Silicon Diode

GI826

600V / 5A

DATASHEET

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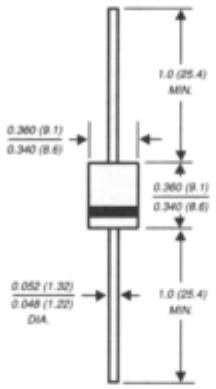
Source: General Semiconductor Databook 1998

GI820 THRU GI828

FAST SWITCHING PLASTIC RECTIFIER

***Reverse Voltage** - 50 to 800 Volts* ***Forward Current** - 5.0 Amperes*

Case Style P600



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- High forward current operation
- Fast switching for high efficiency
- Construction utilizes void-free molded plastic technique
- Uniform molded body
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: Void-free molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.07 ounce, 2.1grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GI820	GI821	GI822	GI824	GI826	GI828	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum non-repetitive peak reverse voltage	V_{RSM}	75	150	250	450	650	880	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=55°C	$I_{(AV)}$	5.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300.0						Amps
Maximum instantaneous forward voltage at 5.0A T_J= 25°C; at 15.7A T_J=150°C	V_F	1.10; 1.05						Volts
Maximum reverse current at rated DC blocking voltage T_A= 25°C; T_A=100°C	I_R	10.0; 1.0						µA; mA
Typical junction capacitance (NOTE 1)	C_J	300.0						pF
Maximum reverse recovery time (NOTE 2)	t_{rr}	200.0						ns
Maximum reverse recovery current (NOTE 2)	$I_{RM(REC)}$	2.0						Amps
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	10.0						°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150						°C

NOTES:
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(2) Reverse recovery test conditions: I_F=1.0A, V_R=30V, di/dt=50A/µs, and I_{rr}=10% I_{RM} for measurement of t_{rr}
(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, with both leads equally to heat sink

RATINGS AND CHARACTERISTIC CURVES GI820 THRU GI828

FIG.1 - FORWARD CURRENT DERATING CURVE

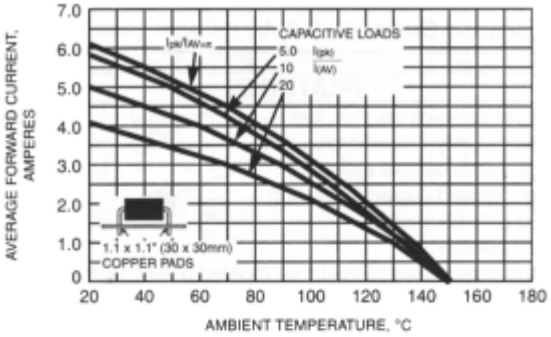


FIG. 2 - FORWARD CURRENT DERATING CURVE

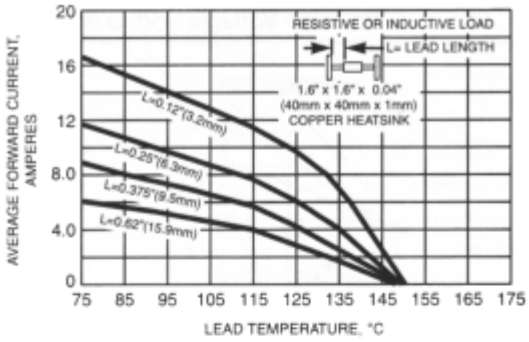


FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

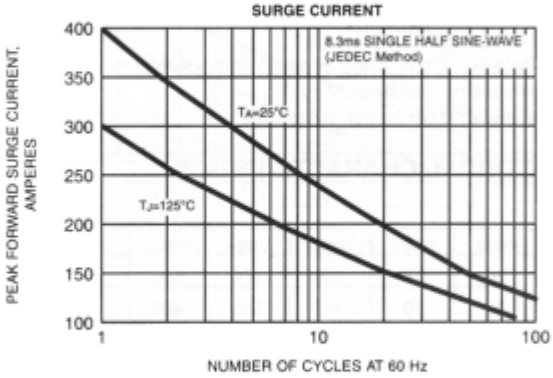


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

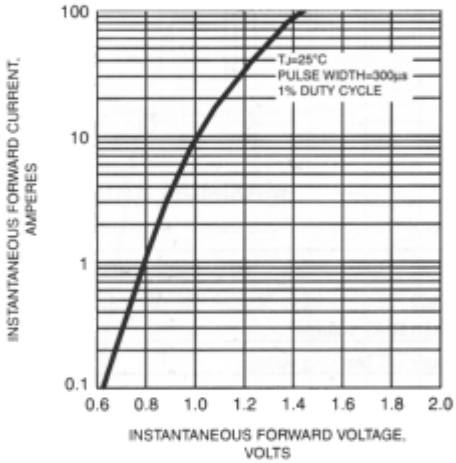


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

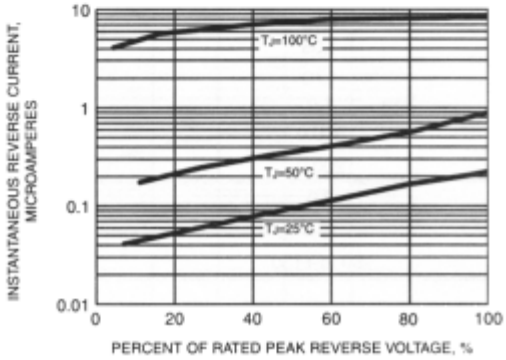
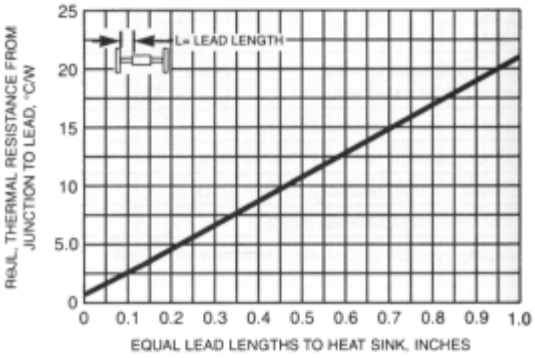



FIG. 6 - TYPICAL THERMAL RESISTANCE