



# ER3002PT / ER3004PT

## ISOLATION SUPERFAST RECOVERY RECTIFIER

**VOLTAGE** 200 to 400 Volts **CURRENT** 30 Amperes

**TO-247AD / TO-3P**

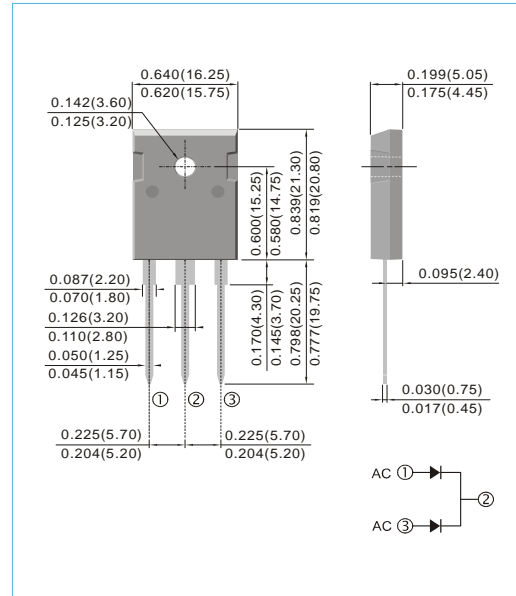
Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- 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 comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: TO-3P Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.2245 ounces, 6.367 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%

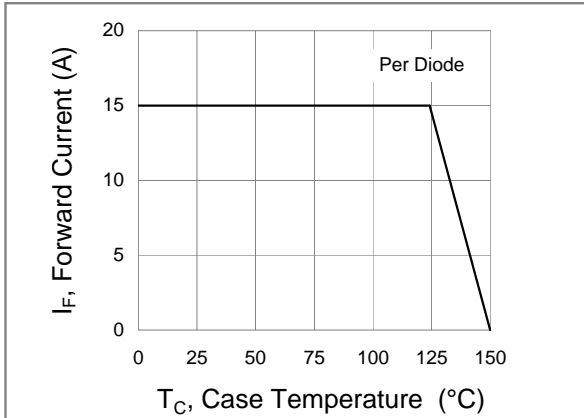
PARAMETER	SYMBOL	ER3002PT	ER3004PT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	V
Maximum RMS Voltage	$V_{RMS}$	140	280	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	V
Maximum Average Forward Current	$I_{F(AV)}$	30		A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300		A
Maximum Forward Voltage at 15A	$V_F$	0.95	1.3	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	1 50		$\mu A$
		$T_J=25^{\circ}C$ $T_J=125^{\circ}C$		
Maximum Reverse Recovery Time (Notes 2)	$t_{rr}$	35		ns
Typical Junction Capacitance (Notes 1)	$C_J$	140		pF
Typical Thermal Resistance (Notes 3)	$R_{\theta JC}$	2		$^{\circ}C / W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150		$^{\circ}C$

#### NOTES :

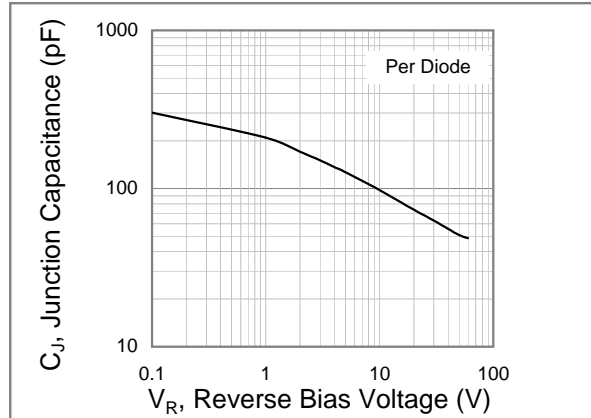
1. Measured at 1MHz and applied reverse voltage of 4.0 Volts.
2. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ , Recover to 0.25A.
3. Infinite heatsink.



