

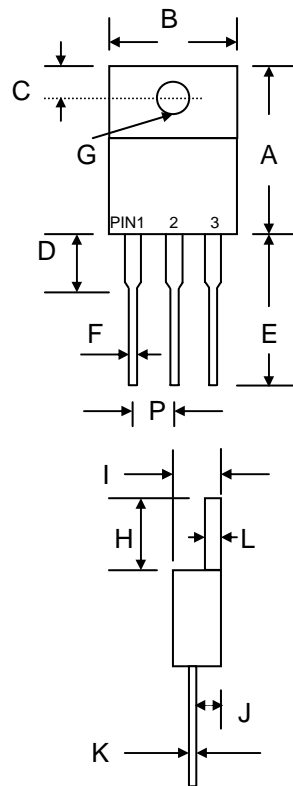
## 16A GLASS PASSIVATED DUAL SUPERFAST RECTIFIER

### Features

- Glass Passivated Die Construction
- Super-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

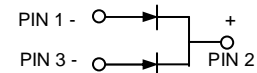
### Mechanical Data

- Case: ITO-220, Full Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm·kg (10 in·lbs) Max.
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



ITO-220		
Dim	Min	Max
A	14.60	15.40
B	9.70	10.30
C	2.55	2.85
D	2.70	3.30
E	13.00	13.80
F	0.50	0.75
G	3.00 Ø	3.50 Ø
H	6.30	6.90
I	4.20	4.80
J	2.50	2.90
K	0.50	0.75
L	2.70	3.15
P	2.29	2.79

All Dimensions in mm



### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	ER	ER	ER	ER	ER	ER	ER	Unit	
		1600FCT	1601FCT	1601AFCT	1602FCT	1603FCT	1604FCT	1606FCT		
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								V	
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	150	200	300	400	600		
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	210	280	420	V	
Average Rectified Output Current @T <sub>C</sub> = 105°C	I <sub>O</sub>	16							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125							A	
Forward Voltage @I <sub>F</sub> = 8.0A	V <sub>FM</sub>	0.95			1.3		1.7		V	
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C	I <sub>RM</sub>	10				500				µA
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	35			50				nS	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	80			60				pF	
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C	

