Certificate Number: Q10561

Certificate Number: E17276

BYW95A - BYW96E

AVALANCHE FAST SOFT-RECOVERY RECTIFIER DIODES

PRV : 200 - 1000 Volts
Io : 3.0 Amperes

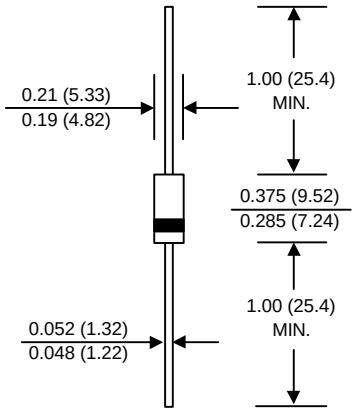
FEATURES :

* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Fast switching for high efficiency
* Pb / RoHS Free

MECHANICAL DATA :

* Case : DO-201AD Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 1.16 grams

DO-201AD



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%.

RATING	SYMBOL	BYW 95A	BYW 95B	BYW 95C	BYW 96D	BYW 96E	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum Continuous Reverse Voltage	V_R	200	400	600	800	1000	V
Min. Reverse Avalanche Breakdown Voltage @ I_R = 0.1 mA	$V_{(BR)R\text{-}min}$	300	500	700	900	1100	V
Maximum Average Forward Current Ttp= 60 °C (Note 1)	$I_{F(AV)}$	3.0					A
Maximum Non-Repetitive Peak Forward Surge Current	I_{FSM}	70					A
Maximum Repetitive Peak Forward Current	I_{FRM}	15					A
Maximum Forward Voltage at I_F = 5.0 Amps.	V_F	1.5					V
Maximum Reverse Current at Reverse Voltage	I_R	5.0					µA
Maximum Reverse Current at Reverse Voltage Tj = 165 °C	$I_{R(H)}$	150					µA
Maximum Reverse Recovery Time (Note 2)	Trr	250			300		ns
Thermal Resistance - Junction to Ambient	RθJA	75					K / W
Junction Temperature Range	T_J	- 65 to + 175					°C
Storage Temperature Range	T_{STG}	- 65 to + 175					°C

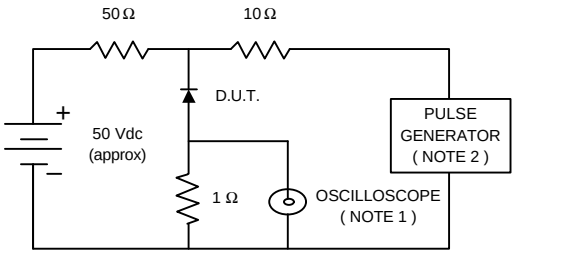
Notes :

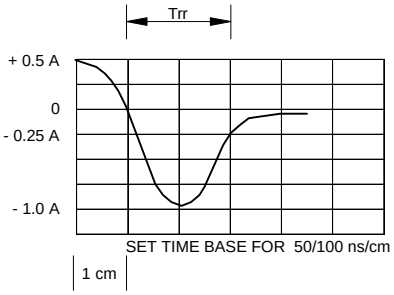
(1) Lead Length 10 mm.

(2) Measured with I_F = 0.5A, I_R = 1.0A, Irr = 0.25A

RATING AND CHARACTERISTIC CURVES (BYW95A - BYW96E)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

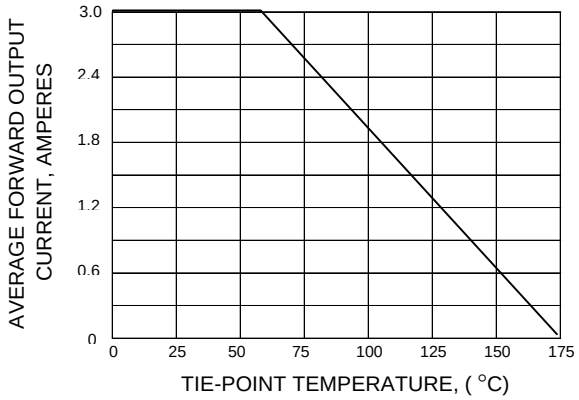


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

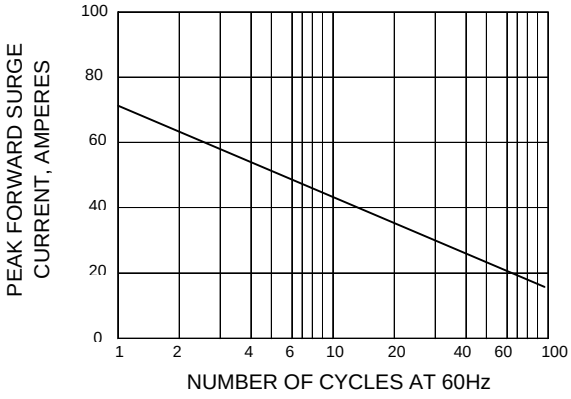


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

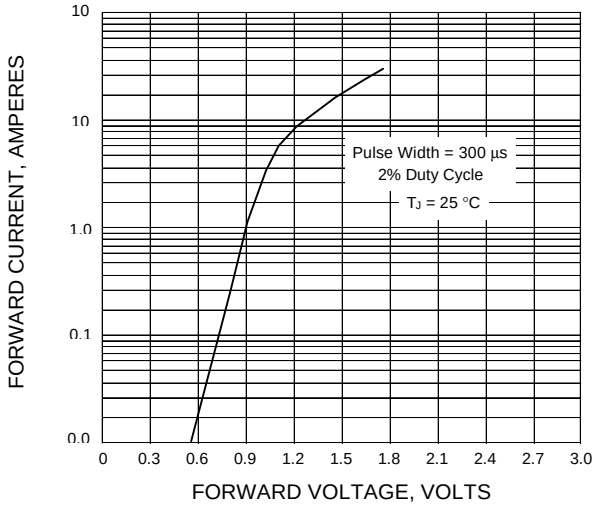


FIG.5 - TYPICAL REVERSE CHARACTERISTICS