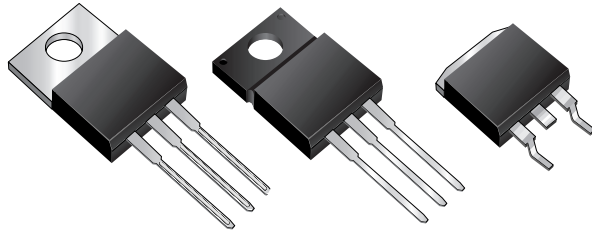




FEP16JT, FEPF16JT, FEPB16JT Series

Vishay Semiconductors
formerly General Semiconductor

Dual Ultrafast Plastic Rectifier

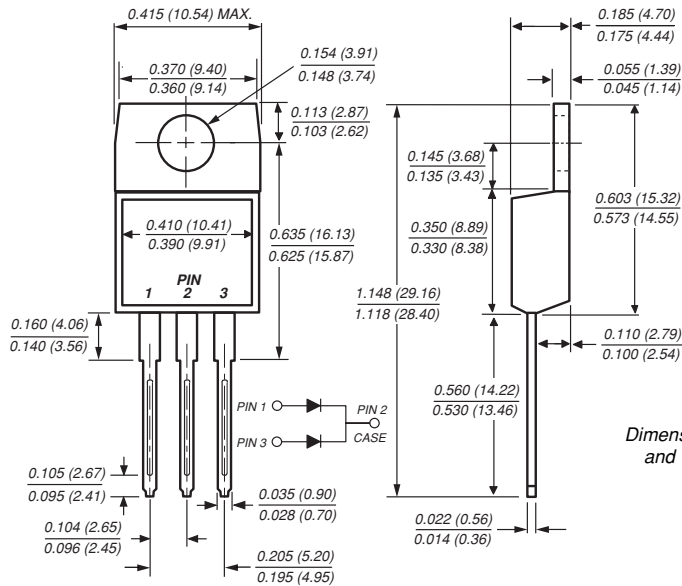


Reverse Voltage 50 to 600V

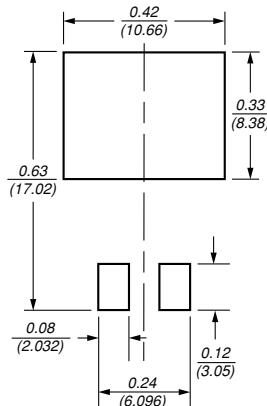
Forward Current 16A

Reverse Recovery Time 35 to 50ns

TO-220AB (FEP16JT Series)



