



# UGP50G

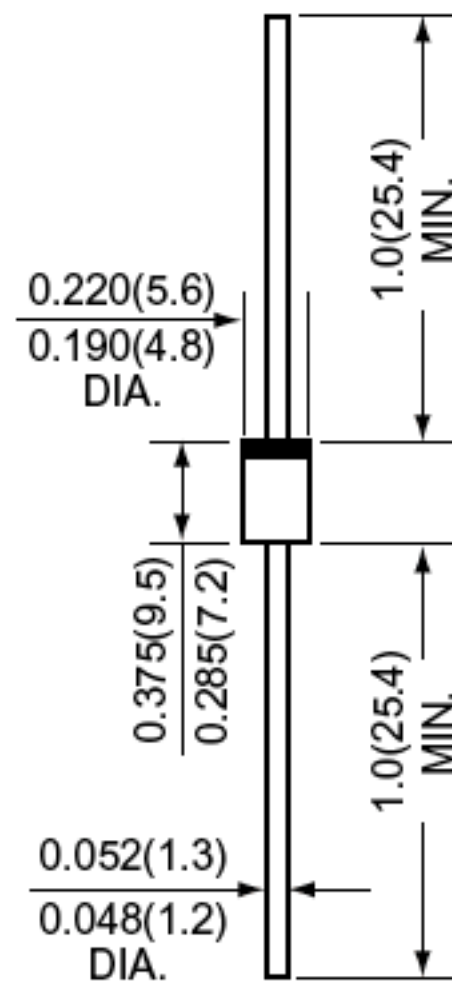
SINTERED GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

Reverse Voltage - 400 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

<i>Ratings at 25 °C ambient temperature unless otherwise specified.</i>	SYMBOLS	UGP50G	UNITS
Maximum repetitive peak reverse voltage	VRRM	400	Volts
Maximum RMS voltage	VRMS	280	Volts
Maximum DC blocking voltage	VDC	400	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	1.25	Volts
Maximum DC reverse current at rated DC blocking voltage	IR	5 50	uA
Maximum reverse recovery time (NOTE 1)	trr	35	nS
Typical junction capacitance (NOTE 2)	CJ	48	pF
Typical thermal resistance (NOTE 3)	RθJA	28	°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 OF UGP50G

