

**TAYCHIPST**

Glass Passivated Junction Rectifier

1N5614GP thru 1N5622GP

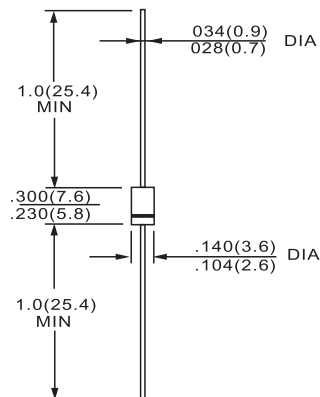
200V-1000V 1.0A

FEATURES

- Superrectifier structure for high reliability application
- Cavity-free glass-passivated junction
- Low forward voltage drop
- Low leakage current, I_R less than $0.1 \mu A$
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip $260^\circ C$, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



DO-15

**TYPICAL APPLICATIONS**

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS							
PARAMETER	SYMBOL	1N5614GP	1N5616GP	1N5618GP	1N5620GP	1N5622GP	UNIT
Maximum repetitive peak reverse voltage ⁽¹⁾	V_{RRM}						
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC blocking voltage ⁽¹⁾	V_{DC}	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55^\circ C$	$I_{F(AV)}$	1.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load ⁽¹⁾	I_{FSM}	50					A
Operating junction and storage temperature range ⁽¹⁾	T_J, T_{STG}	- 65 to + 175					$^\circ C$

ELECTRICAL CHARACTERISTICS								
PARAMETER	TEST CONDITIONS	SYMBOL	1N5614GP	1N5616GP	1N5618GP	1N5620GP	1N5622GP	UNIT
Minimum reverse breakdown voltage	50 μA	V_{BR}	220	440	660	880	1100	V
Maximum instantaneous forward voltage	1.0 A	V_F	1.2					V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25^\circ C$ $T_A = 100^\circ C$	I_R	0.5 25					μA
Maximum reverse recovery time	$I_F = 0.5 A, I_R = 1.0 A,$ $I_{rr} = 0.25 A$	t_{rr}	2.0					μs
Maximum junction capacitance	at 12 V, 1 MHz	C_J	45	35	25	20	15	pF

THERMAL CHARACTERISTICS ($T_A = 25^\circ C$ unless otherwise noted)								
PARAMETER	SYMBOL	1N5614GP	1N5616GP	1N5618GP	1N5620GP	1N5622GP	UNIT	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	45					$^\circ C/W$	

Note:

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

(2) JEDEC registered values



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Figure 1. Forward Current Derating Curve

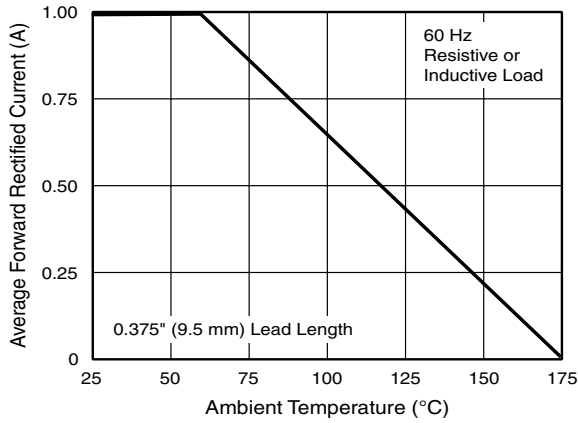


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

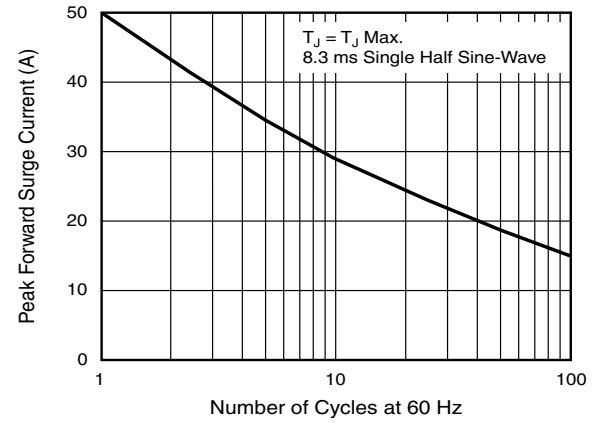


Figure 3. Typical Instantaneous Forward Characteristics

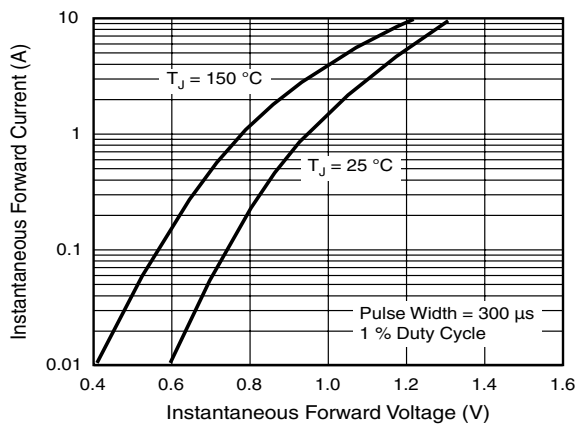


Figure 4. Typical Reverse Characteristics

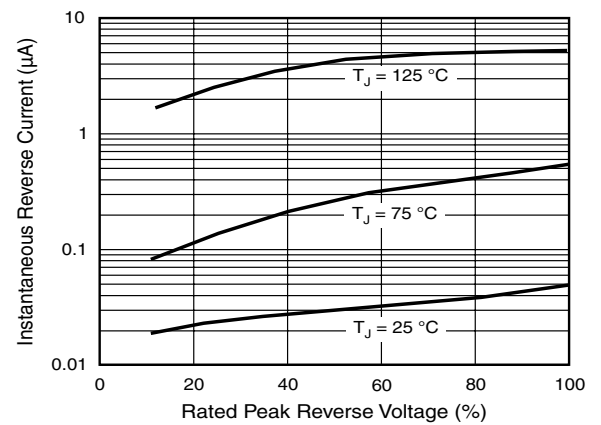


Figure 5. Typical Junction Capacitance

