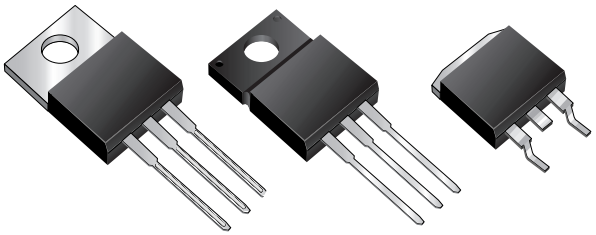
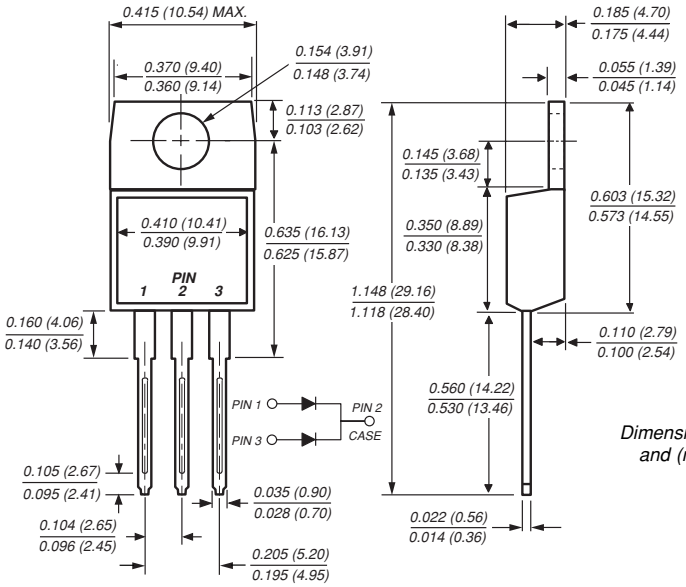
Vishay Semiconductors
formerly General Semiconductor

Dual Ultrafast Plastic Rectifier

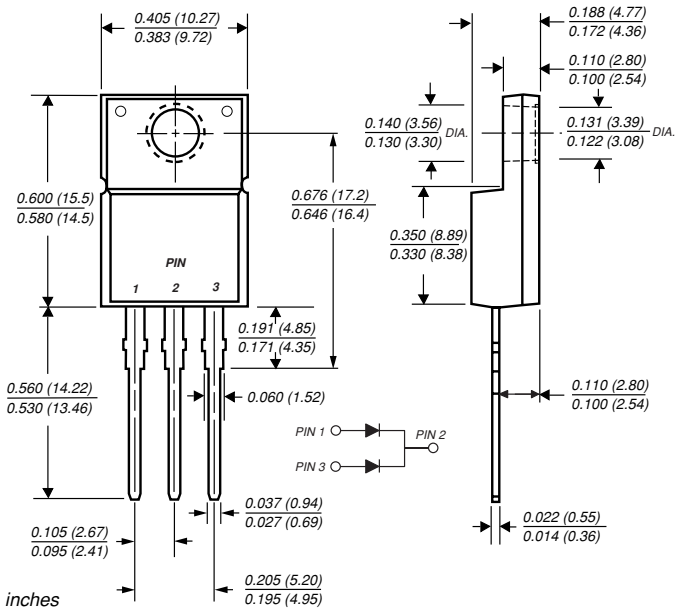
Reverse Voltage 50 to 600V
Forward Current 16A
Reverse Recovery Time 35 to 50ns



TO-220AB (FEP16JT Series)

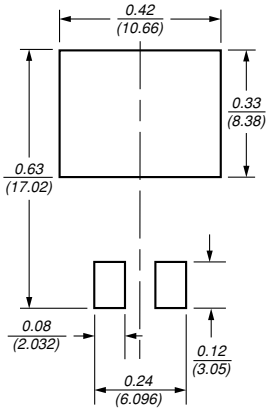


ITO-220AB (FEPF16JT Series)

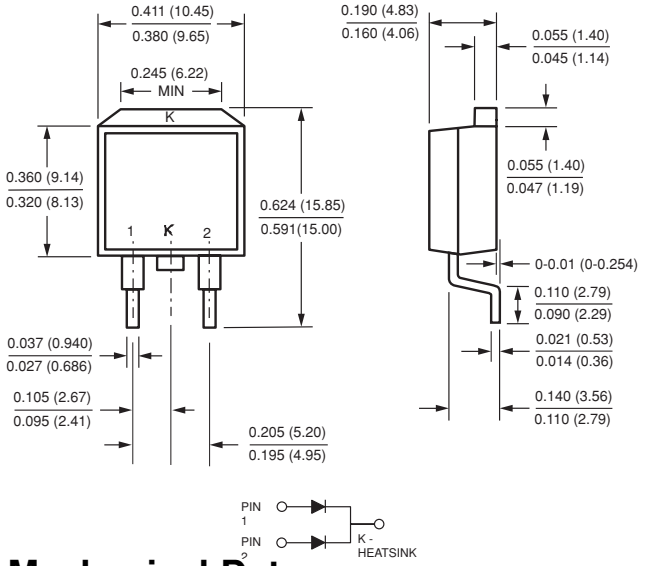


Dimensions in inches and (millimeters)

