



# UGP20A THRU UGP20K

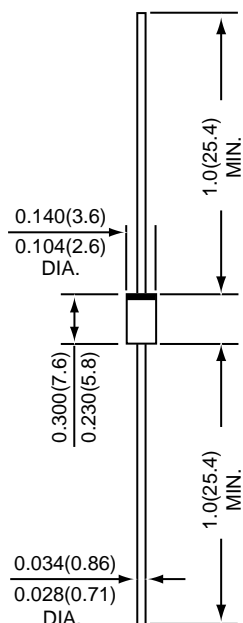
## SINTERED GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 800 Volts

Forward Current - 2.0 Amperes

**PATENTED**

DO-204AC



\*Dimensions in inches and (millimeters)

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



### FEATURES

- \* GPRC (Glass Passivated Rectifier Chip) inside
- \* Glass passivated cavity-free junction
- \* Ultrafast recovery time for high efficiency
- \* Low forward voltage , high current capability
- \* Low leakage current
- \* High surge current capability
- \* High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### 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 ounces , 0.4 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	SYMBOLS	UGP20							UNITS
		A	B	D	F	G	J	K	
Maximum repetitive peak reverse voltage	VRRM	50	100	200	300	400	600	800	Volts
Maximum RMS voltage	VRMS	35	70	140	210	280	420	560	Volts
Maximum DC blocking voltage	VDC	50	100	200	300	400	600	800	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG.1)	I (AV)	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	65					60		Amps
Maximum instantaneous forward voltage at 2.0 A	VF	0.95		1.25		1.7	2.2	Volts	
Maximum DC reverse current at rated DC blocking voltage	IR	5 100							uA
Maximum reverse recovery time (NOTE 1)	trr	35							nS
Typical junction capacitance (NOTE 2)	CJ	22							pF
Typical thermal resistance (NOTE 3)	R θ JA	40							°C / W
Operating junction and storage temperature range	TJ,TSTG	-55 to +150							°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 UGP20A THRU UGP20K

FIG.1 - FORWARD CURRENT DERATING CURVE

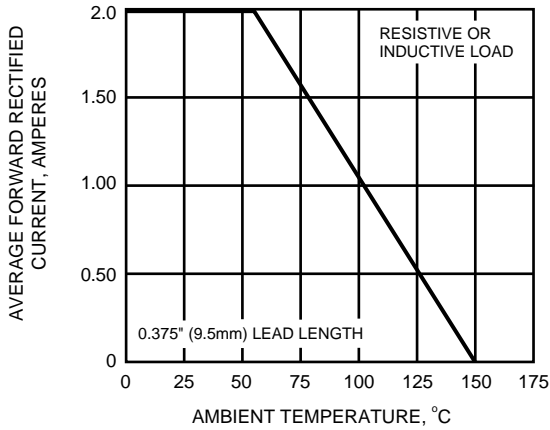


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

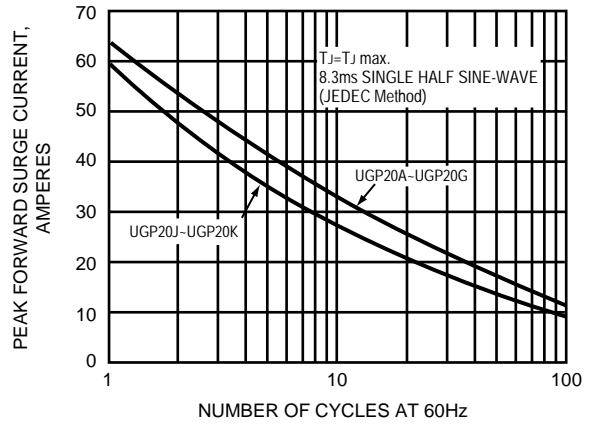


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

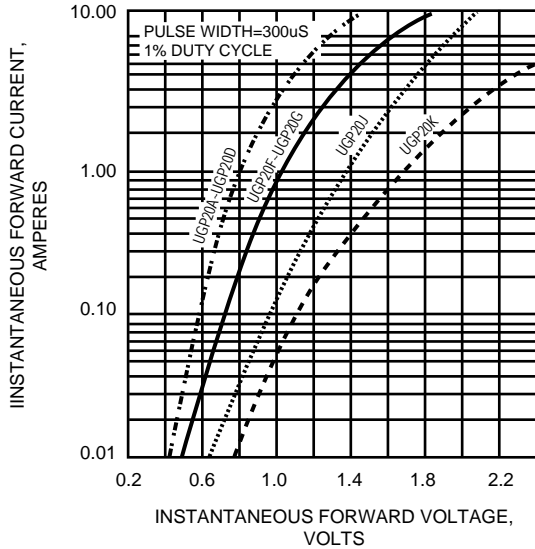


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

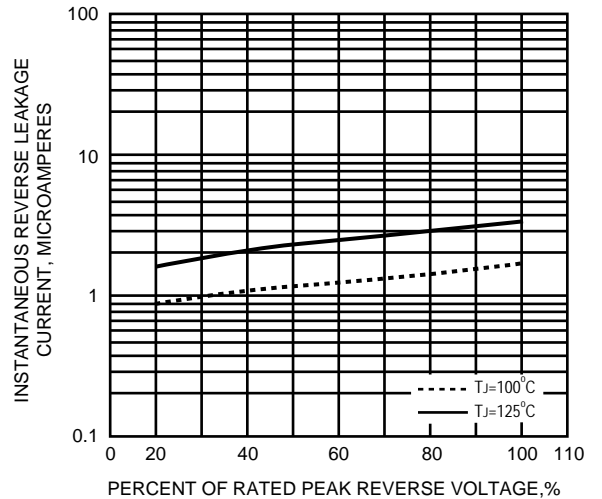


FIG.5 - TYPICAL JUNCTION CAPACITANCE