FIG.1 - FORWARD CURRENT DERATING CURVE

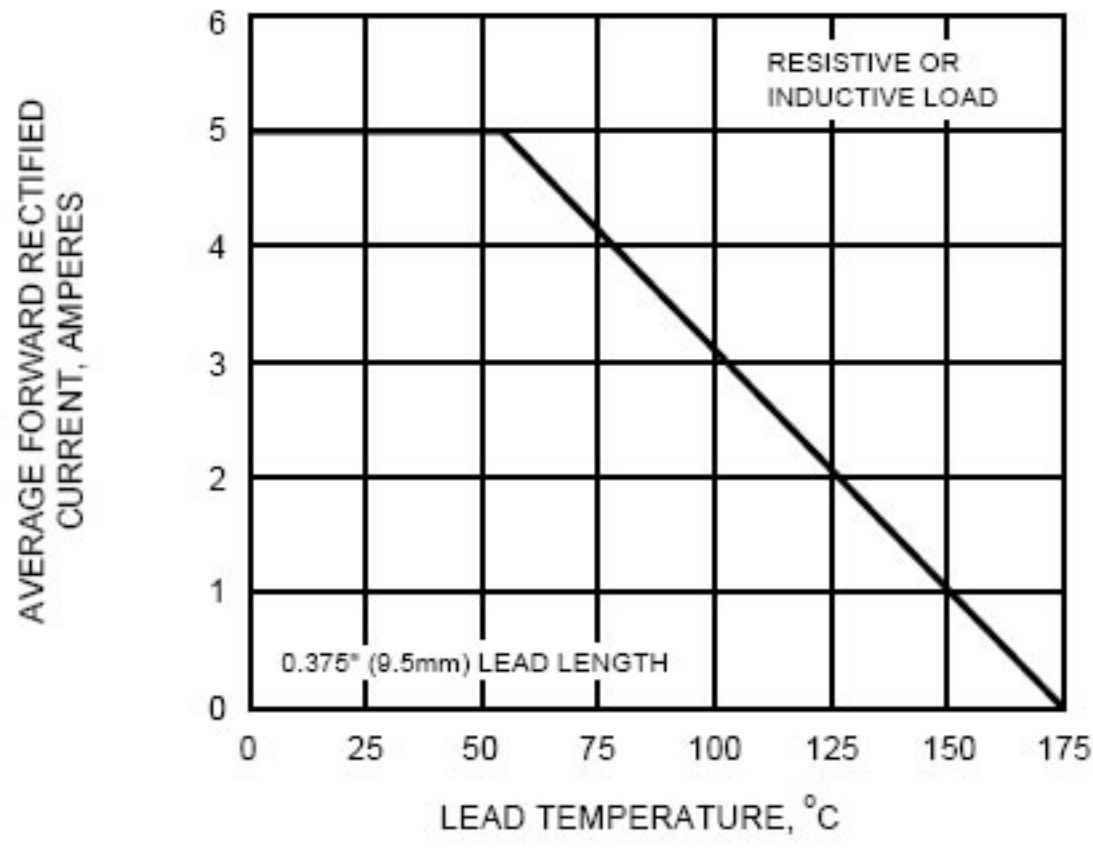


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

