



# FR201 THRU FR207, BY296 THRU BY299

## 2.0 AMPS. FAST RECOVERY RECTIFIERS

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any
- \* Weight: 0.40 grams

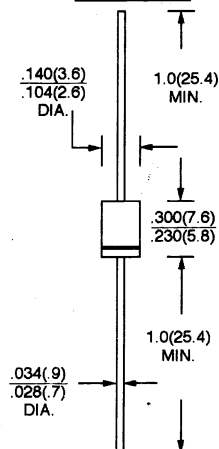
### VOLTAGE RANGE

50 to 1000 Volts

CURRENT

2.0 Amperes

### DO-15



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	FR201	FR202	FR203	FR204	FR205	FR206	FR207	UNITS
			BY296	BY297	BY298		BY299		
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum D.C Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	60							A
Maximum Instantaneous Forward Voltage at 2.0A	$V_F$	1.3							V
Maximum D.C Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated D.C Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_R$	5.0 100							$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	150				250	500		nS
Typical Junction Capacitance (Note 2)	$C_J$	40							pF
Operating Temperature Range	$T_J$	- 65 to + 125							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150							$^\circ\text{C}$

NOTES: 1. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $t_{RR} = 0.25\text{A}$ .

2. Measured at 1 MHz and applied reverse voltage of 4.0V D.C.

# RATINGS AND CHARACTERISTIC CURVES (FR201 THRU FR207, BY296 THRU BY299)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

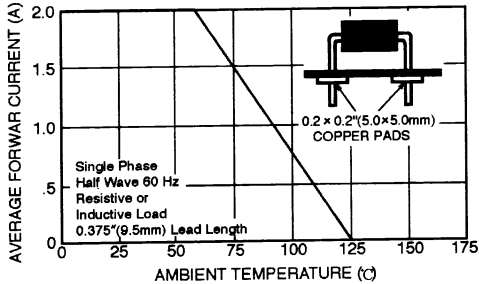


FIG. 2 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

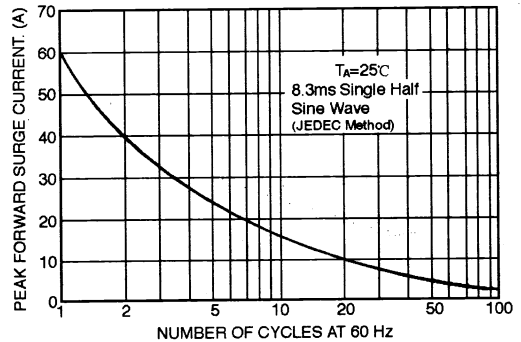


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

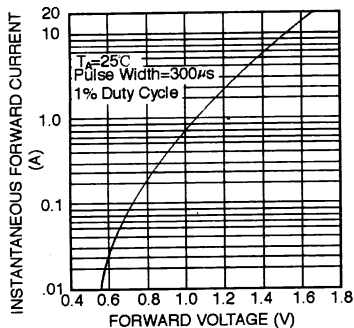


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

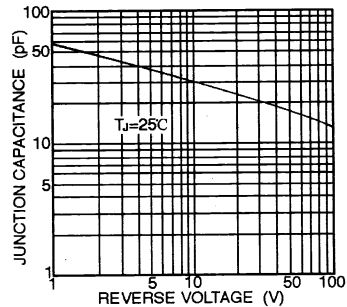


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