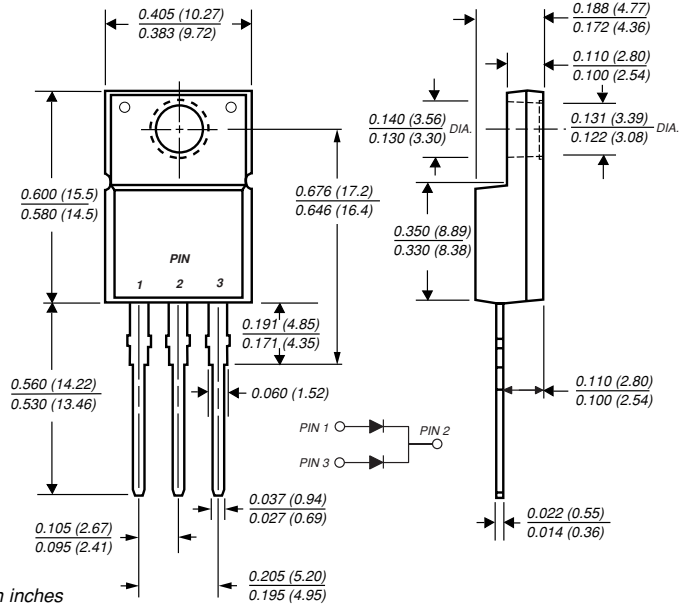
Mounting Pad
Layout
TO-263AB



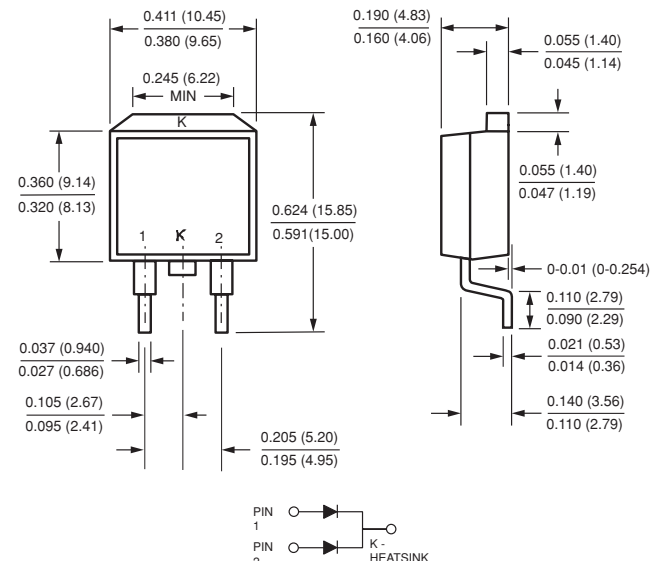
Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive centertap
- Glass passivated chip junction
- Low power loss
- High surge current capability
- Low forward voltage, high current capability
- Superfast recovery times for high efficiency

ITO-220AB (FEPF16JT Series)



TO-263AB (FEPB16JT Series)



Mechanical Data

Case: JEDEC TO-220AB, ITO-220AB & TO-263AB
molded plastic body

Terminals: Plated leads, solderable per
MIL-STD-750, Method 2026

High temperature soldering guaranteed:
250°C/10 seconds at terminals

Polarity: As marked **Mounting Position:** Any

Mounting Torque: 10 in-lbs maximum

Weight: 0.08 oz., 2.24 g

FEP16JT, FEPF16JT, FEPB16JT Series



Vishay Semiconductors
formerly General Semiconductor

Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	FEP 16AT	FEP 16BT	FEP 16CT	FEP 16DT	FEP 16FT	FEP 16GT	FEP 16HT	FEP 16JT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at T _C = 100°C	I _{F(AV)}	16								A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T _C = 100°C per leg	I _{FSM}	200				125				A
Operating storage and temperature range	T _J , T _{STG}	−55 to +150								°C
RMS Isolation voltage (FEPF) from terminals to heatsink with t = 1.0 second, RH ≤ 30%	V _{ISOL}	4500 ⁽¹⁾ 3500 ⁽²⁾ 1500 ⁽³⁾								V

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	FEP 16AT	FEP 16BT	FEP 16CT	FEP 16DT	FEP 16FT	FEP 16GT	FEP 16HT	FEP 16JT	Unit
Maximum instantaneous forward voltage per leg at 8.0A	V _F	0.95				1.30		1.50		V
Maximum DC reverse current per leg T _C = 25°C at rated DC blocking voltage T _C = 100°C	I _R	10 500								μA
Maximum reverse recovery time per leg at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	35				50				ns
Typical junction capacitance per leg at 4V, 1MHz	C _J	85						60		pF

Thermal Characteristics

($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	FEP	FEPF	FEPB	Unit
Typical thermal resistance from junction to case per leg	$R_{\theta JC}$	2.2	3.1	2.2	°C/W

Notes:

- (1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
- (2) Clip mounting (on case), where leads do overlap heatsink
- (3) Screw mounting with 4-40 screw, where washer diameter is $\leq 4.9\text{mm}$ (0.19")
- (4) Pulse test: 300μs pulse width, 1% duty cycle

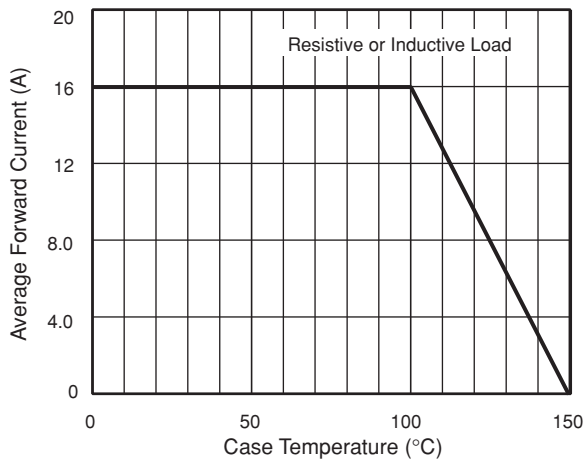
Ordering Information

Product	Case	Package Code	Package Option
FEP16AT - FEP16JT	TO-220AB	45	Anti-Static tube, 50/tube, 2K/carton
FEPF16AT - FEPF16JT	ITO-220AB	45	Anti-Static tube, 50/tube, 2K/carton
FEPB16AT - FEPB16JT	TO-263AB	31	13" reel, 800/reel, 4.8K/carton
		45	Anti-Static tube, 50/tube, 2K/carton
		81	Anti-Static 13" reel, 800/reel, 4.8K/carton