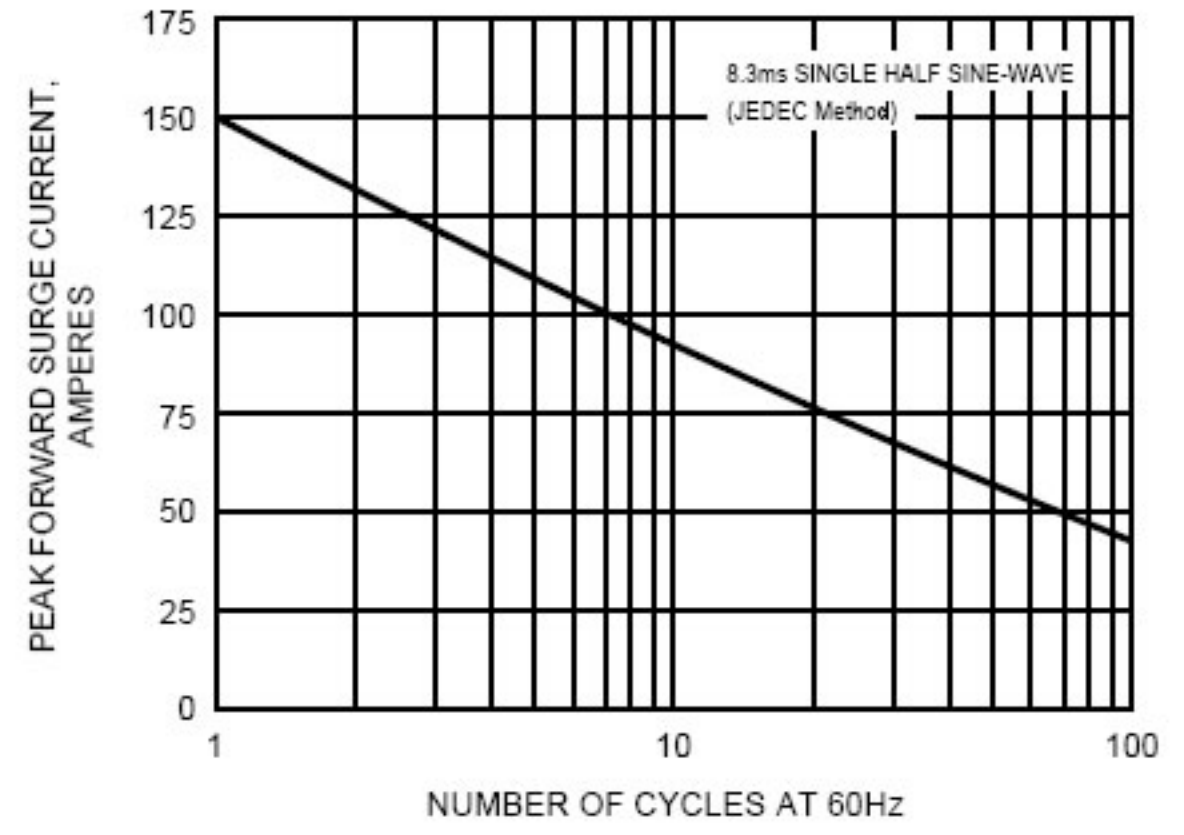


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

