

# GUL1A-R THRU GUL1M-R

**SURFACE MOUNT  
ULTRFAST SWITCHING RECTIFIER**  
VOLTAGE: 50 to 1000V      CURRENT: 1.0A



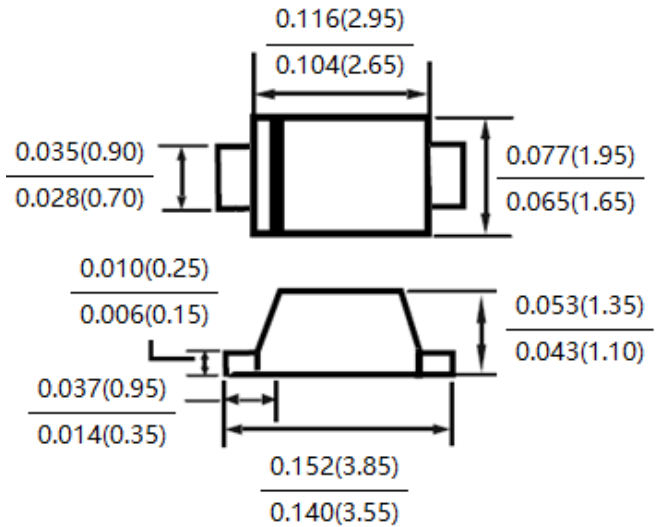
## FEATURE

Ideal for surface mount pick and place application  
Low profile package  
Built-in strain relief  
High surge capability  
High temperature soldering guaranteed  
260°C/10sec/at terminals  
Glass passivated chip  
Fast recovery time for high efficiency

## MECHANICAL DATA

Terminal: Plated leads solderable per J-STD-002  
Case: Molded with UL-94 class V-0 recognized Flame Retardant Epoxy  
Polarity color band denotes cathode  
Marking: U1A~U1M

## SMF



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

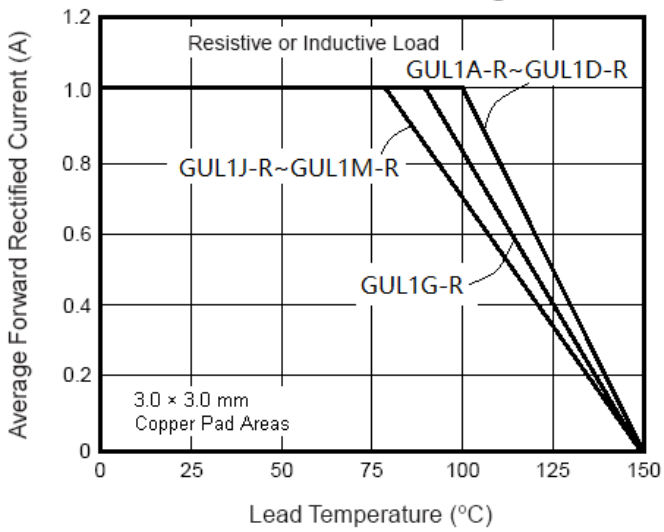
	Symbol	GUL 1A-R	GUL 1B-R	GUL 1D-R	GUL 1G-R	GUL 1J-R	GUL 1K-R	GUL 1M-R	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>rms</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	V <sub>dc</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8"lead length at T <sub>L</sub> =110°C	I <sub>f(av)</sub>	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	30							A
Maximum Forward Voltage at rated forward current	V <sub>f</sub>	1.0		1.4		1.7		V	
Maximum DC Reverse Current at rated DC blocking voltage	I <sub>r</sub>	Ta =25°C			5.0			μA	
		Ta =125°C			300				
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	50				75		nS	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	9.0							pF
Typical Thermal Resistance (Note 3)	R <sub>th(jl)</sub>	21							°C/W
	R <sub>th(ja)</sub>	62							
	R <sub>th(jc)</sub>	22							
Storage and Operating Junction Temperature	T <sub>stg, Tj</sub>	-50 to +150							°C

Note:

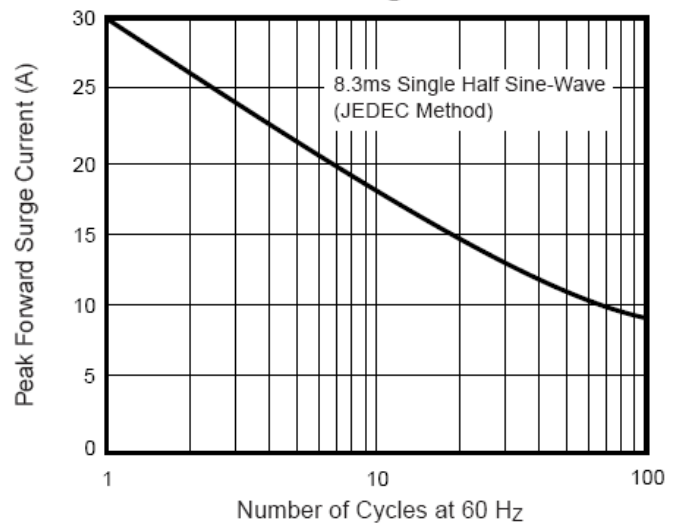
- Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0V<sub>dc</sub>
- Thermal Resistance from Junction to terminal mounted on 3x3mm copper pad area

RATINGS AND CHARACTERISTIC CURVES GUL1A-R THRU GUL1M-R

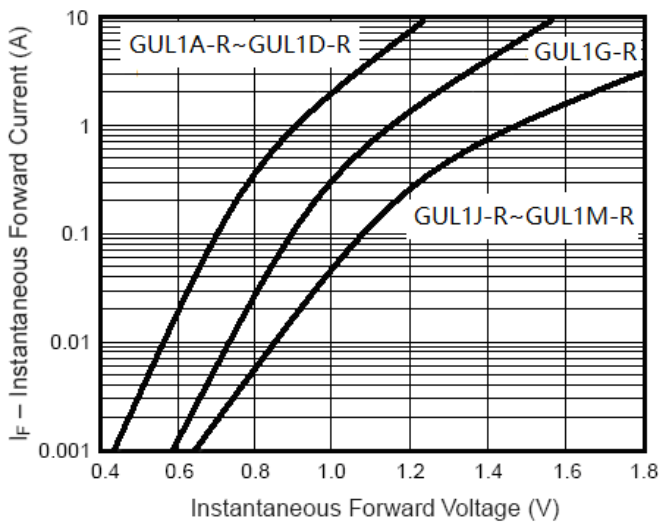
Forward Current Derating Curve



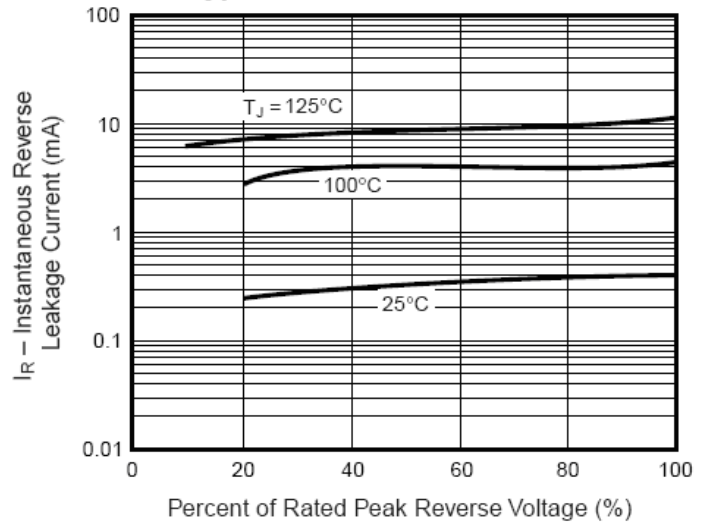
Maximum Non-Repetitive Peak Forward Surge Current



Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance