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

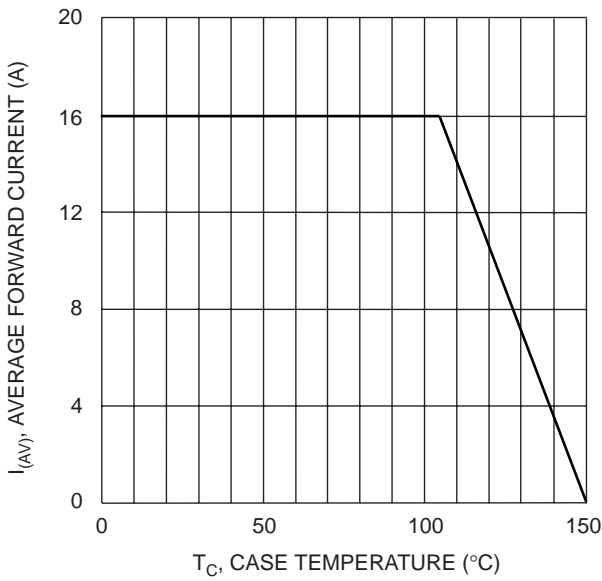


Fig. 1 Forward Current Derating Curve

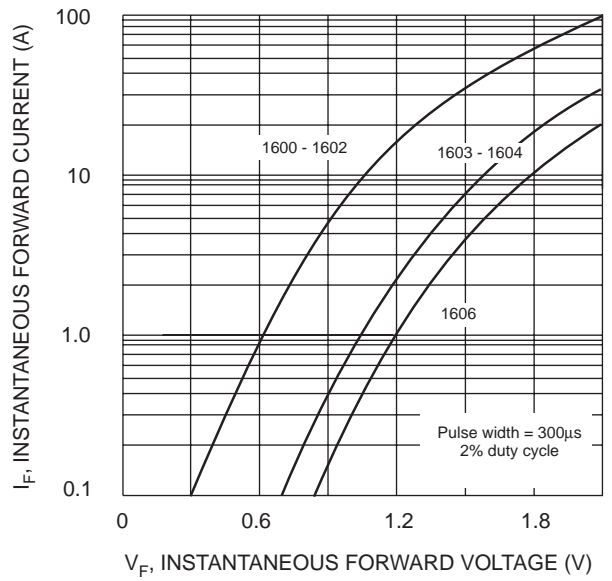


Fig. 2 Typical Forward Characteristics

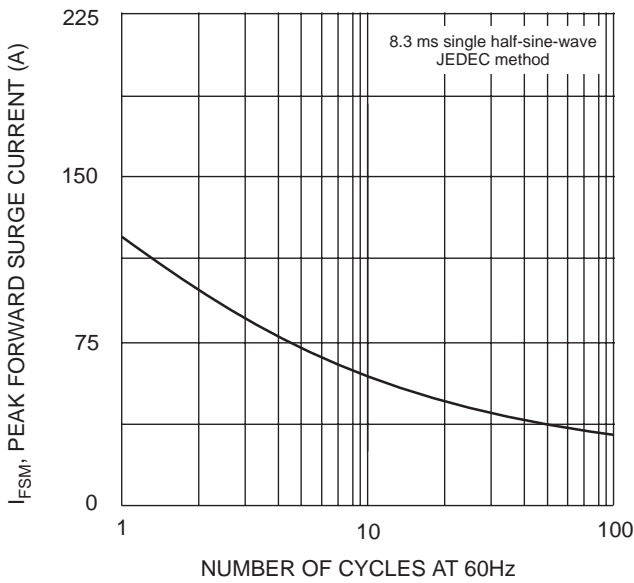


Fig. 3 Maximum Non-Repetitive Surge Current

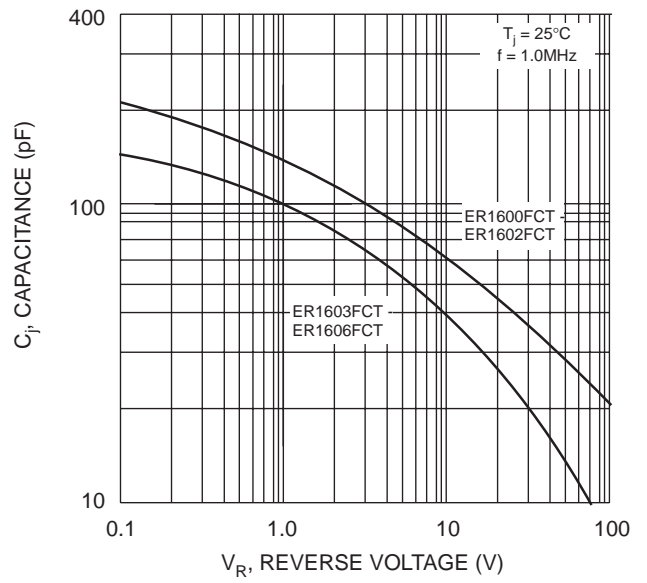
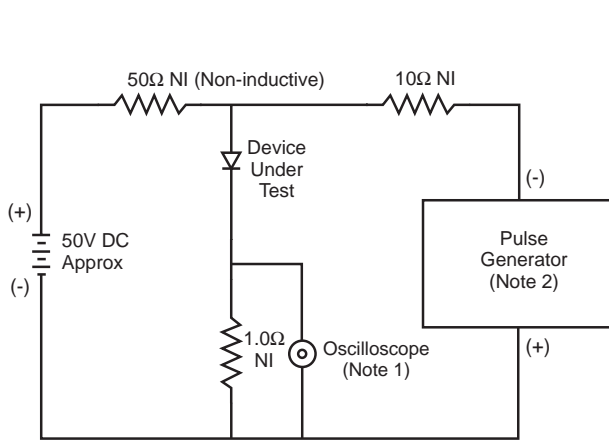
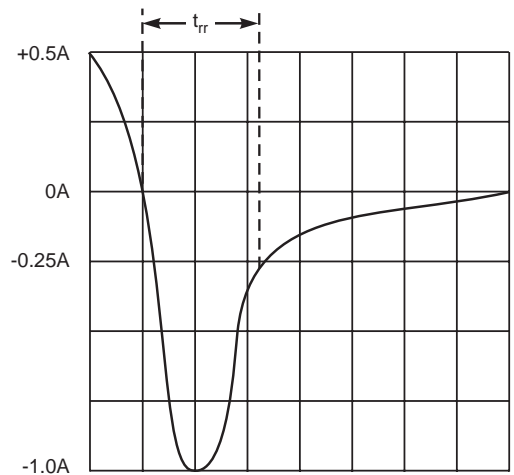


Fig. 4 Typical Junction Capacitance



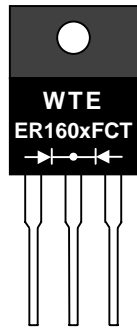
- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
  2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## MARKING INFORMATION



WTE = Manufacturer's Logo  
 ER160xFCT = Device Number  
 x = 0, 1, 1A, 2, 3, 4 or 6  
 Polarity = As Marked on Body

## PACKAGING INFORMATION

### BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	555 x 145 x 95	2,000	572 x 306 x 218	8,000	19.0

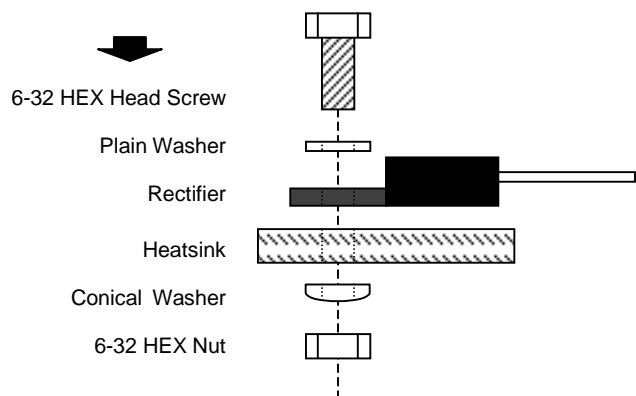
**Note:** 1. Anti-static tube, water clear color.

## RECOMMENDED SCREW MOUNTING ARRANGEMENT

The full molded plastic package affords a major reduction of hardware as compared to a standard TO-220 package. However, precautions should be made in mounting procedure.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause crack on device package.

A layer of thermal grease or thermal pad in the interface will be considerably helpful for heat dissipation.



## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
ER1600FCT	ITO-220	50 Units/Tube
ER1601FCT	ITO-220	50 Units/Tube
ER1601AFCT	ITO-220	50 Units/Tube
ER1602FCT	ITO-220	50 Units/Tube
ER1603FCT	ITO-220	50 Units/Tube
ER1604FCT	ITO-220	50 Units/Tube
ER1606FCT	ITO-220	50 Units/Tube

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, ER1600FCT-LF.**

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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