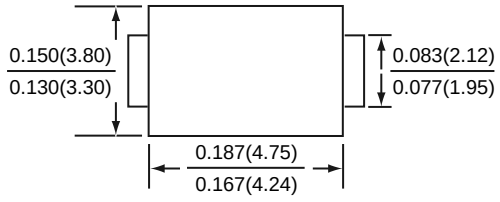
UGF15A THRU UGF15K

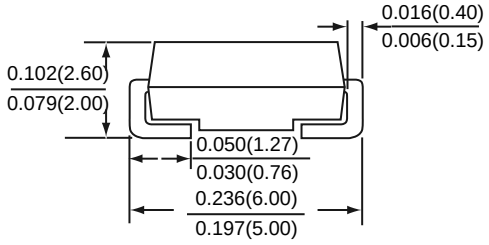
SURFACE MOUNT GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 800 Volts *Forward Current - 1.5 Amperes*

PATENTED

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 : Solder plated , solderable per MIL-STD-750, Method 2026
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight : 0.003 ounes , 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	*SYMBOLS*	*UGF15*							*UNITS*
		A	*B*	*D*	*F*	*G*	*J*	*K*	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	Volts
Maximum average forward rectified current T_A=55°C	$I_{(AV)}$	1.5							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50					45		Amps
Maximum instantaneous forward voltage at 1.5 A	V_F	0.95			1.25		1.7	2.2	Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25°C T_A=125°C	I_R	5 80							uA
Maximum reverse recovery time (NOTE 1)	trr	35							nS
Typical junction capacitance (NOTE 2)	C_J	20							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	20							°C / W
Operating junction and storage temperature range	T_J,T_{STG}	-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 UGF15A THRU UGF15K

FIG.1 - FORWARD CURRENT DERATING CURVE

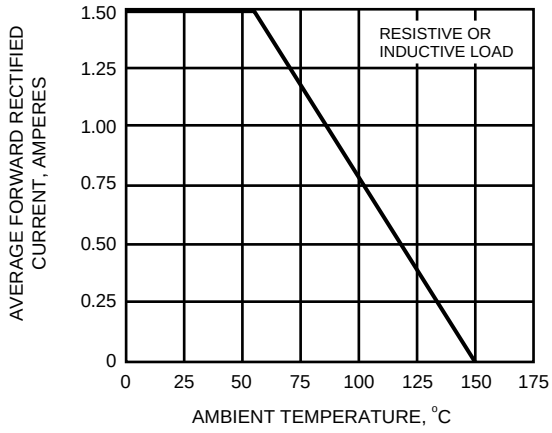


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

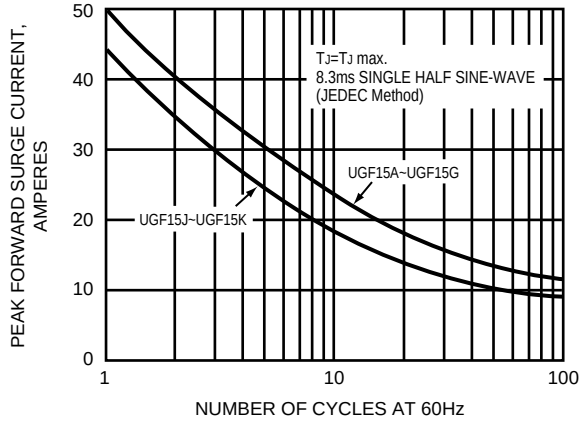


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

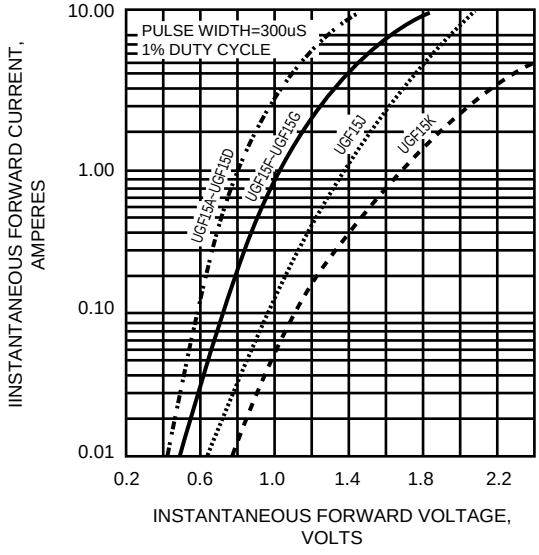


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

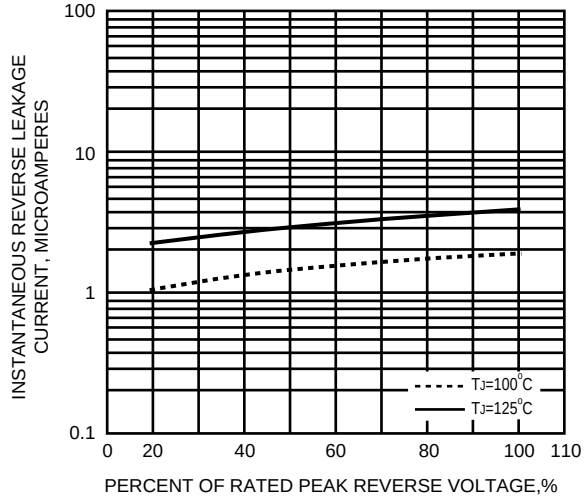
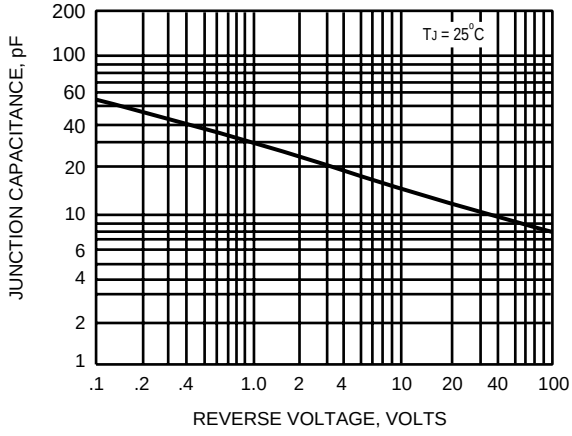



FIG.5 - TYPICAL JUNCTION CAPACITANCE