



# UGF30A THRU UGF30K

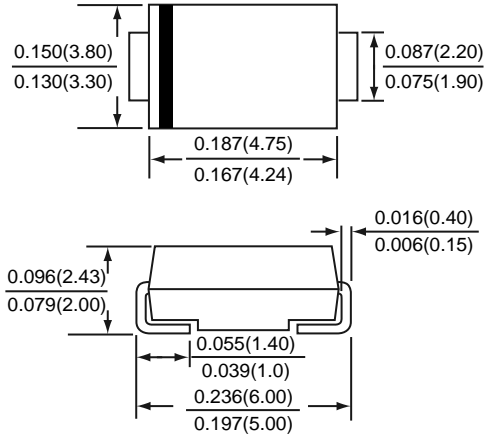
**SURFACE MOUNT GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER**

Reverse Voltage - 50 to 800 Volts

Forward Current - 3.0 Amperes

**PATENTED**

SMB/DO-214AA



\*Dimensions in inches and (millimeters)

**SUPEREX II**™



## 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 :** Tin plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Color band denotes cathode end

**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	G	J	K	
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	Volts
Maximum RMS voltage	VRMS	35	70	140	280	420	560	Volts
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	Volts
Maximum average forward rectified current at TL=110°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 TA=25°C at rated DC blocking voltage TA=125°C	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)	RθJL	16						°C / W
Operating junction and storage temperature range	TJ,TSTG	-55 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 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

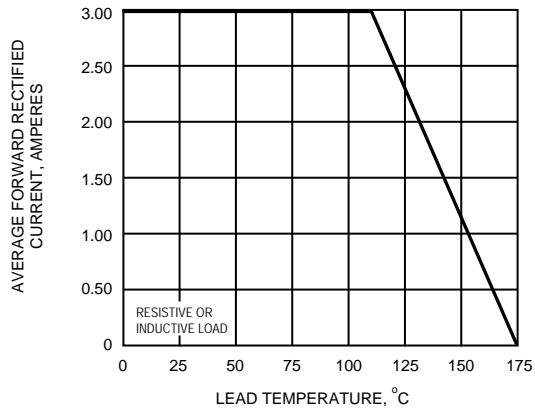


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

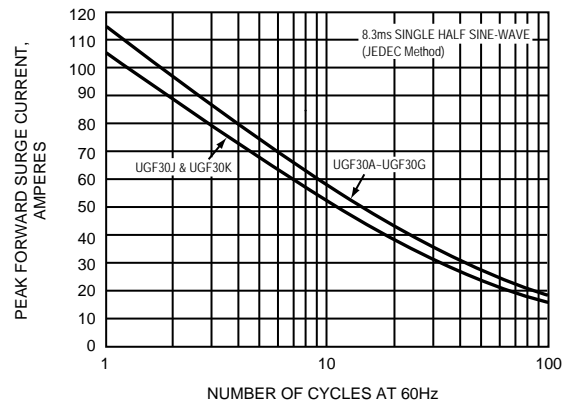


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

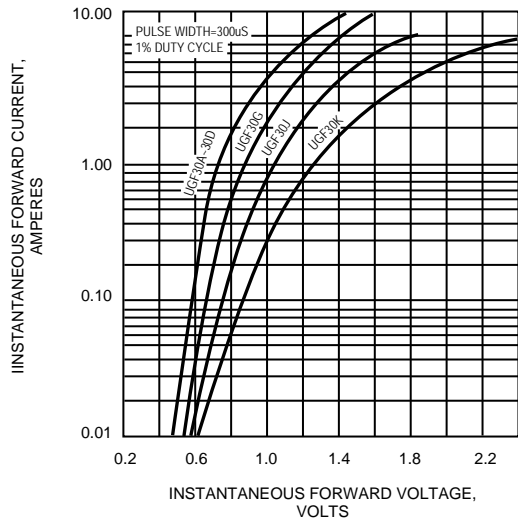


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

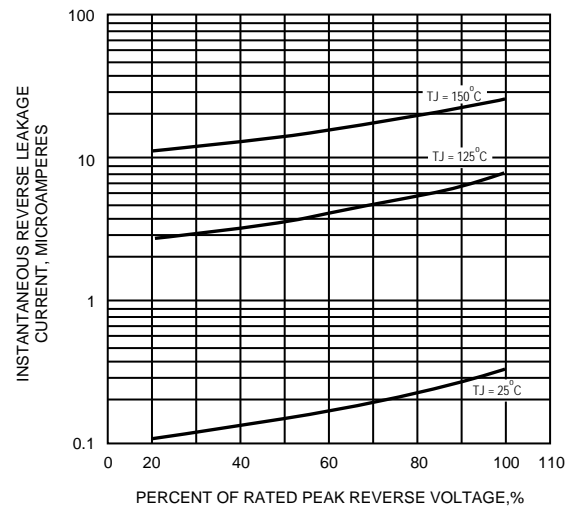


FIG.5 - TYPICAL JUNCTION CAPACITANCE

