

BYW54 - BYW56

PRV : 600 - 1000Volts
Io : 2.0 Amperes

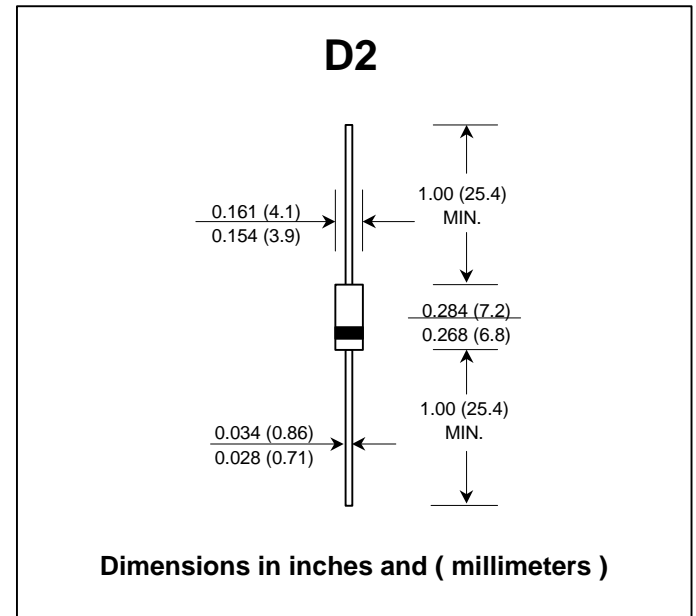
FEATURES :

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

MECHANICAL DATA :

- * Case : D2 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 : 0.465 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%.

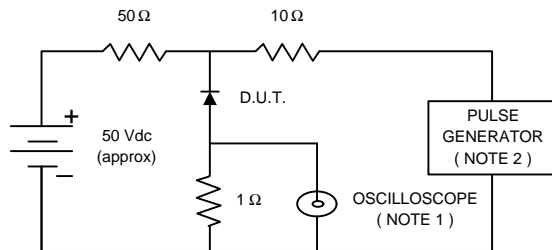
RATING	SYMBOL	BYW54	BYW55	BYW56	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum Crest Working Reverse Voltage	V_{RWM}	600	800	1000	V
Maximum Continuous Reverse Voltage	V_R	600	800	1000	V
Min. Reverse Avalanche Breakdown Voltage @ $I_R = 0.1 \text{ mA}$	$V_{(BR)R-min.}$	650	900	1300	V
Maximum Average Forward Current $T_{ip} = 45 \text{ }^\circ\text{C}$ (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 $I_F = 1.0 \text{ A}$	V_F	1.0			V
Maximum Reverse Current at $V_R = V_{RRM}$	I_R	1.0			μA
Maximum Reverse Current at $V_R = V_{RRM}$, $T_j = 165 \text{ }^\circ\text{C}$	$I_{R(H)}$	150			μA
Typical Reverse Recovery Time (Note 2)	T_{rr}	3.0			μs
Thermal Resistance - Junction to Ambient	$R_{\theta JA}$	100			K / W
Junction Temperature Range	T_j	- 65 to + 175			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175			$^\circ\text{C}$

Notes :

- (1) Lead Length 10 mm.
- (2) Test Conditions : $I_F = 0.5 \text{ A}$ to $I_R = 1 \text{ A}$; measured at $I_{rr} = 0.25 \text{ A}$

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.

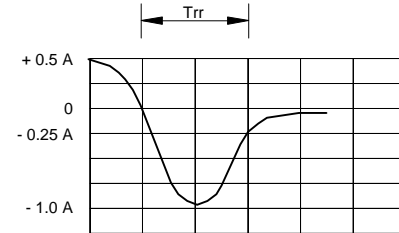


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

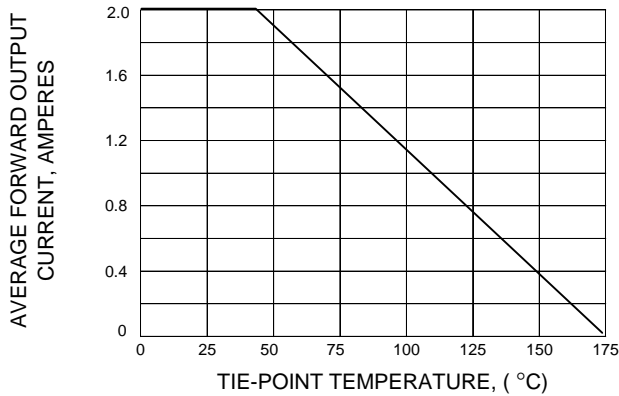


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

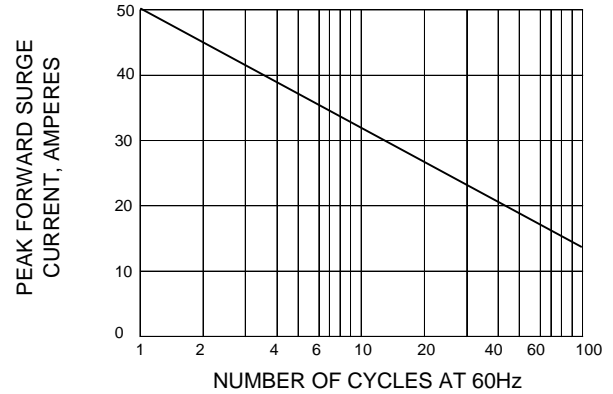


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

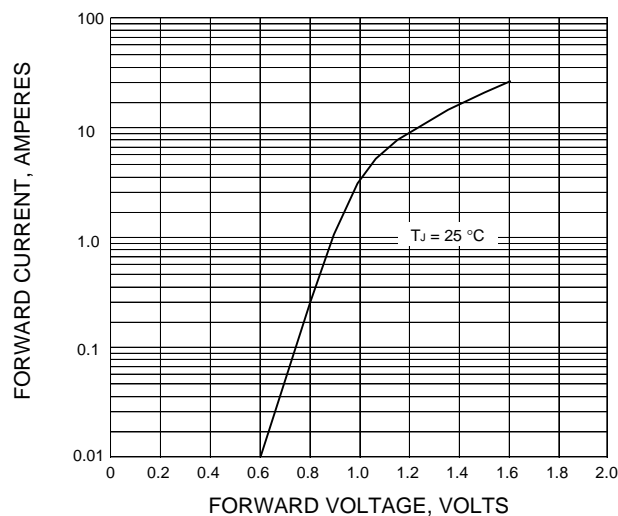


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

