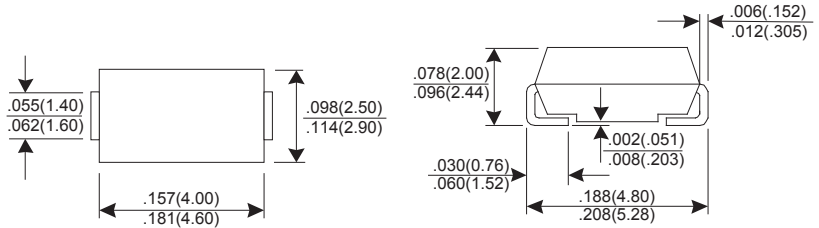


# 1.0 Amp Surface Mount Glass Fast Recovery Rectifiers

## Description

## Mechanical Dimensions

FRS10G~110G



### SMA/DO-214AC

Dimensions in inches and (millimeters)

#### Features

- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability
- ★ Glass passivated chip

#### Mechanical Data

- ★ Case: Molded plastic SMA/DO-214AC
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-750 method 2026
- ★ Polarity: Color band denotes cathode
- ★ Mounting position: Any
- ★ Weight: 0.064 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOL	FRS10G	FRS11G	FRS12G	FRS14G	FRS16G	FRS18G	FRS110G	UNIT
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 T <sub>A</sub> =55°C	I <sub>F(AV)</sub>	1.0							A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							A
Maximum Instantaneous Forward Voltage @ 1.0 A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current @T <sub>J</sub> =25°C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C	I <sub>R</sub>	5.0 100							uA uA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	150			250	500	nS		
Typical junction Capacitance (Note 2)	C <sub>J</sub>	15							pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	75							°CW
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150							°C

NOTES : (1) Reverse recovery test conditions I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.  
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
(3) Thermal Resistance junction to ambient.

# 1.0 Amp Surface Mount Glass Fast Recovery Rectifiers

**FRS10G~11G**

FIG.1 - FORWARD CURRENT DERATING CURVE

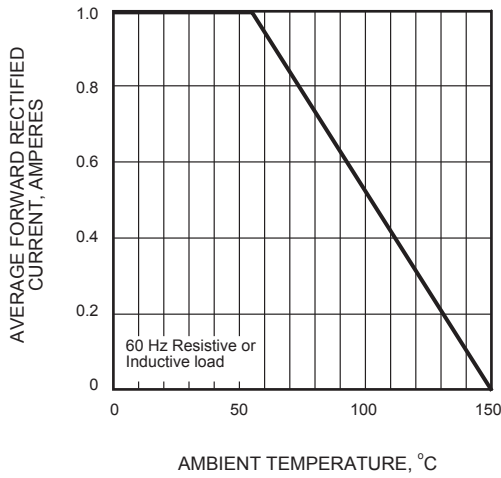


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

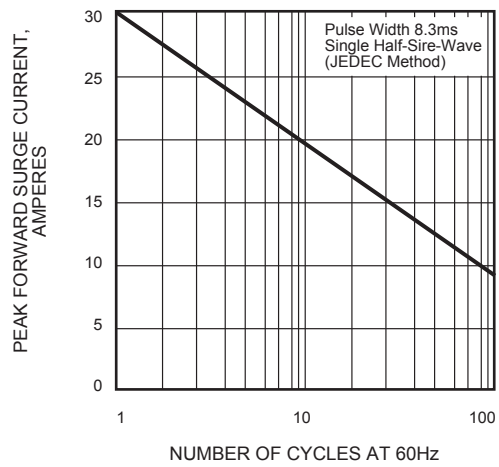


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

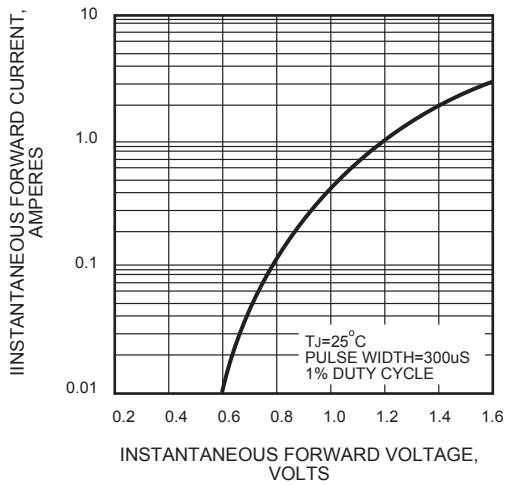


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

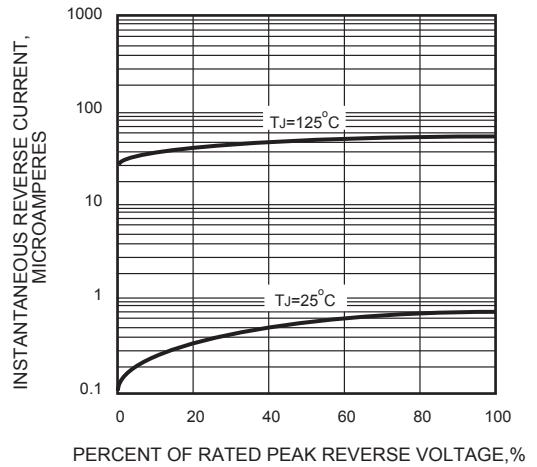


FIG.5 - TYPICAL JUNCTION CAPACITANCE