Mounting Pad Layout TO-263AB



TO-263AB (FEPB16JT Series)



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual recitifier 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

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

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 at rated DC blocking voltage T_C = 25°C 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°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 ≤ 4.9mm (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 45 81	13" reel, 800/reel, 4.8K/carton Anti-Static tube, 50/tube, 2K/carton Anti-Static 13" reel, 800/reel, 4.8K/carton

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

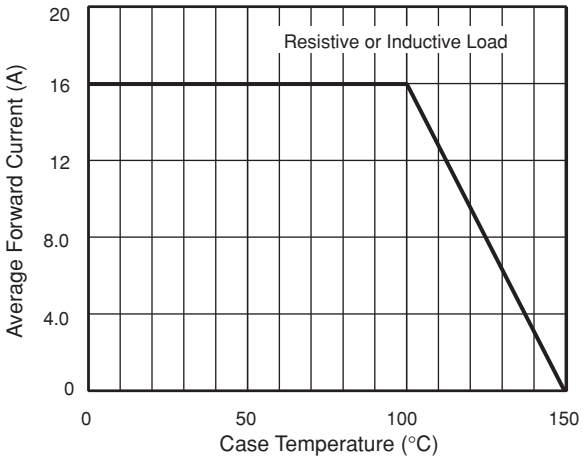


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

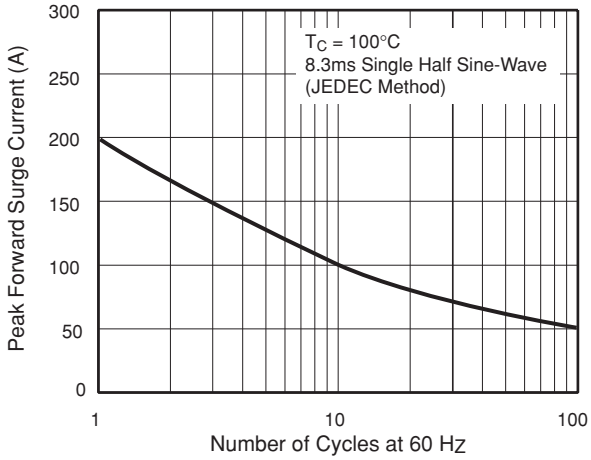


Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg

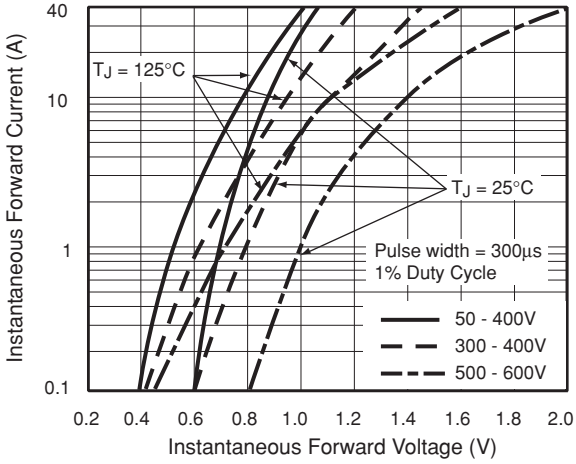


Fig. 4 – Typical Reverse Characteristics Per Leg

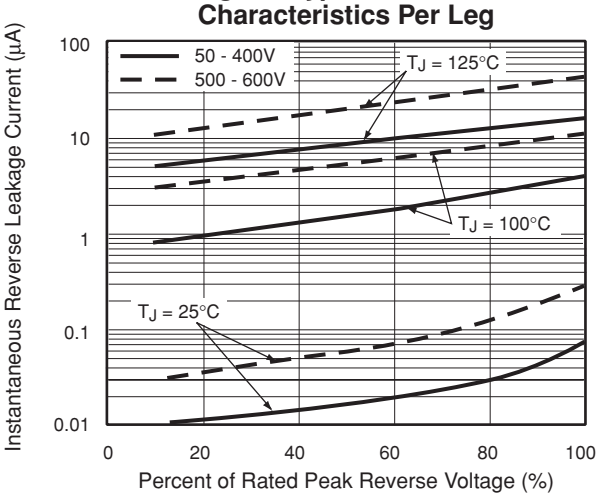
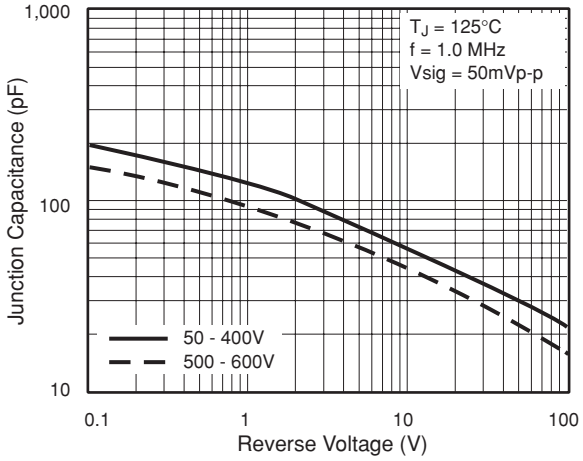


Fig. 5 – Typical Junction Capacitance Per Leg



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