available.

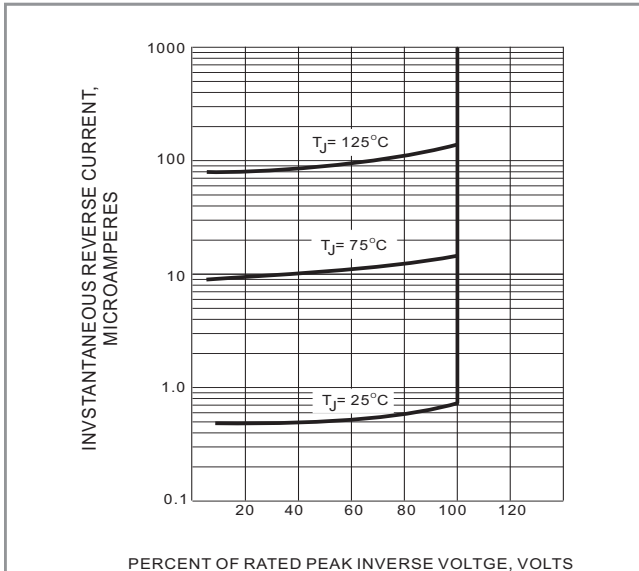
**RATING AND CHARACTERISTIC CURVES**



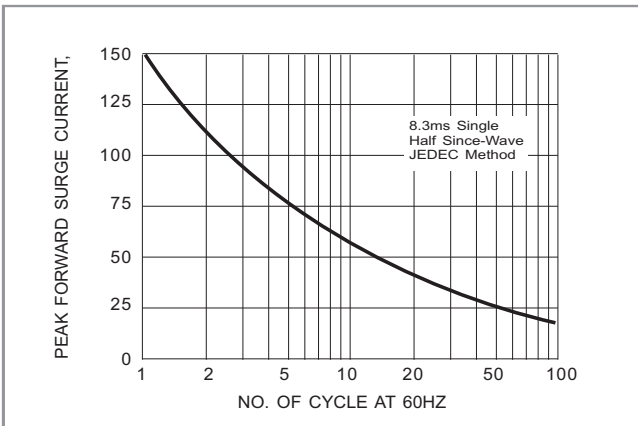
**Fig.1- FORWARD CURRENT DERATING CURVE**



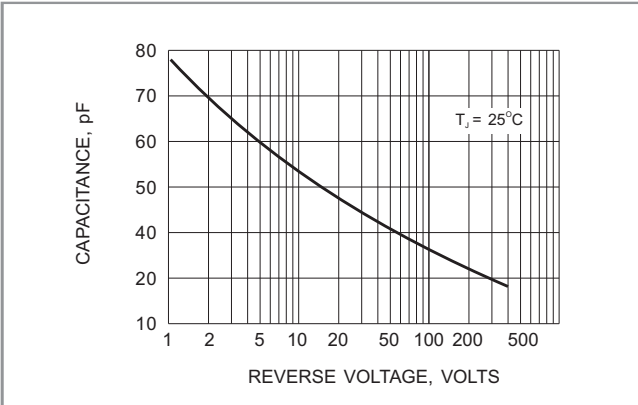
**Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- MAXIMUM NON - REPETITIVE SURGE CURRENT**

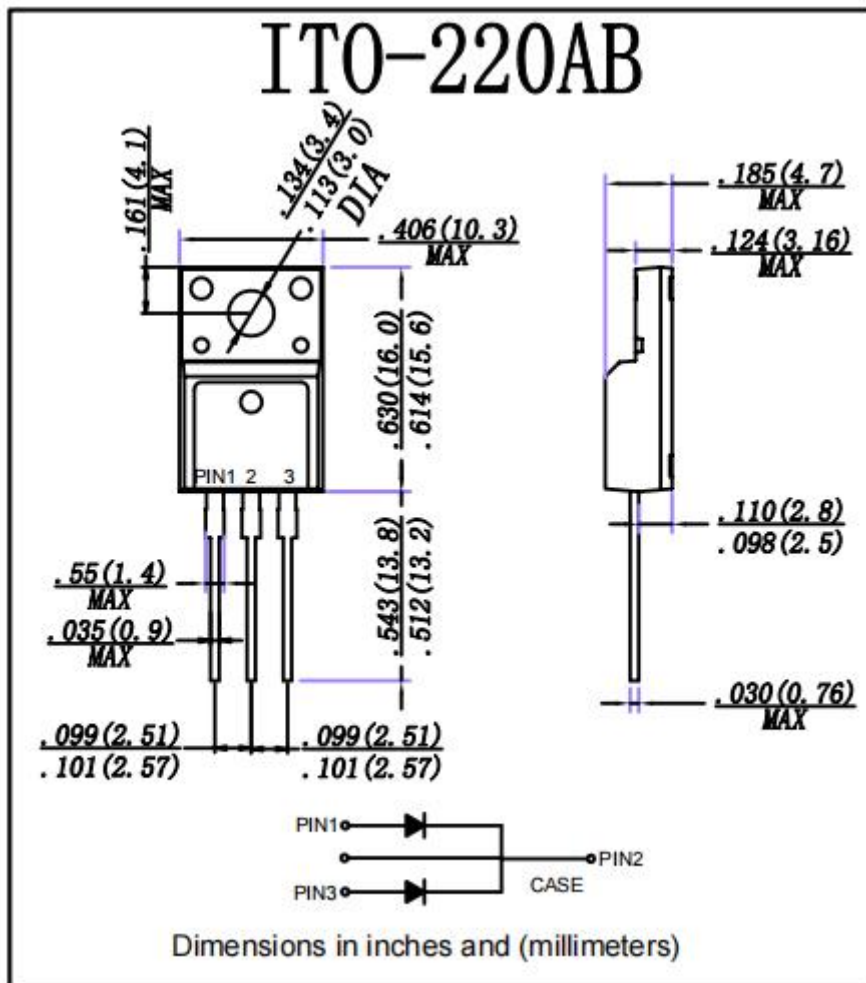


**Fig.5- TYPICAL JUNCTION CAPACITANCE**

### Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ER1600FCT~ER1606FCT	ITO-220AB	50	1000	5000	Tube

### Outline Dimensions



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