

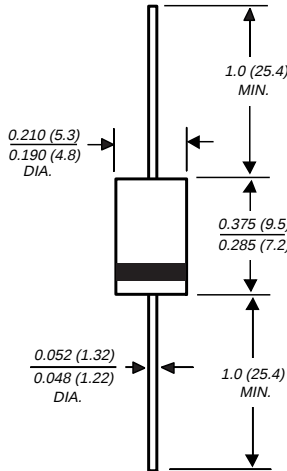
SBYV27-50 THRU SBYV27-200

SOFT RECOVERY, ULTRAFAST PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts

Current - 3.5 Amperes

DO-204AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High temperature soldering guaranteed: 265°C/10 seconds, 0.375 (9.5mm) lead length, at 5lbs., (2.3kg) tension
- ◆ Excellent high temperature switching
- ◆ High surge capability
- ◆ Reduced EMI over conventional BYV28
- ◆ Nitride oxide passivated junction
- ◆ Superfast recovery times
- ◆ Low forward voltage, high current capability
- ◆ Soft recovery characteristic

MECHANICAL DATA

Case: JEDEC DO-204AD molded plastic over a passivated junction

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color Band denotes cathode end

Mounting Position: Any

Weight: 0.045 ounce, 1.2 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SBYV28-50	SBYV28-100	SBYV28-150	SBYV28-200	UNITS
Maximum recurrent 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 100μA	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)	1.0				Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	80.0				Amps
Maximum instantaneous forward voltage at 3.0A	T _J =25°C T _J =150°C V _F	1.07 0.88				Volts
Maximum DC reverse current at rated DC blocking voltage	T _A =25°C T _A =100°C I _R	5.0 200.0				μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	20.0				ns
Typical junction capacitance (NOTE 2)	C _J	20.0				pF
Typical thermal resistance (NOTE 3)	R _{θJL}	25.0				°C/W
Operating junction temperature range	T _J , T _{STG}	-55 to +150				°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, both leads attached to heatsink

RATINGS AND CHARACTERISTIC CURVES SBYV27-50 THRU SBYV27-200

FIG. 1 - FORWARD CURRENT DERATING CURVE

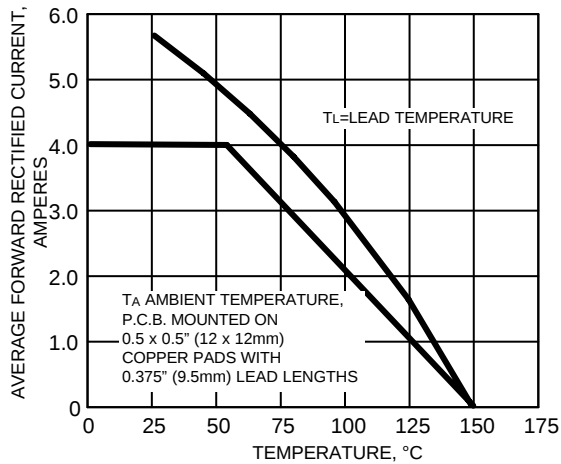


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

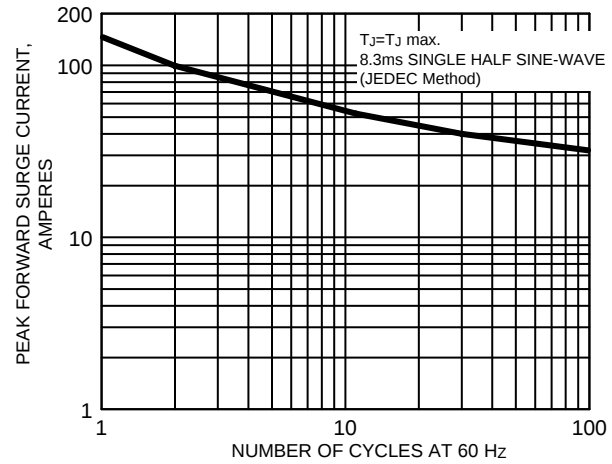


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

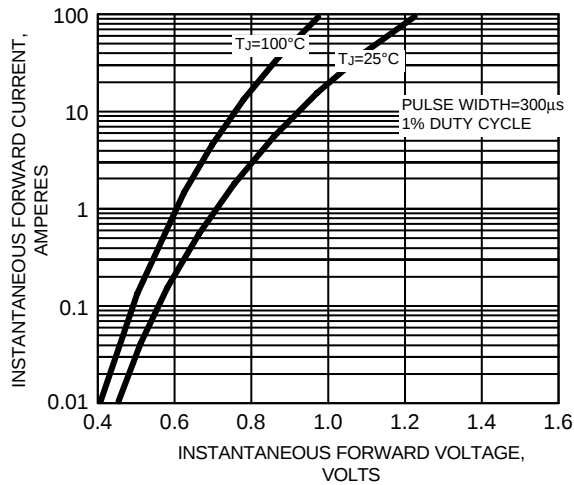


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

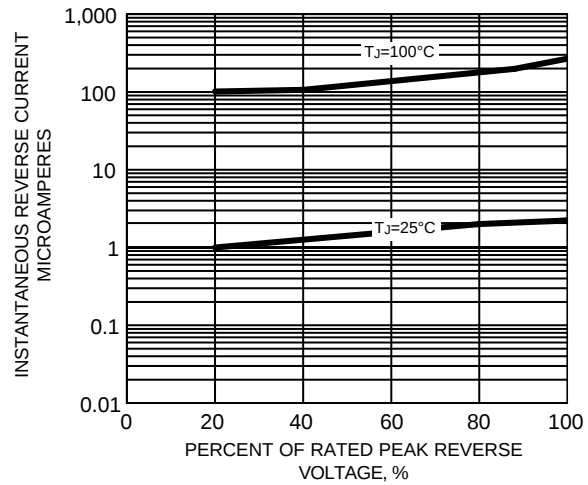


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

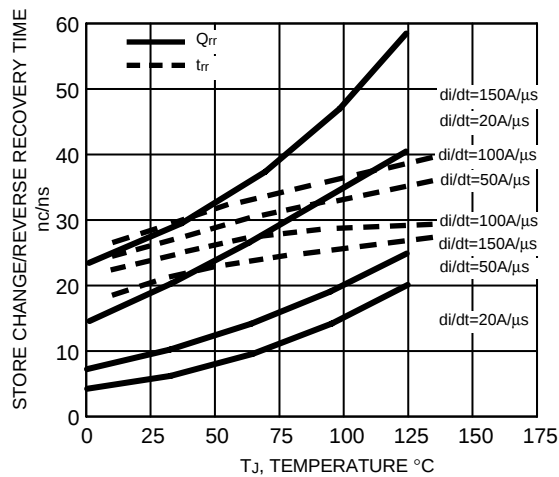


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