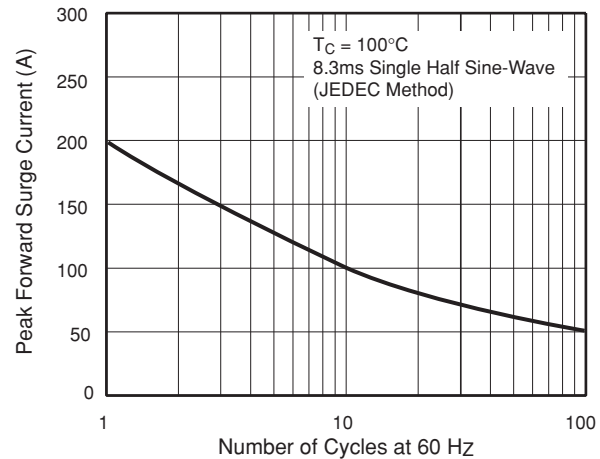


Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

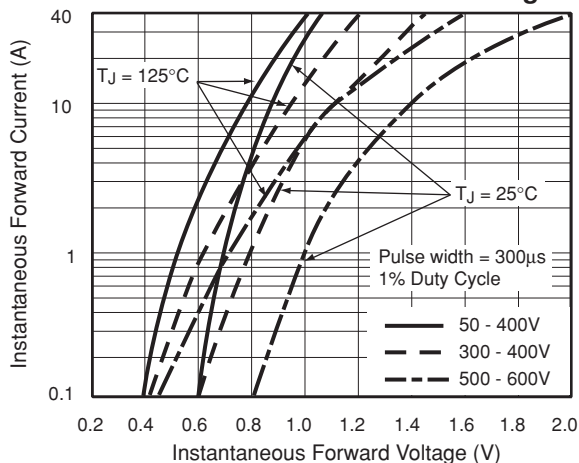
**Fig. 1 – Forward Current
Derating Curve**



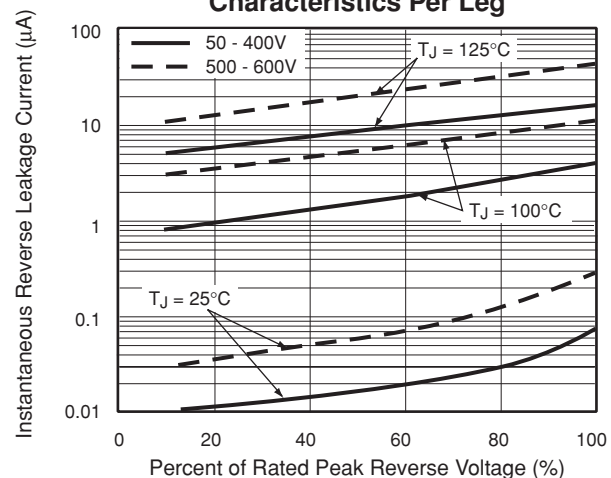
**Fig. 2 – Maximum Non-Repetitive Peak
Forward Surge Current**



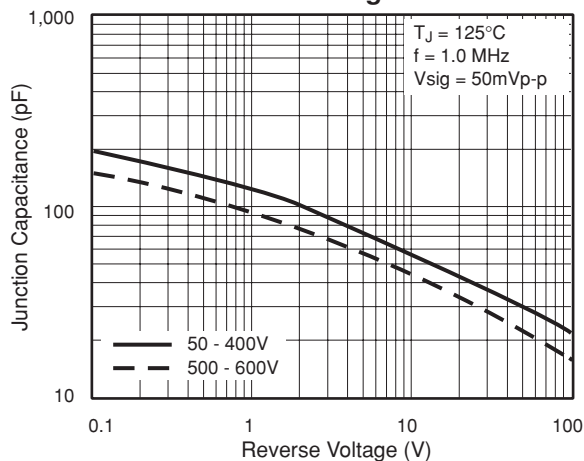
**Fig. 3 – Typical Instantaneous
Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse
Characteristics Per Leg**



**Fig. 5 – Typical Junction Capacitance
Per Leg**





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