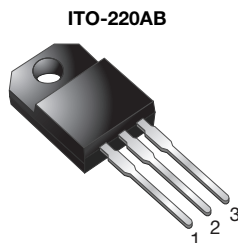
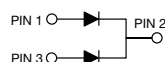


Dual Common Cathode Ultrafast Plastic Rectifier



FEPF16xT Series



RoHS
COMPLIANT

FEATURES

- Power pack
- Glass passivated pellet chip junction
- Ultrafast recovery time
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106 for ITO-220AB package
- AEC-Q101 qualified available
 - Automotive ordering code: base P/NHE3
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in high frequency rectifier of switching mode power supplies, inverters, freewheeling diodes, DC/DC converters, and other power switching application.

MECHANICAL DATA

Case: ITO-220AB

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade
Base P/NHE3_X - RoHS-compliant and AEC-Q101 qualified ("X" denotes revision code e.g. A, B,...)

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: as marked

Mounting Torque: 10 in-lbs max.

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	2 x 8.0 A
V_{RRM}	300 V to 600 V
I_{FSM}	125 A
t_{rr}	50 ns
V_F	1.30 V, 1.50 V
T_J max.	150 °C
Package	ITO-220AB
Circuit configurations	Common cathode

MAXIMUM RATINGS ($T_C = 25\text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	FEPF16FT	FEPF16GT	FEPF16HT	FEPF16JT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	300	400	500	600	V
Maximum average forward rectified current at $T_C = 100\text{ °C}$	$I_{F(AV)}$	16				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	125				A
Operating storage and temperature range	T_J, T_{STG}	-55 to +150				°C
Isolation voltage from terminal to heatsink $t = 1\text{ min}$	V_{AC}	1500				V



ELECTRICAL CHARACTERISTICS (T _C = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	FEPF16FT	FEPF16GT	FEPF16HT	FEPF16JT	UNIT
Maximum instantaneous forward voltage per diode	8.0 A	V _F ⁽¹⁾	1.3		1.5		V
Maximum DC reverse current per diode at rated DC blocking voltage	T _C = 25 °C	I _R	10				μA
	T _C = 100 °C		500				
Maximum reverse recovery time per diode	I _F = 0.5 A, I _R = 1.0 A, I _{rr} = 0.25 A	t _{rr}	50				ns
Typical junction capacitance per diode	4.0 V, 1 MHz	C _J	85		60		pF

Note

⁽¹⁾ Pulse test: 300 μs pulse width, 1 % duty cycle

THERMAL CHARACTERISTICS ($T_C = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	FEPF	UNIT
Typical thermal resistance from junction to case per diode	$R_{\theta JC}$	3.1	$^{\circ}\text{C/W}$

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ITO-220AB	FEPF16JT-E3/45	1.97	45	50/tube	Tube
ITO-220AB	FEPF16JT E3_A/P ⁽¹⁾	1.97	45	50/tube	Tube

Note

⁽¹⁾ AEC-Q101 qualified

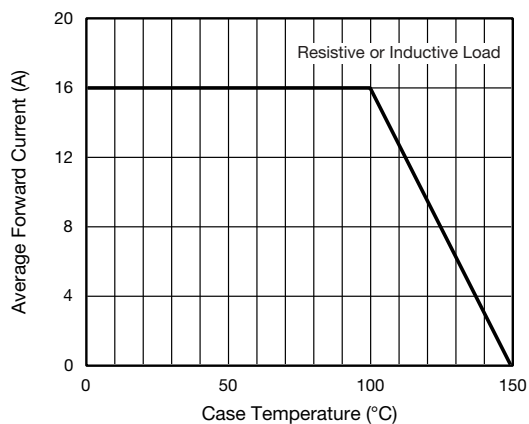
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