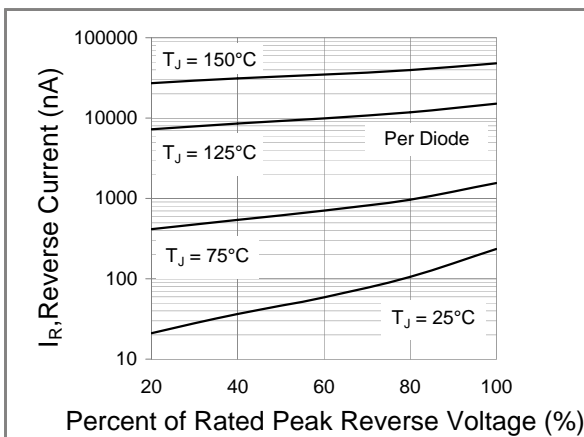
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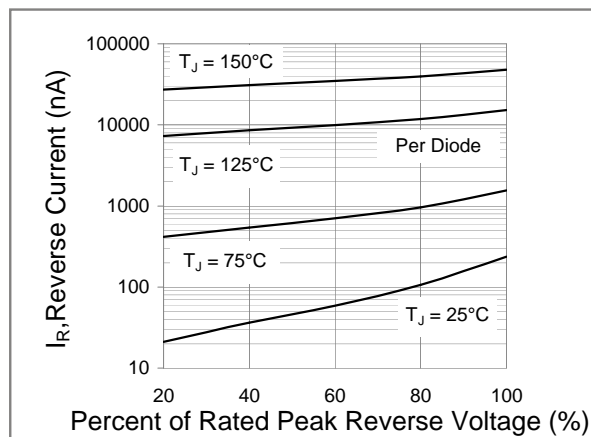
**Fig.1 Forward Current Derating Curve**



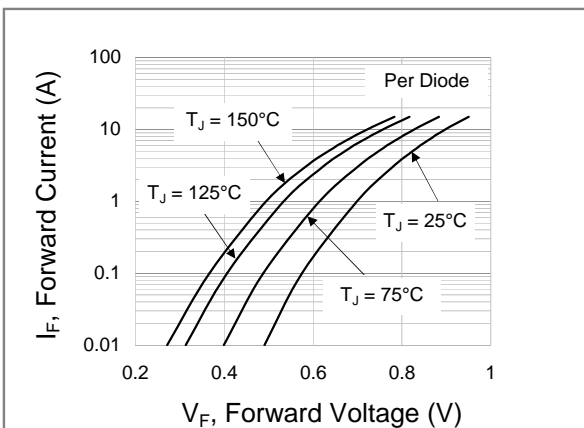
**Fig.2 Typical Junction Capacitance**



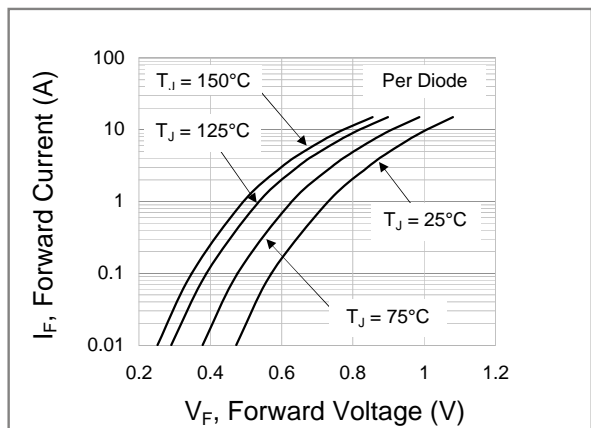
**Fig.3 ER3002PT Typical Reverse Characteristics**



**Fig.4 ER3004PT Typical Reverse Characteristics**



**Fig.5 ER3002PT Typical Forward Characteristics**



**Fig.6 ER3004PT Typical Forward Characteristics**



## ER3002PT / ER3004PT

### Part No\_packing code\_Version

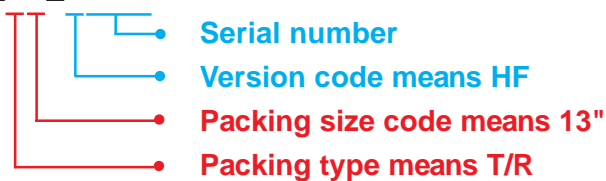
ER3002PT\_T0\_00001

ER3002PT\_T0\_10001

For example :

**RB500V-40\_R2\_00001**

Part No.



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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