Silicon Diode

1N5061GP

600V / 1A

DATASHEET

OEM – General Semiconductor

Source: General Semiconductor Databook 1998

Datasheet Rev. 1.3 – 05/19 – data without warranty / liability

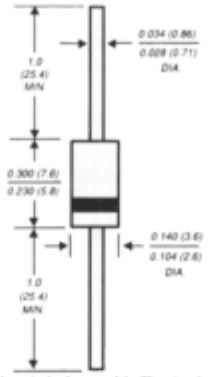
1N5059GP THRU 1N5062GP

GLASS PASSIVATED JUNCTION RECTIFIER

***Reverse Voltage** - 200 to 800 Volts* ***Forward Current** - 1.0 Ampere*

PATENTED*

DO-204AC



Dimensions in inches and (millimeters)

** Glass -plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306*

SUPERECTIFIER®

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at T_A=75°C with no thermal runaway
- Typical I_R less than 0.1µA
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs., (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AC molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.015 ounce, 0.4 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N5059GP	1N5060GP	1N5061GP	1N5062GP	UNITS
* Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	140	280	420	560	Volts
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=75°C	$I_{(AV)}$	1.0				Amp
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0				Amps
* Maximum instantaneous forward voltage at 1.0A, T_A=75°C	V_F	1.2				Volts
* Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at T_A=25°C T_A=75°C	$I_{R(AV)}$	5.0 150.0				µA
* Maximum DC reverse current at rated DC blocking voltage T_A= 25°C T_A=175°C	I_R	5.0 300.0				µA
Typical reverse recovery time (NOTE 1)	t_{rr}	2.0				µs
Typical junction capacitance (NOTE 2)	C_J	15.0				pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	45.0 20.0				°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175				°C

NOTES:
(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}
(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted
* JEDEC registered value

RATINGS AND CHARACTERISTIC CURVES 1N5059GP THRU 1N5062GP

FIG. 1 - FORWARD CURRENT DERATING CURVE

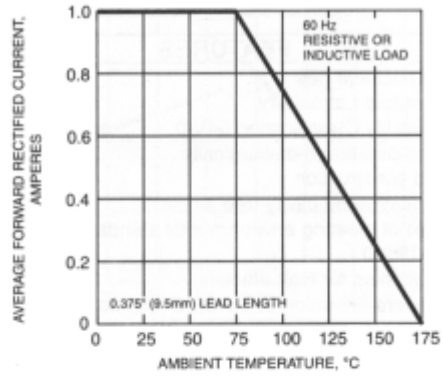


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

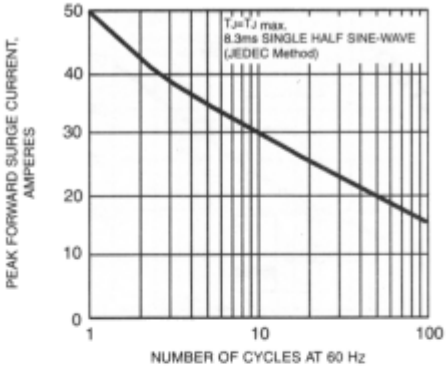


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

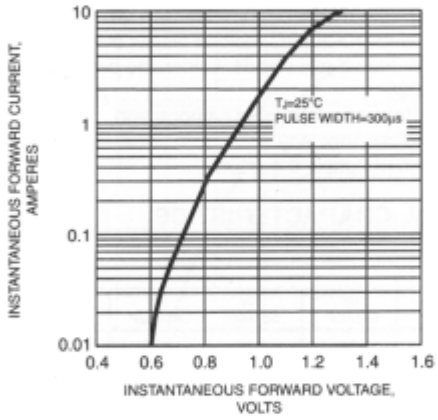


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

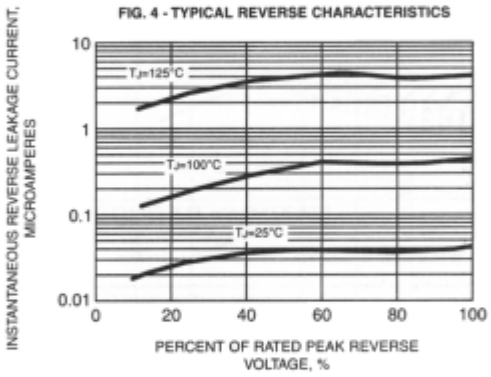


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

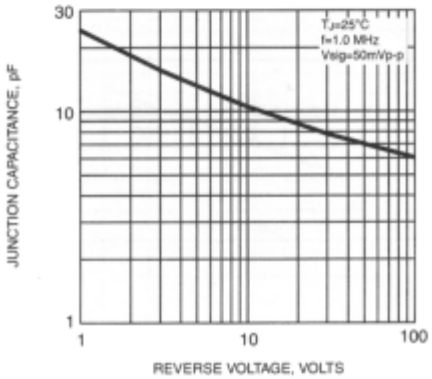


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE