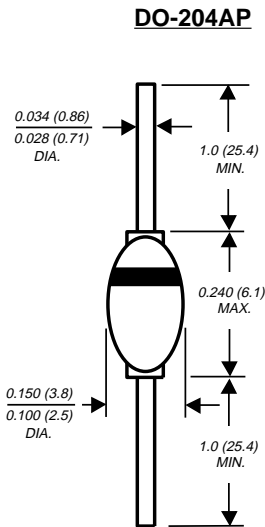


BYV27-50 THRU BYV27-200

GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 2.0 Amperes

PATENTED *



Dimensions in inches and (millimeters)

* Brazed-lead assembly is covered by Patent No. 3,930,306

FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Superfast recovery time for high efficiency
- ◆ Low forward voltage, high current capability
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ Hermetically sealed package
- ◆ Low leakage current
- ◆ High surge current capability
- ◆ High temperature soldering guaranteed:
350°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension



MECHANICAL DATA

Case: JEDEC DO-204AP solid glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.02 ounce, 0.56 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYV27-50	BYV27-100	BYV27-150	BYV27-200	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	Volts
Minimum reverse breakdown voltage at 100 μA	V _{BR}	55	110	165	220	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _L =85°C	I _(AV)	2.0				Amps
Peak forward surge current 10ms single half sine-wave superimposed on rated load at T _J =175°C	I _{FSM}	50.0				Amps
Maximum instantaneous forward voltage at 3.0A	V _F	T _J =25°C	1.07			Volts
		T _J =175°C	0.88			
Maximum DC reverse current at rated DC blocking voltage	I _R	T _A =25°C	1.0			μA
		T _A =165°C	150.0			
Maximum reverse recovery time (NOTE 1)	t _{rr}	25.0				ns
Typical junction capacitance (NOTE 2)	C _J	45.0				pF
Typical thermal resistance (NOTE 3, 4)	R _{θJA}	65.0				°C/W
	R _{θJL}	20.0				
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175				°C

NOTES:

- (1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsinks
- (4) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length and mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads

RATINGS AND CHARACTERISTIC CURVES BYV27-50 THRU BYV27-200

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

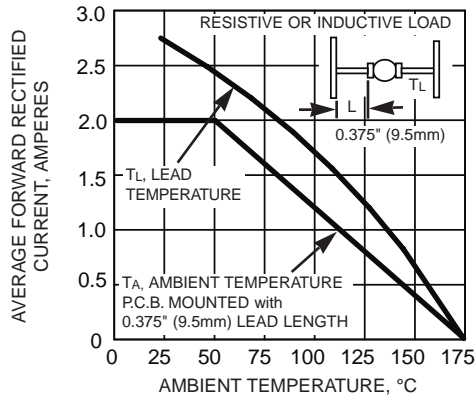


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

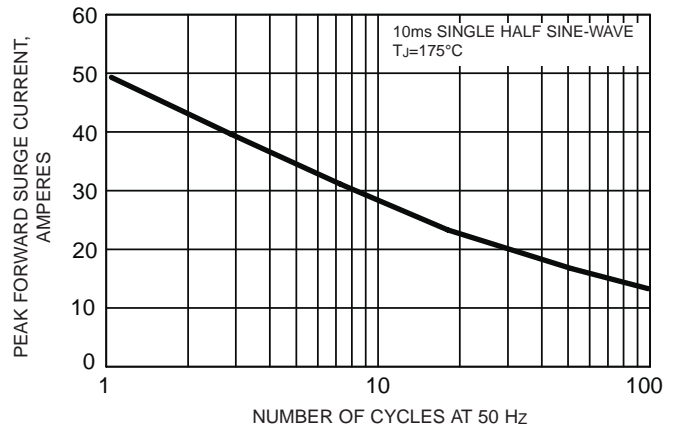


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

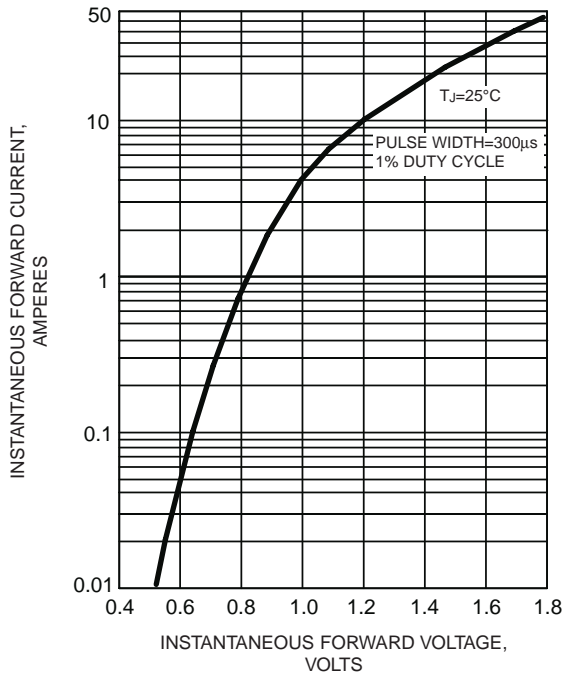


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

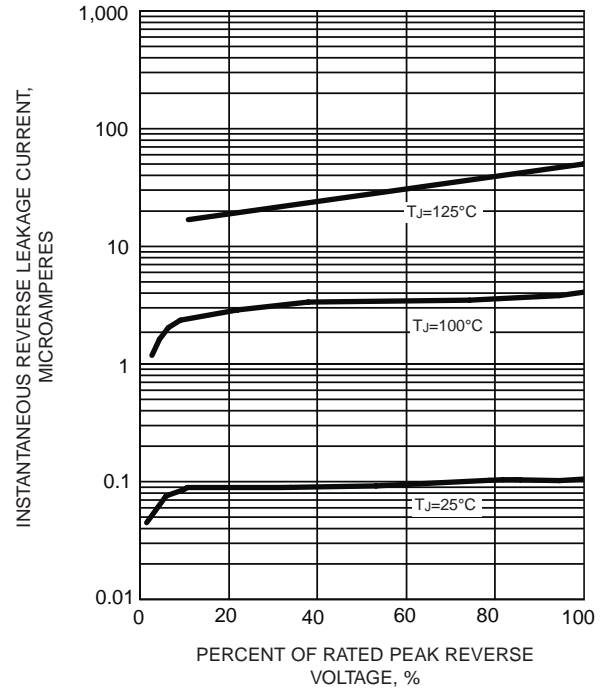


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