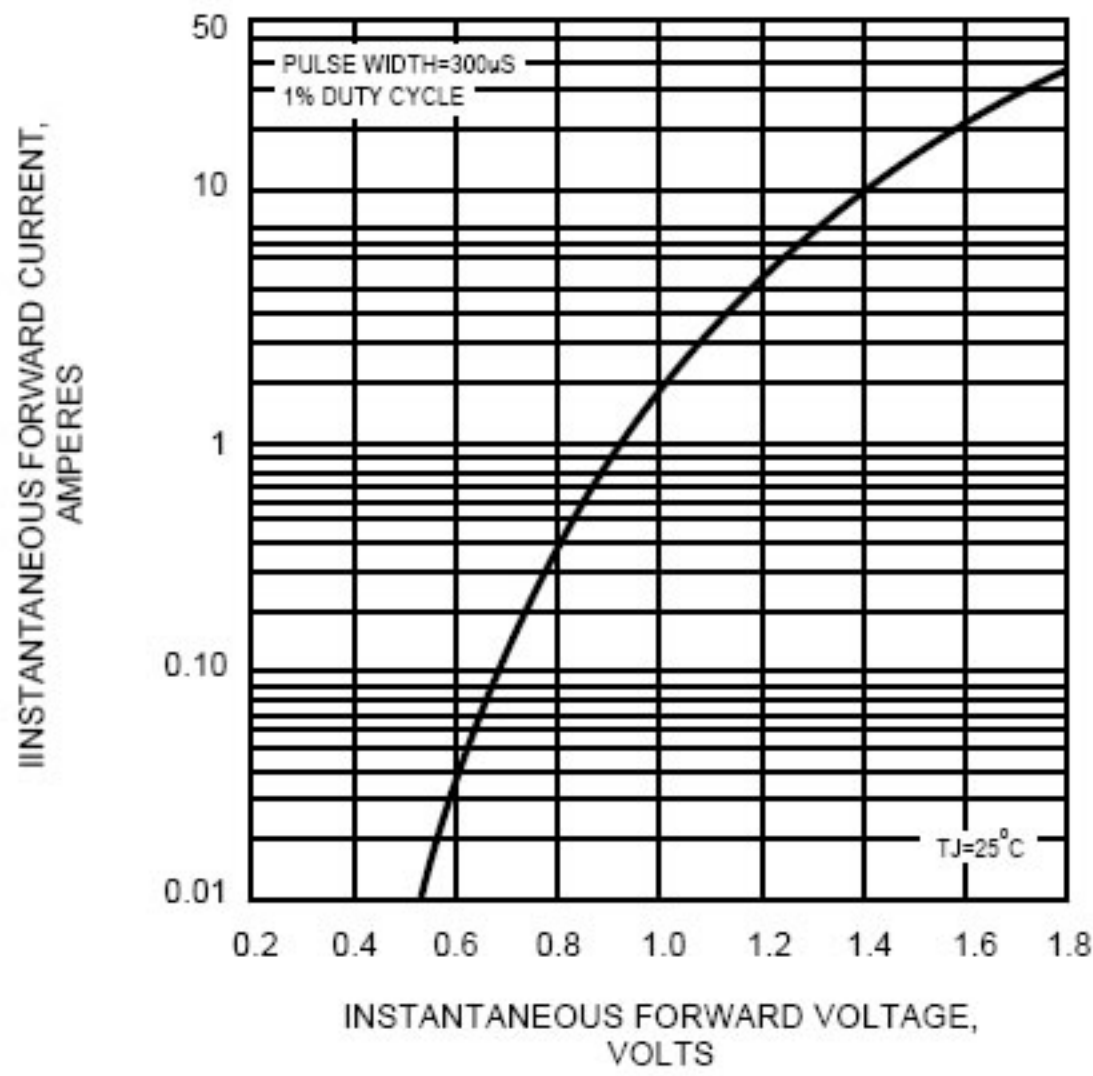


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

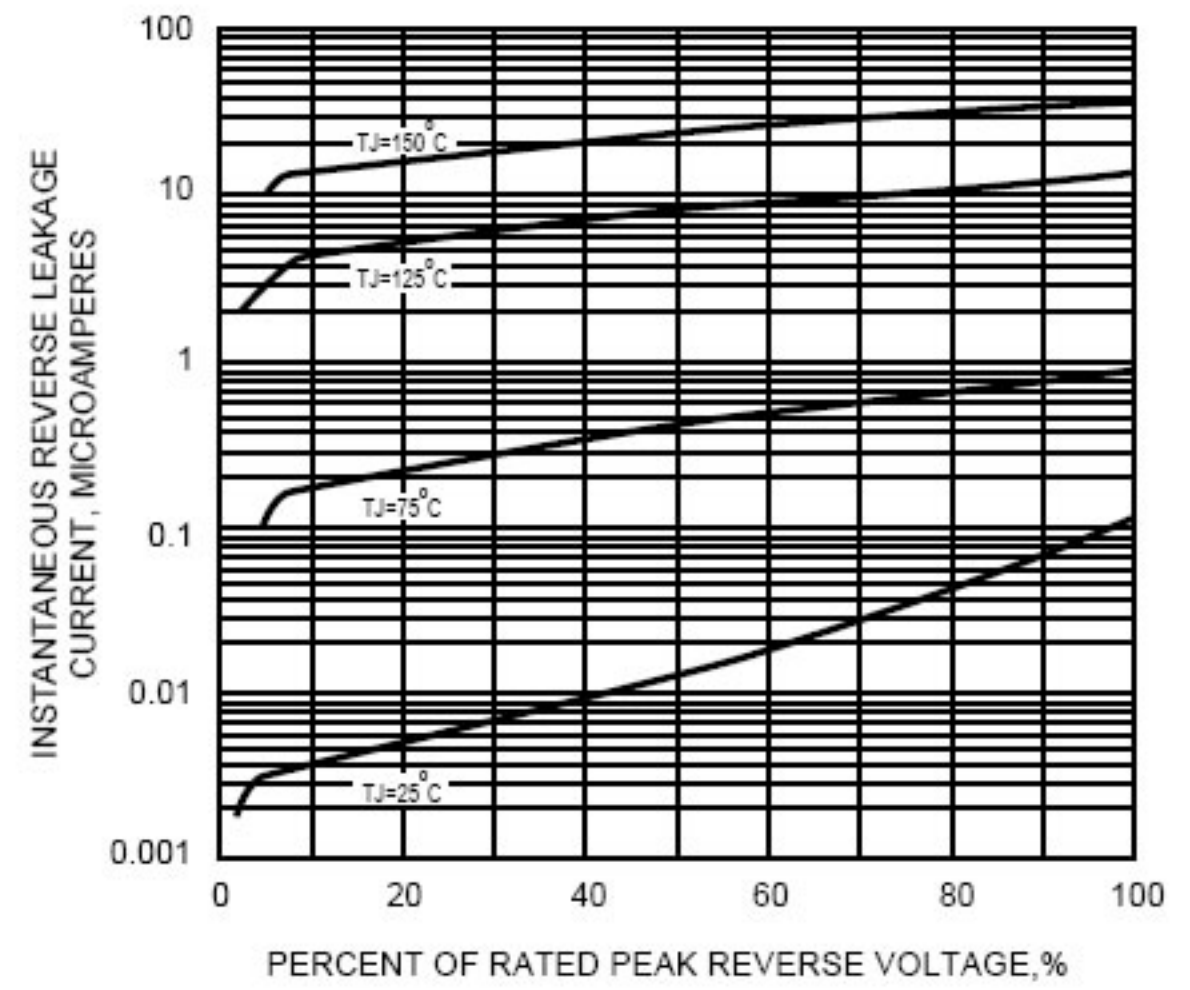


