



# UGP50D THRU UGP50J

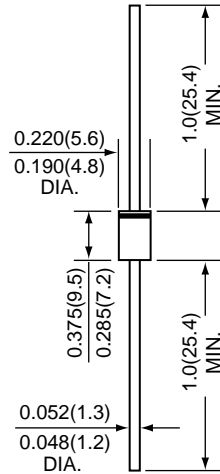
## SINTERED GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

Reverse Voltage - 200 to 600 Volts

Forward Current - 5.0 Amperes

**PATENTED**

DO-201AD



\*Dimensions in inches and (millimeters)

**SUPEREX II**<sup>TM</sup>



### FEATURES

- \* GPRC (Glass Passivated Rectifier Chip) inside
- \* Glass passivated cavity-free junction
- \* Ideal for surface mount automotive applications
- \* Ultrafast recovery time for high efficiency
- \* Built-in strain relief
- \* Easy pick and place
- \* High temperature soldering guaranteed: 260°C/10 seconds, at terminals
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### MECHANICAL DATA

**Case** : JEDEC DO-201AD molded plastic over glass body

**Terminals** : Tin Plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Color band denotes cathode end

**Weight** : 0.04 ounces , 1.12 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	SYMBOLS	UGP50D	UGP50G	UGP50J	UNITS
Maximum repetitive peak reverse voltage	VRRM	200	400	600	Volts
Maximum RMS voltage	VRMS	140	280	420	Volts
Maximum DC blocking voltage	VDC	200	400	600	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG.1)	I (AV)	5.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	150			Amps
Maximum instantaneous forward voltage at 5.0 A	VF	1.10	1.25	1.7	Volts
Maximum DC reverse current at rated DC blocking voltage TA=25°C TA=125°C	IR	5 150			uA
Maximum reverse recovery time (NOTE 1)	trr	35			nS
Typical junction capacitance (NOTE 2)	CJ	68			pF
Typical thermal resistance (NOTE 3)	R θJA	25			°C / W
Operating junction and storage temperature range	TJ,TSTG	-65 to +175			°C

NOTES : (1) Reverse recovery test condition : IF 0.5A, IR=1.0A, Irr=0.25A  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
 (3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead lengths, P.C.B. mounted.

# RATINGS AND CHARACTERISTIC CURVES UGP50D THRU UGP50J

FIG.1 - FORWARD CURRENT DERATING CURVE

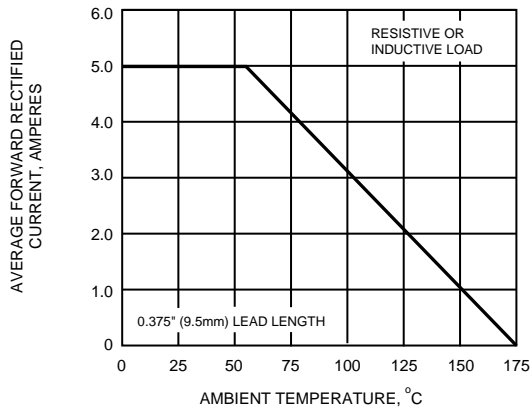


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

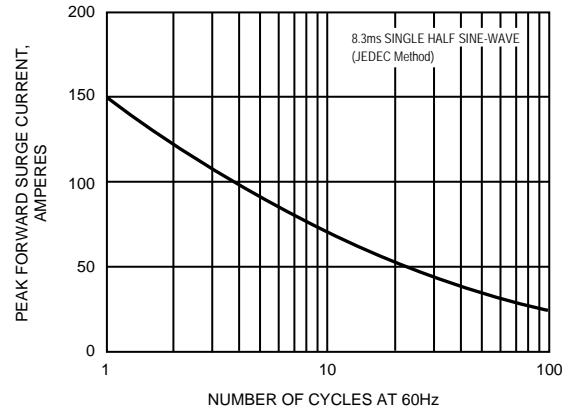


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

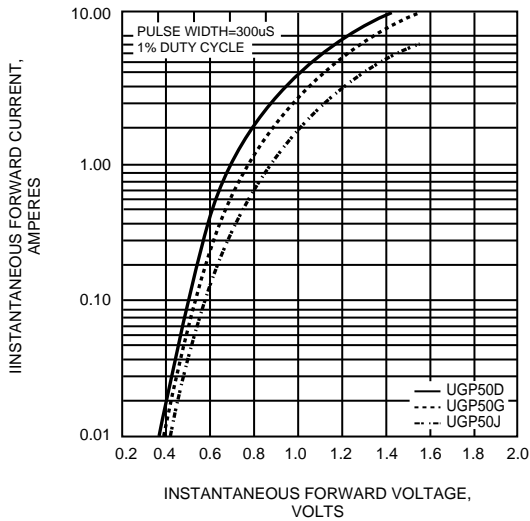


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

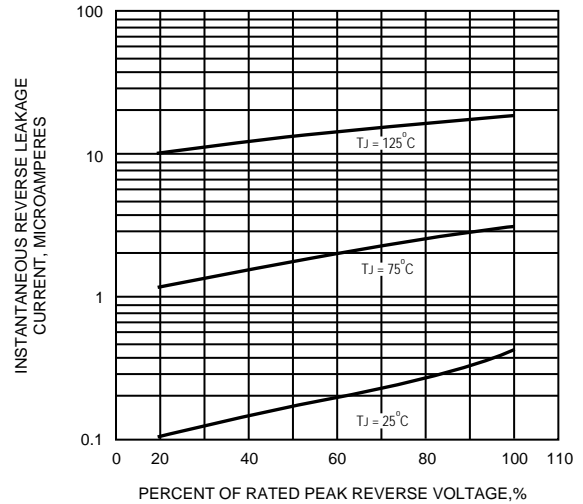


FIG.5 - TYPICAL JUNCTION CAPACITANCE

