

1N5415 - 1N5420

FAST RECOVERY RECTIFIERS

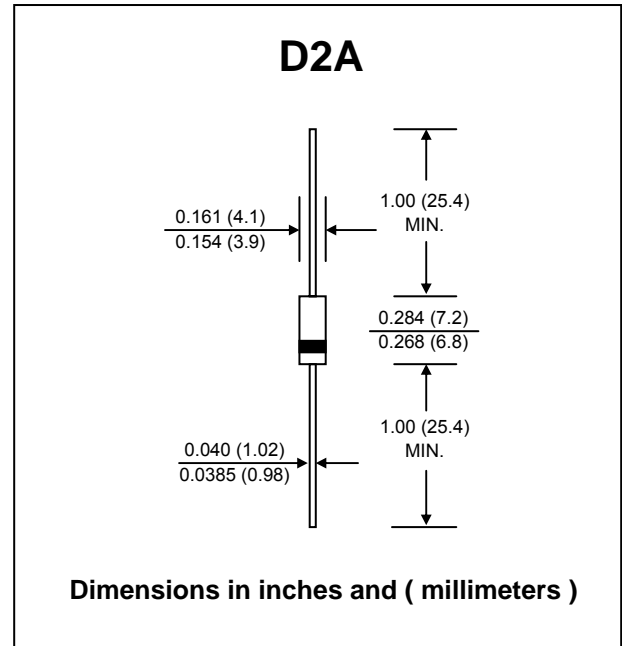
PRV : 50 - 600 Volts
Io : 3.0 Amperes

FEATURES :

- * Glass Passivated Junction Chip
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast recovery time
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : D2A 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 : 0.645 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	1N5415	1N5416	1N5417	1N5418	1N5419	1N5420	UNIT
Maximum Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	500	600	V
Minimum Breakdown Voltage @ 50 μ A	$V_{BR(Min)}$	55	110	220	440	550	660	V
Maximum Average Forward Current at Ta = 55 °C	$I_{F(AV)}$	3.0						A
Maximum Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load	I_{FSM}	80						A
Maximum Forward Voltage	at $I_F = 3.0$ A	1.10						V
	at $I_F = 9.0$ A	1.50						
Maximum Reverse Current at V_{RWM}	Ta = 25 °C	1.0						μ A
	Ta = 100 °C	20						
Maximum Reverse Recovery Time ⁽¹⁾	T_{rr}	150				250	400	ns
Thermal Resistance, Junction to Lead ⁽²⁾	$R_{\theta JL}$	20						°C/W
Junction Temperature Range	T_J	- 65 to + 175						°C
Storage Temperature Range	T_{STG}	- 65 to + 175						°C

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 0.5A$, $I_{RM} = 1A$, $I_{R(REC)} = 0.25 A$.
 (2) At 3/8 inch (10 mm) lead length from body.

RATING AND CHARACTERISTIC CURVES (1N5415 - 1N5420)

FIG. 1 - FORWARD CURRENT DERATING CURVE

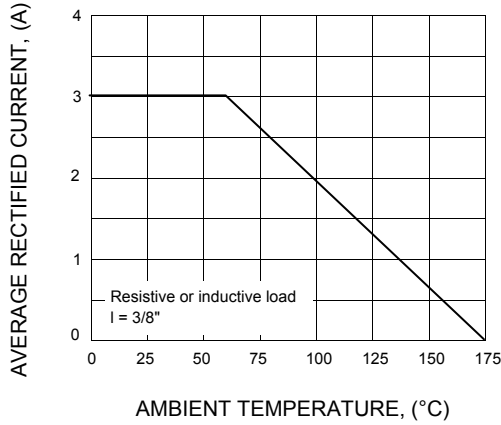


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

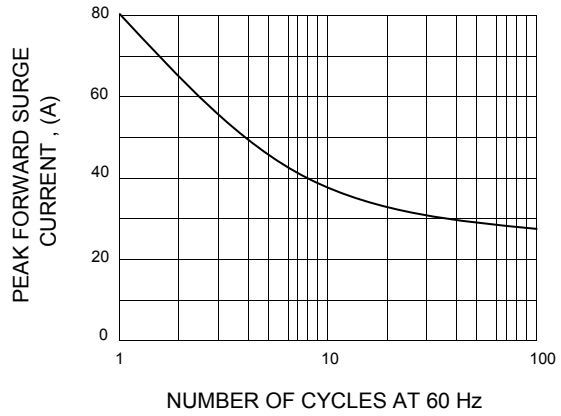


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

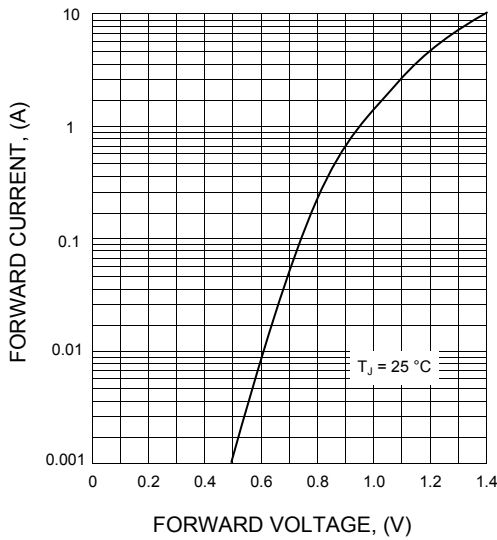


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

