

# Silicon Diode

## **FESB16DT**

Fast Efficient Rectifier

200V / 16A

# DATASHEET

from

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OEM – General Semiconductor

Source: General Semiconductor Databook 1998

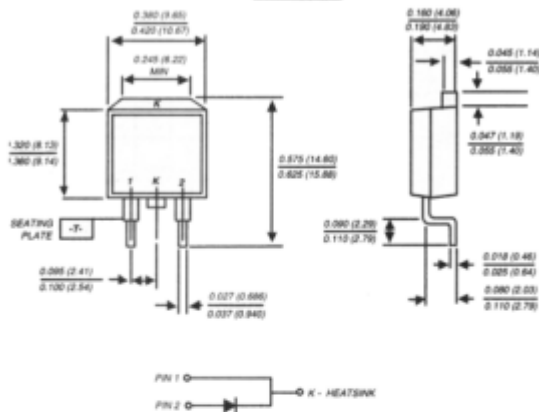
**NEW PRODUCT                      NEW PRODUCT                      NEW PRODUCT**

# FESB16AT THRU FESB16JT

## FAST EFFICIENT PLASTIC RECTIFIER

**Reverse Voltage - 50 to 600 Volts      Forward Current - 16.0 Amperes**

### TO-263AB



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low power loss
- ◆ Low forward voltage, high current capability
- ◆ High surge current capability
- ◆ Superfast recovery time, for high efficiency
- ◆ High temperature soldering in accordance with CECC 802 / Reflow guaranteed



### MECHANICAL DATA

**Case:** JEDEC TO-263AB molded plastic body over passivated chips  
**Terminals:** Plated lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Mounting Position:** Any  
**Weight:** 0.08 ounce, 2.24 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FESB 16AT	FESB 16BT	FESB 16CT	FESB 16DT	FESB 16FT	FESB 16GT	FESB 16HT	FESB 16JT	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	Volts
Maximum average forward rectified current at T <sub>C</sub> =100°C	I <sub(av)< sub=""></sub(av)<>	16.0								Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T <sub>C</sub> =100°C	I <sub>FSM</sub>	250.0								Amps
Maximum instantaneous forward voltage at 16A	V <sub>F</sub>	0.975		1.3			1.5		Volts	
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	T <sub>C</sub> =25°C 10.0			T <sub>C</sub> =100°C 500.0					µA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	35.0			50.0					ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	175.0				145.0				pF
Typical thermal resistance (NOTE 3)	R <sub>θJC</sub>	1.2								°C/W
Operating and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150								°C

**NOTES:**

- (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>T</sub>=0.25A
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to case

**RATINGS AND CHARACTERISTICS CURVES FESB16AT THRU FESB16JT**

FIG. 1 - FORWARD CURRENT DERATING CURVE

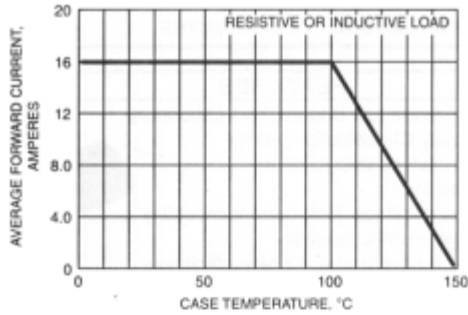


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

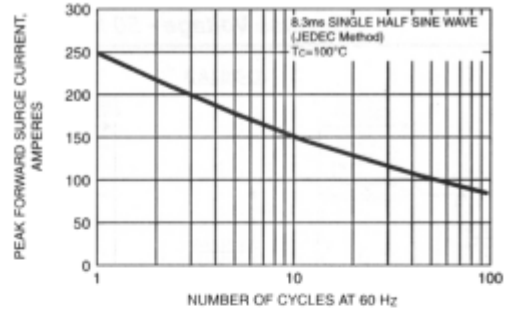


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

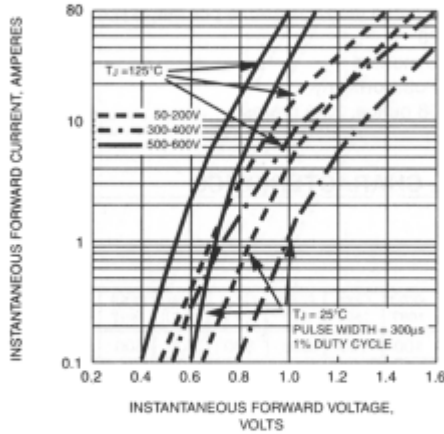


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

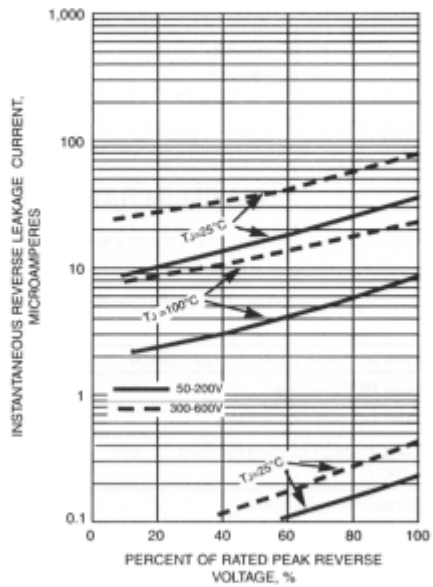


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

