

# RP16AT THRU RP16KT

16 AMPERE FAST-RECOVERY RECTIFIER

**GENERAL  
INSTRUMENT**



## FEATURES

- Dual rectifier construction
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Exceeds environmental standards of MIL-STD-19500.
- High current capability
- High surge capacity
- Low forward voltage
- Fast switching for high efficiency

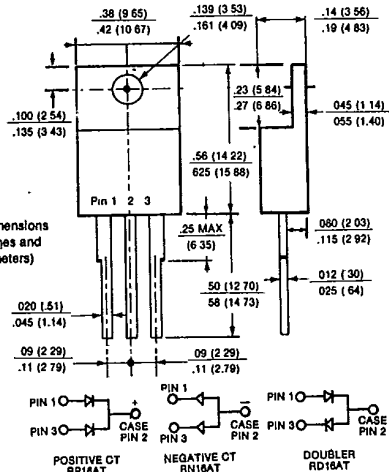
## MECHANICAL DATA

Case: TO-220 molded plastic  
 Terminals: Lead solderable per MIL-STD-202, Method 208  
 Polarity: As marked  
 Mounting position: Any  
 Weight: .08 ounces, 2.24 grams

**VOLTAGE RANGE**  
50 to 1000 Volts

**CURRENT**  
16 Amperes

### TO-220 CT



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25° ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

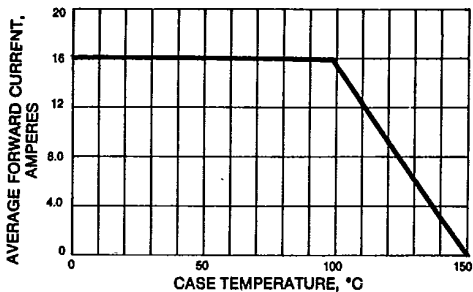
	RP16AT	RP16BT	RP16DT	RP16GT	RP16JT	RP16KT	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	V
Maximum RMS Voltage	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	50	100	200	400	800	800	V
Maximum Average Forward Rectified Current at T <sub>c</sub> = 100°C	16.0						A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	200						A
Maximum Forward Voltage at 8.0A per element	1.2			1.3			V
Maximum Average Reverse Current At Peak Reverse Voltage T <sub>c</sub> = 25°C T <sub>c</sub> = 100°C	25 250						μA μA
Typical Junction Capacitance (Note 1)	30						PF
Maximum Reverse Recovery Time (Note 2)	150		200		250		ns
Typical Thermal Resistance RθJC (Note 3)	3.0						°C/W
Storage and Operating Temperature Range T <sub>J</sub>	-65 to +150						°C

**NOTES:**

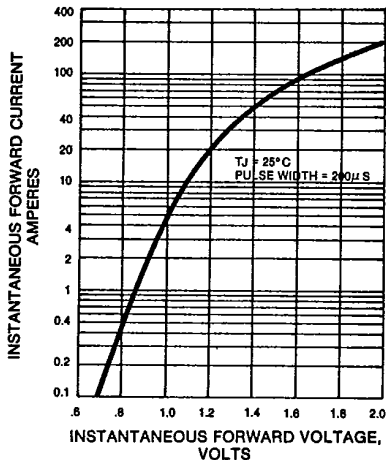
1. Measured at 1 MHz and applied reverse voltage of 4.0 volts
2. Reverse Recovery Test Conditions: I<sub>F</sub> = .5A, I<sub>R</sub> = 1A, I<sub>rr</sub> = .25A
3. Thermal Resistance for each junction to case.

**RATING CHARACTERISTIC CURVES  
RP16AT THRU RP16KT**

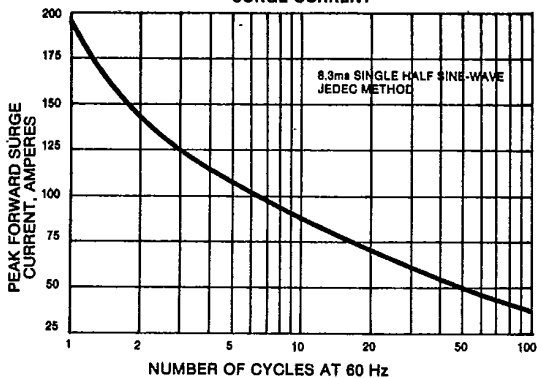
**FIG. 1—FORWARD CURRENT DERATING CURVE**



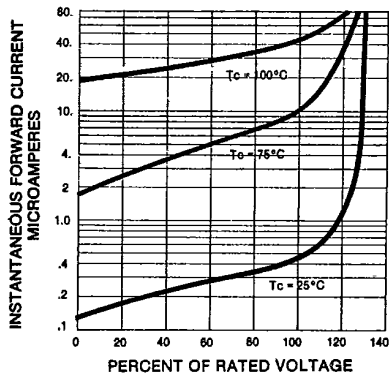
**FIG. 2—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3—MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG. 4—TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5—TYPICAL JUNCTION CAPACITANCE**

