

GSEM513 thru GSEM518

High Voltage Glass Passivated Junction Rectifiers
 Reverse Voltage 1600V to 2000V Forward Current 1.0A

Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Repetitive peak reverse voltage: 1600-2000V
- Plastic material has UL classification 94V-0

Mechanical Data

- Plastic case: DO-204AL (DO-41)
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250°C/10 seconds. 375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension



DO-204AL (DO-41)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%

Parameter	Symbol	GSEM513	GSEM516	GSEM518	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1600	1800	2000	V
Maximum RMS Voltage	V_{RMS}	1120	1260	1400	V
Maximum DC Blocking Voltage	V_{DC}	1600	1800	2000	V
Max. Average Forward Rectified Current, R-load $T_A=75^\circ\text{C}^1$	$I_{F(AV)}$	1.0			A
Max. Average Forward Rectified Current, R-load $T_A=100^\circ\text{C}^1$		0.75			
Repetitive Peak Forward Current ($f>15\text{Hz}$) ¹	I_{FRM}	10.0			A
Peak Forward Surge Current, 50Hz Half Sine-Wave at $T_A=25^\circ\text{C}$	I_{FSM}	50.0			A
Rating for Fusing, $t<10\text{ms}$, $T_A=25^\circ\text{C}$	I^2t	12.5			A ² s
Maximum Forward Voltage at 1.0A, $T_J=25^\circ\text{C}$	V_F	1.1			V
Leakage Current @ $T_J=25^\circ\text{C}$, $V_R=V_{RRM}$	I_R	5			uA
Leakage Current @ $T_J=100^\circ\text{C}$, $V_R=V_{RRM}$		200.0			
Thermal Resistance Junction to Ambient Air ¹	$R_{\theta JA}$	45.0			°C/W
Operating Junction Temperature	T_J	-50 to +150			°C
Storage Temperature Range	T_{STG}	-50 to +150			°C

Note:

1. Valid provided leads are kept at ambient temperature at a distance of 10mm from case

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Ratings and Characteristic Curves

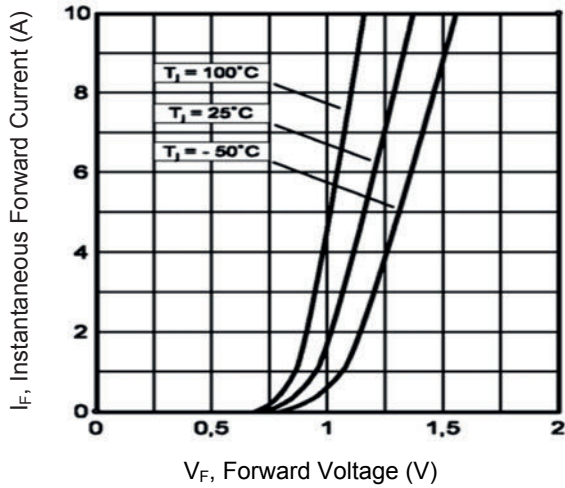


Figure 1. Forward Characteristics (Typical Values)

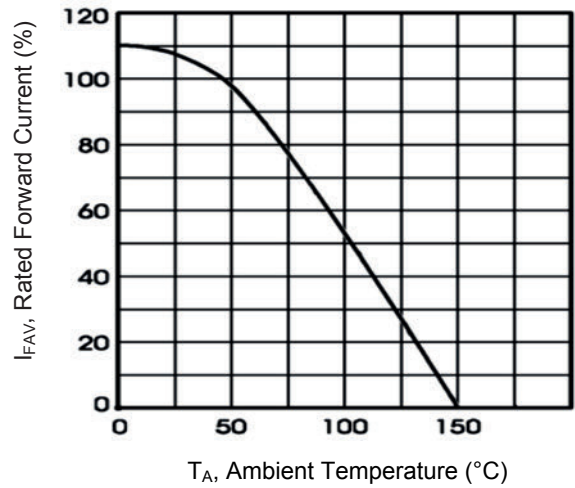


Figure 2. Rated Forward Current vs. Ambient Temperature

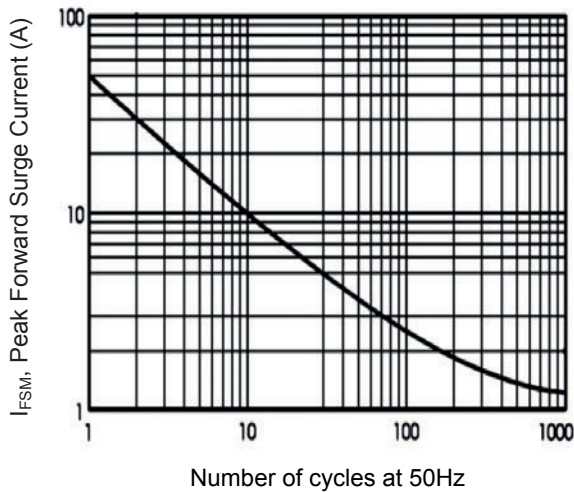


Figure 3. Peak Forward Surge Current

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Package Outline Dimensions DO-204AL (DO-41)

