



# UGF30A THRU UGF30K

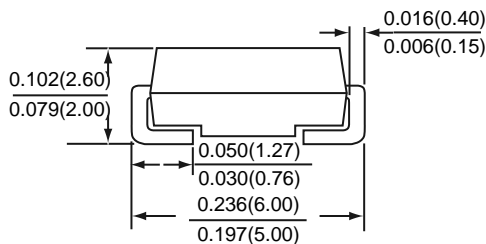
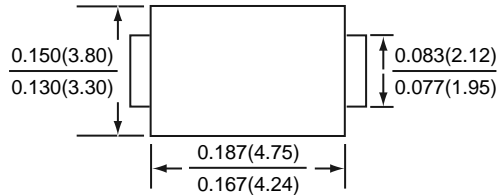
## SURFACE MOUNT GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

*Reverse Voltage - 50 to 800 Volts*

*Forward Current - 3.0 Amperes*

**PATENTED**

DO-214AA



\*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-214AA molded plastic over passivated chip  
**Terminals :** Solder plated , solderable per MIL-STD-750, Method 2026  
**Polarity :** Color band denotes cathode end  
**Mounting Position :** Any  
**Weight :** 0.004 ounces , 0.12 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.	SYMBOLS	UGF30							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 at TA=55°C	I (AV)	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	IFSM	115					105		Amps
Maximum instantaneous forward voltage at 3.0 A	VF	0.95		1.25		1.7	2.2	Volts	
Maximum DC reverse current at rated DC blocking voltage	IR	5 120							uA
Maximum reverse recovery time (NOTE 1)	trr	35							nS
Typical junction capacitance (NOTE 2)	CJ	45							pF
Typical thermal resistance (NOTE 3)	RθJA	16							°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 and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

# RATINGS AND CHARACTERISTIC CURVES UGF30A THRU UGF30K

FIG.1 - FORWARD CURRENT DERATING CURVE

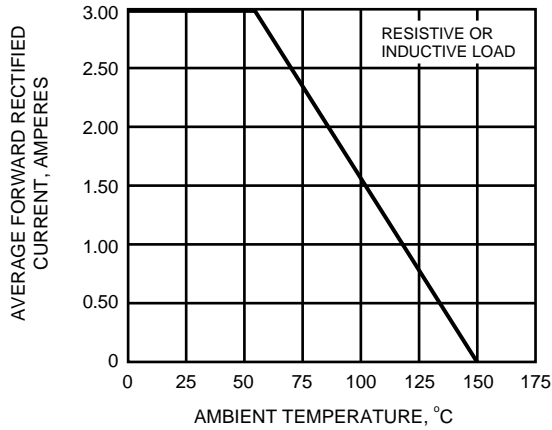


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

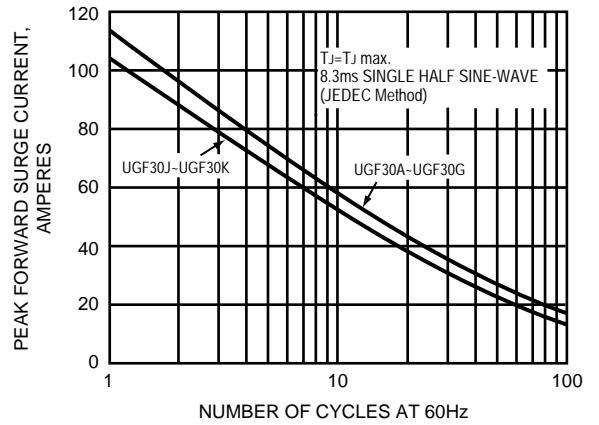


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

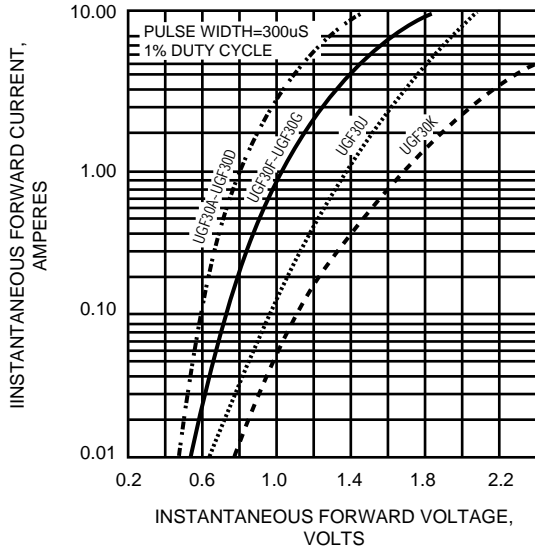


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

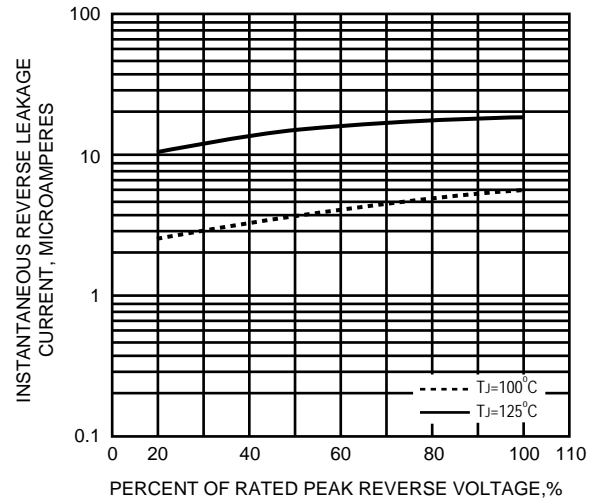


FIG.5 - TYPICAL JUNCTION CAPACITANCE

