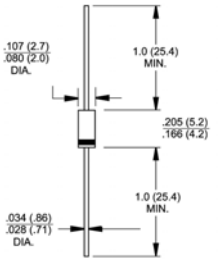
GP10A thru GP10Y

Glass Passivated Junction Rectifiers
Reverse Voltage 50 to 1600 Volts Forward Current 1.0 Ampere

Features

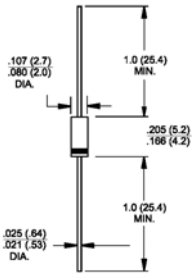
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at T_A = 75°C and 55°C with no thermal runaway
- Typical I_R less than 0.1µA
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

A-405



Dimensions in inches and (millimeters)

Note: Lead diameter is 0.025(0.64)/0.021(0.53) for suffix "S" part numbers

Mechanical Data

- Case: JEDEC DO-204AL(DO-41)/A-405, 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: DO-41 - 0.012 ounce, 0.335 gram
  A-405 - 0.008 ounce, 0.235 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	GP 10A	GP 10B	GP 10D	GP 10G	GP 10J	GP 10K	GP 10M	GP 10N	GP 10Q	GP 10T	GP 10V	GP 10W	GP 10Y	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1100	1200	1300	1400	1500	1600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	770	840	910	980	1050	1120	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1100	1200	1300	1400	1500	1600	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (See Fig.1)	$I_{F(AV)}$	1.0													Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							25.0						Amps
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead length T_A=75°C	$I_{R(AV)}$	30													uA
Maximum instantaneous forward voltage at 1.0A	V_F	1.1					1.2				1.3				Volts
Maximum DC reverse current @T_A=25°C at rated DC blocking voltage @T_A=125°C	I_R	5.0 50													uA
Typical reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	1.0													uS
Typical junction capacitance at 4.0V, 1MHz	C_J	8.0					7.0				5.0				pF
Typical thermal resistance (NOTE 1)	$R_{\theta JA}$	55.0													°C/W
Operating junction temperature range	T_J	-55 to +150							-55 to +125						°C
Storage temperature range	T_{STG}	-55 to +150													°C

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

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

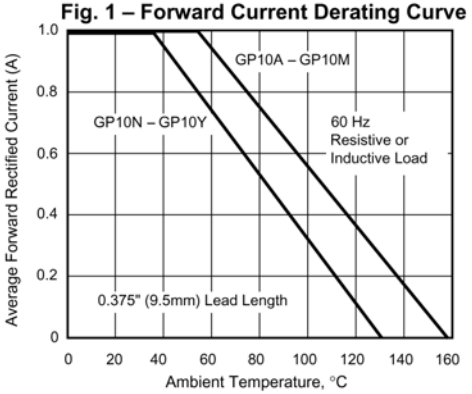


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

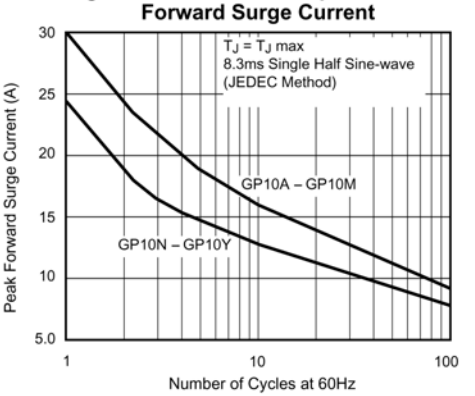


Fig 3. – Typical Instantaneous Forward Characteristics

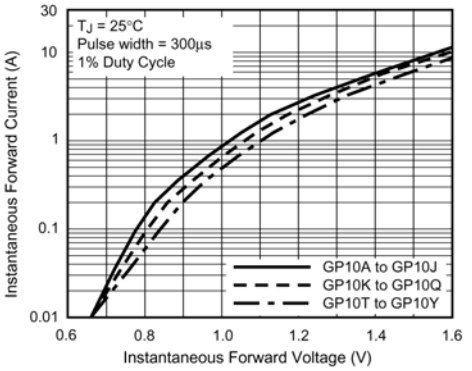


Fig 4. – Typical Reverse Characteristics

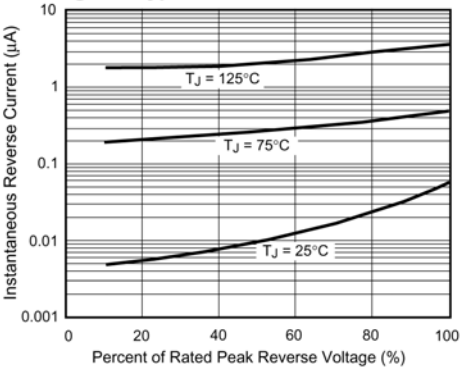


Fig 5. – Maximum Repetitive Peak Reverse Voltage, V_{RRM}

GP10A	50V
GP10B	100V
GP10D	200V
GP10G	400V
GP10J	600V
GP10K	800V
GP10M	1000V
GP10N	1100V
GP10Q	1200V
GP10T	1300V
GP10V	1400V
GP10W	1500V
GP10Y	1600V

Fig 6. – Typical Junction Capacitance