

BYW54 - BYW56

PRV : 600 - 1000Volts
Io : 2.0 Amperes

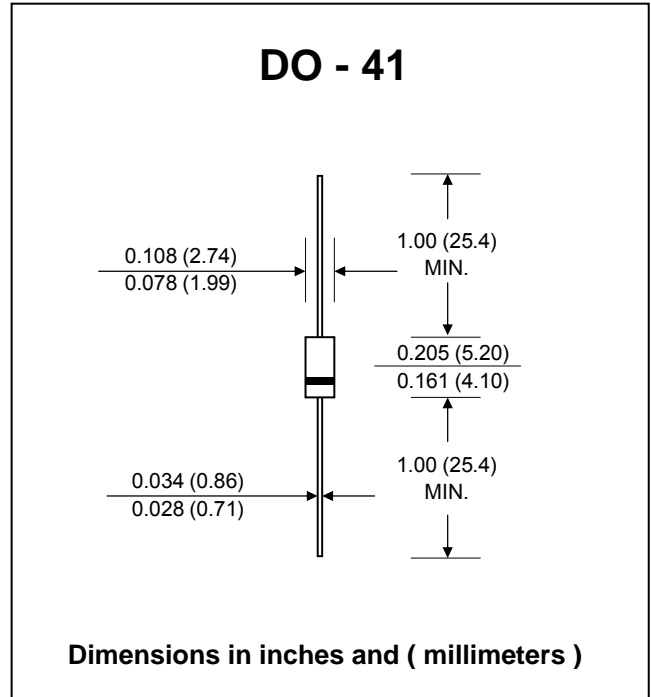
FEATURES :

- * Glass passivated junction chip
- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : DO-41 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 : 0.335 gram

AVALANCHE RECTIFIER DIODES



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%.

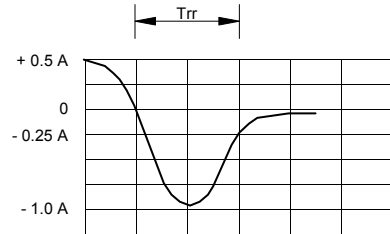
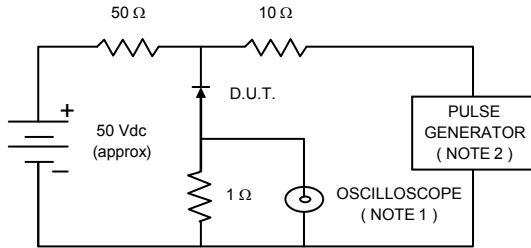
RATING	SYMBOL	BYW54	BYW55	BYW56	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum Crest Working Reverse Voltage	V_{RWM}	600	800	1000	V
Maximum Continuous Reverse Voltage	V_R	600	800	1000	V
Min. Reverse Avalanche Breakdown Voltage @ $I_R = 0.1$ mA	$V_{(BR)R-min.}$	650	900	1100	V
Maximum Average Forward Current $T_{tp} = 45$ °C (Note 1)	$I_{F(AV)}$	2.0			A
Maximum Non-Repetitive Peak Forward Surge Current	I_{FSM}	50			A
Maximum Repetitive Peak Forward Current	I_{FRM}	12			A
Maximum Forward Voltage at $I_F = 1.0$ A	V_F	1.0			V
Maximum Reverse Current at $V_R = V_{RRM}$ $V_R = V_{RRM}, T_j = 165$ °C	I_R	1.0			μ A
	$I_{R(H)}$	150			μ A
Typical Reverse Recovery Time (Note 2)	T_{rr}	3.0			μ s
Thermal Resistance - Junction to Ambient	$R_{\theta JA}$	100			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) Test Conditions : $I_F = 0.5$ A to $I_R = 1$ A ; measured at $I_{rr} = 0.25$ A

RATING AND CHARACTERISTIC CURVES (BYW54 - BYW56)

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

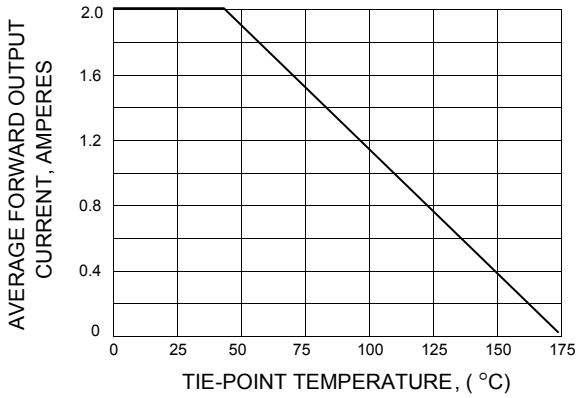


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

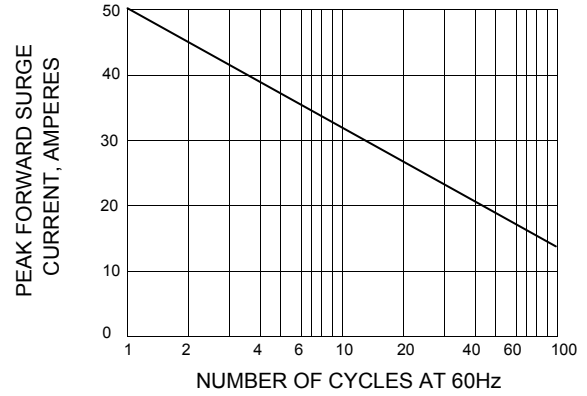


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

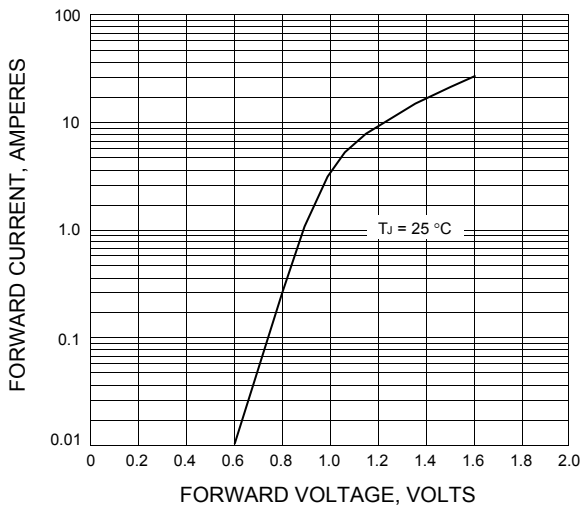


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

