

# 1N5415 - 1N5420

## FAST RECOVERY RECTIFIERS

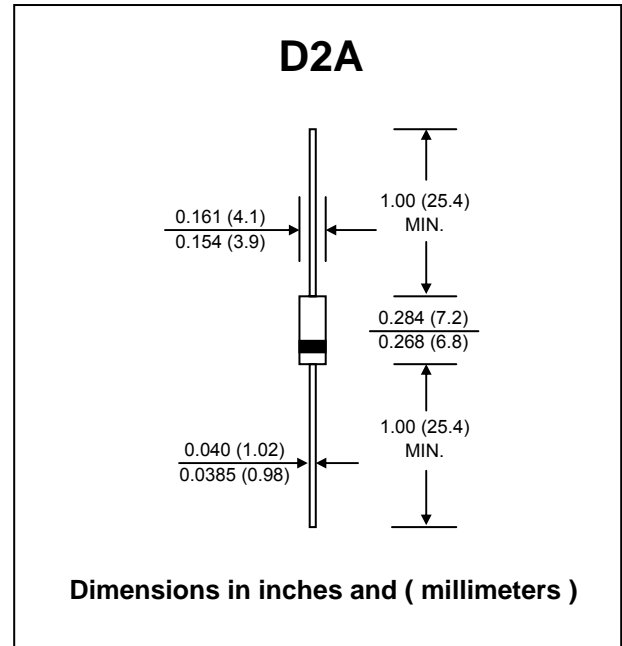
**PRV : 50 - 600 Volts**  
**Io : 3.0 Amperes**

### 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 $\mu$ 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						$\mu$ A
	Ta = 100 °C	20						
Maximum Reverse Recovery Time <sup>(1)</sup>	$T_{rr}$	150				250	400	ns
Thermal Resistance, Junction to Lead <sup>(2)</sup>	$R_{\theta JL}$	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

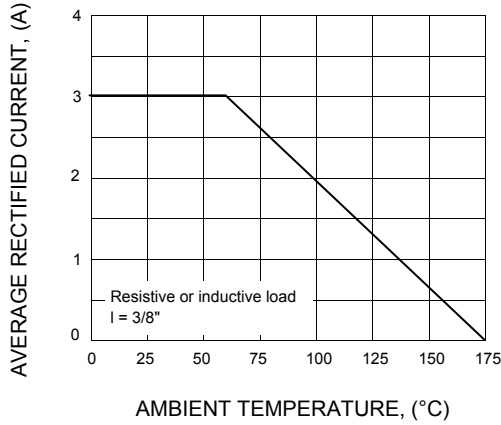


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

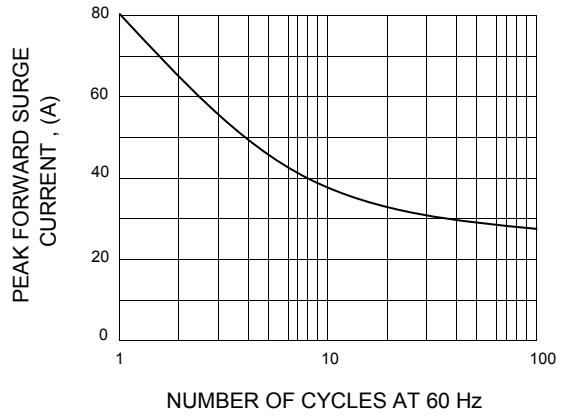


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

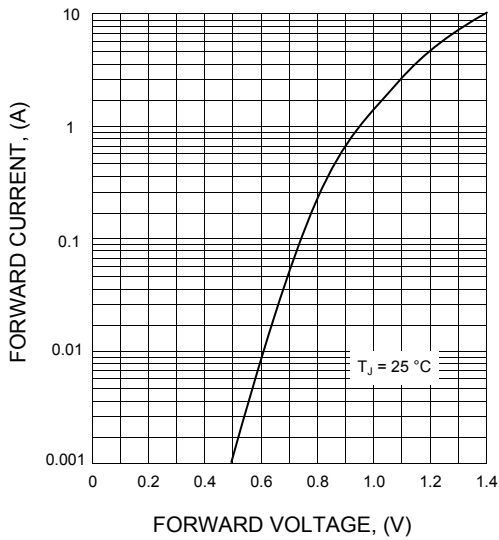


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

