



# ER1600FCT~ER1606FCT

## ISOLATION SUPERFAST RECOVERY RECTIFIER

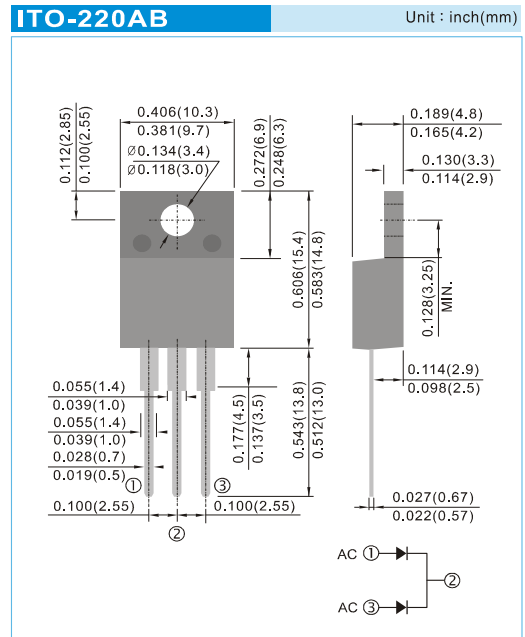
**VOLTAGE** 50 to 600 Volt **CURRENT** 16 Ampere

### 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							$^\circ\text{C}$

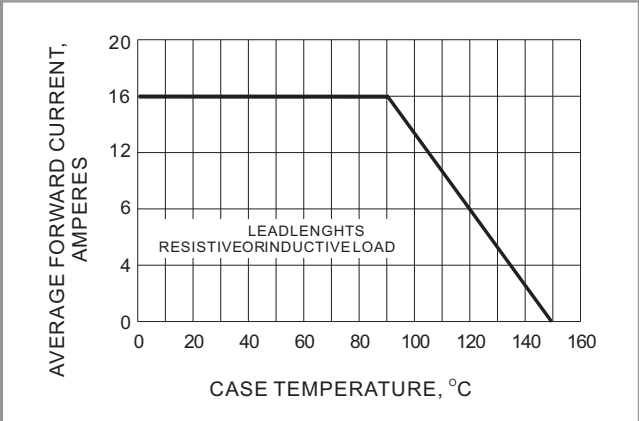
#### NOTES :

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.

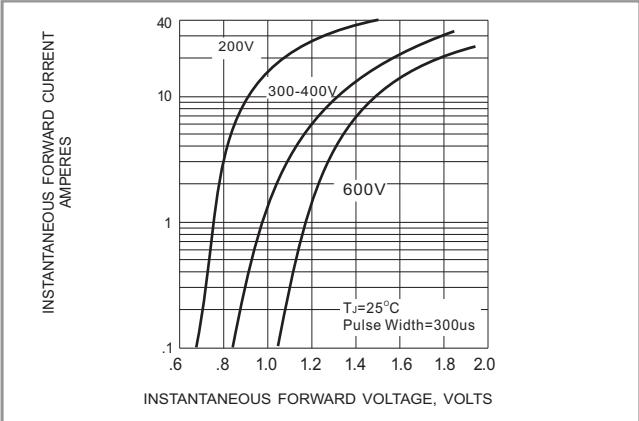


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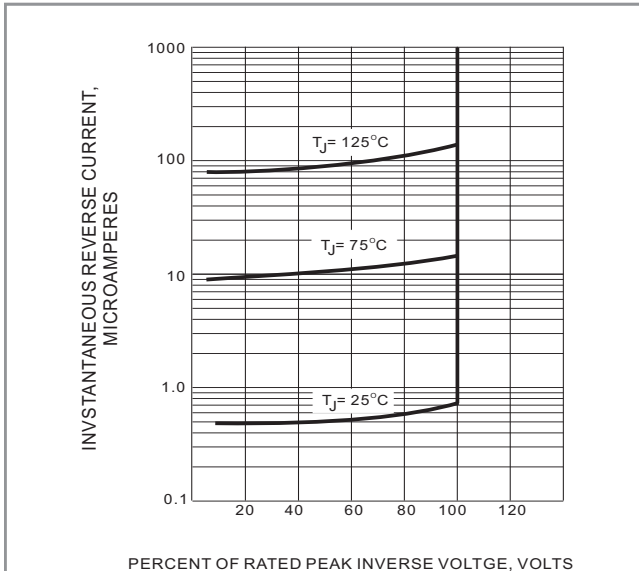
## RATING AND CHARACTERISTIC CURVES



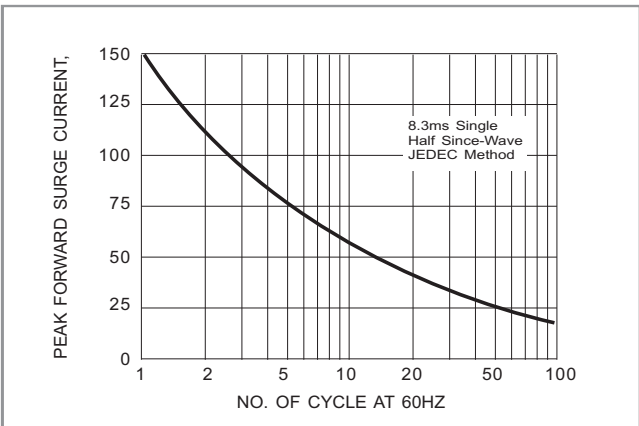
**Fig.1- FORWARD CURRENT DERATING CURVE**



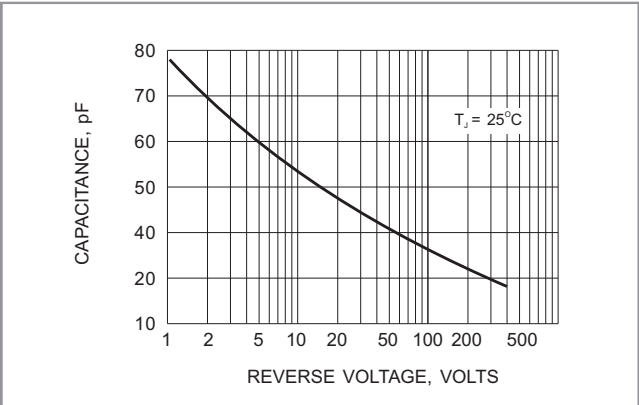
**Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**



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



**Fig.5- TYPICAL JUNCTION CAPACITANCE**



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**Part No\_packing code\_Version**

ER1600FCT\_T0\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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