FIG.5 - TYPICAL JUNCTION CAPACITANCE

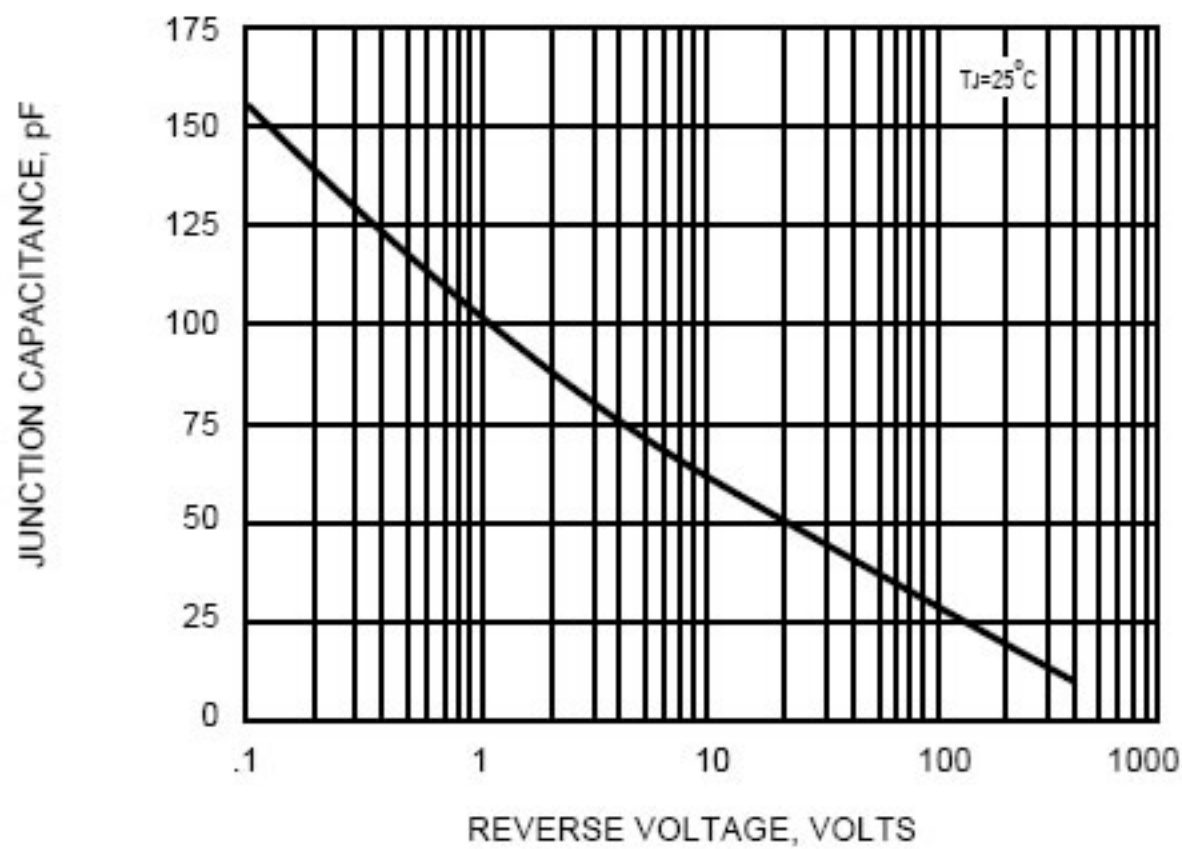


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

