



# ER1600CT~ER1606CT

## ISOLATION SUPERFAST RECOVERY RECTIFIER

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

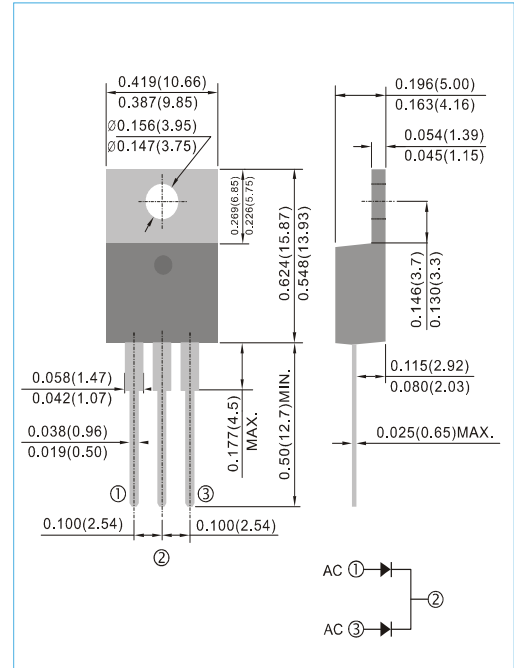
### FEATURES

- 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: TO-220AB Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.067 ounces, 1.89 grams.

**TO-220AB** Unit : inch(mm)



### 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	ER1600CT	ER1601CT	ER1601ACT	ER1602CT	ER1603CT	ER1604CT	ER1606CT	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 Rated DC Blocking Voltage $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	$I_R$	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

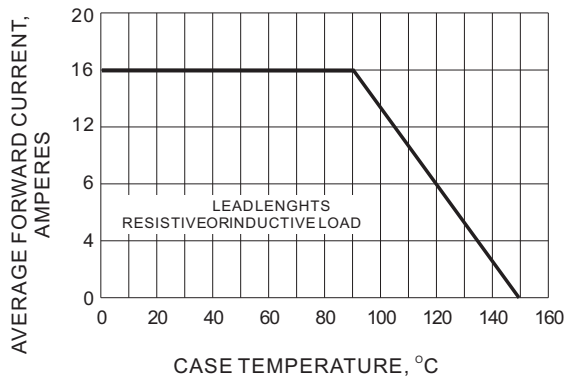


Fig.1- FORWARD CURRENT DERATING CURVE

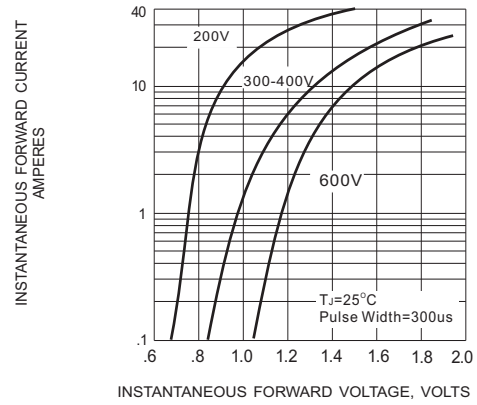


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

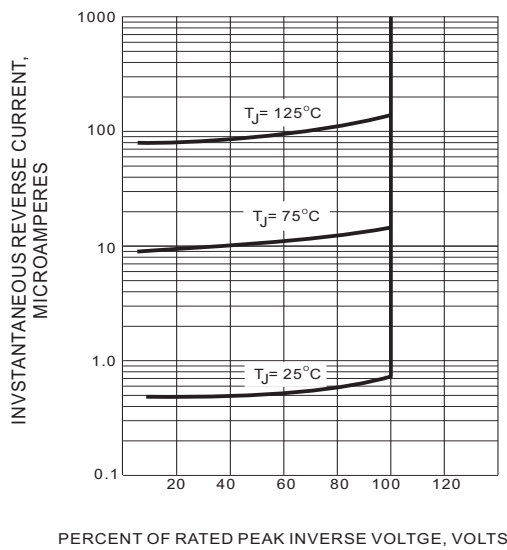


FIG.3 TYPICAL REVERSE CHARACTERISTICS

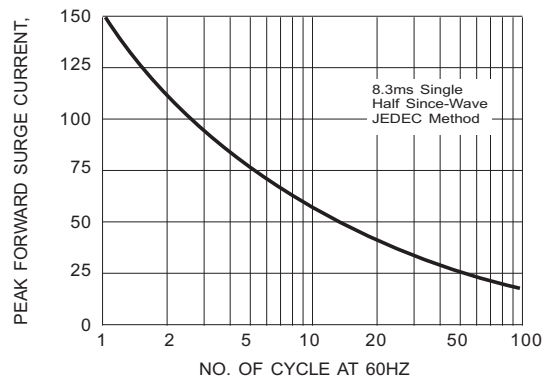


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT

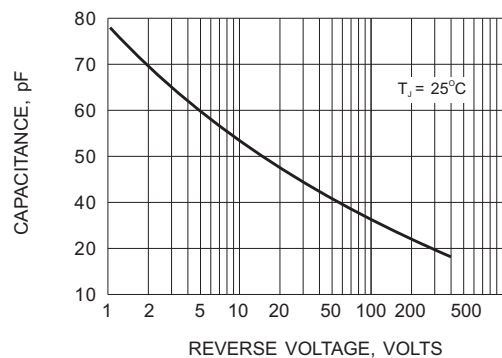


Fig.5- TYPICAL JUNCTION CAPACITANCE



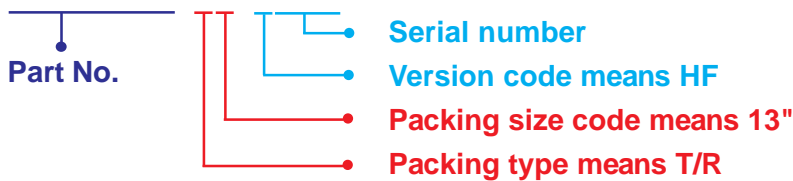
## ER1600CT~ER1606CT

Part No\_packing code\_Version

ER1600CT\_T0\_00001

For example :

RB500V-40\_R2\_00001



Packing Code XX				Version Code XXXXX		
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)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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