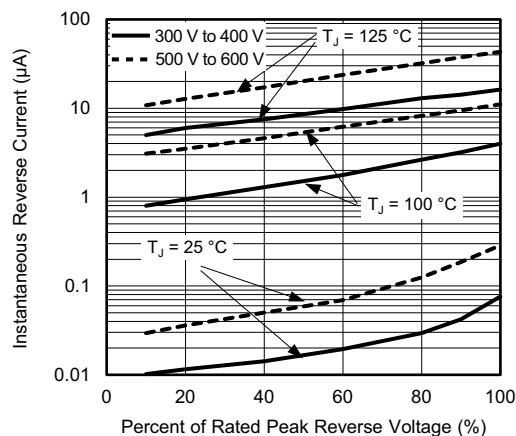


Fig. 4 - Typical Reverse Characteristics Per Diode

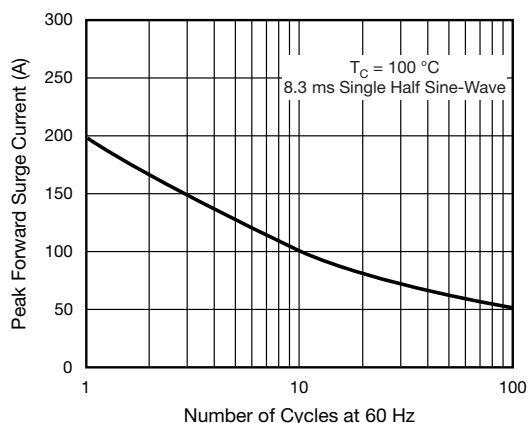


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

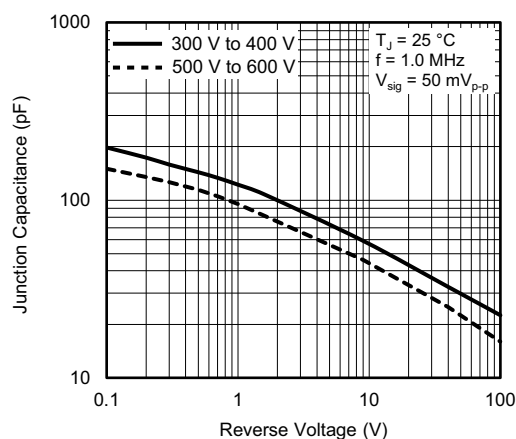


Fig. 5 - Typical Junction Capacitance Per Diode

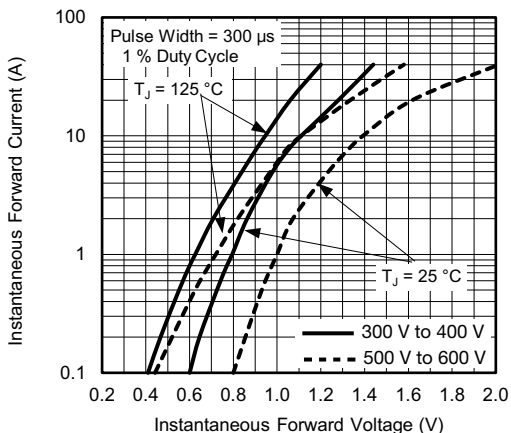
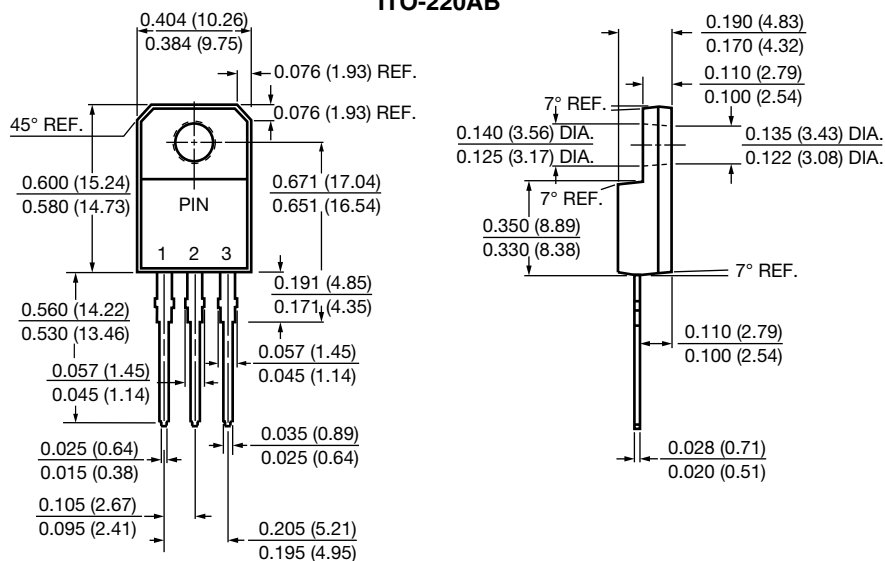


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

ITO-220AB




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