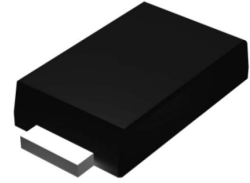


GSS52S thru GSS520S

Surface Mount Schottky Barrier Rectifiers
 Reverse Voltage 20V to 200V Forward Current 5A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- Low profile package
- Built-in strain relief, ideal for automated placement
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



SMAF



RoHS
COMPLIANT

Mechanical Data

- Case: SMAF molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbol	GSS 52S	GSS 53S	GSS 54S	GSS 56S	GSS 510S	GSS 515S	GSS 520S	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	42	71	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	60	100	150	200	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	5.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method at Rated T_L)	I_{FSM}	125.0							A
Maximum Instantaneous Forward Voltage at 5.0A ¹	V_F	0.55		0.70	0.85	0.90	0.95	V	
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage ¹	$T_A=25^\circ\text{C}$	100			20			μA	
	$T_A=100^\circ\text{C}$	10			-			mA	
	$T_A=125^\circ\text{C}$	-			5			mA	
Typical Junction Capacitance ³	C_J	250			120			pF	
Typical Thermal Resistance ²	$R_{\theta JA}$	50							$^\circ\text{C/W}$
	$R_{\theta JL}$	28							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes:

1. Pulse test: 300 μs pulse width, 1% duty cycle
2. P.C.B. mounted 0.2 x 0.2" (5 x 5mm) copper pad areas
3. Measured at 1MHz and reverse voltage of 4.0V

Ratings and Characteristics Curves

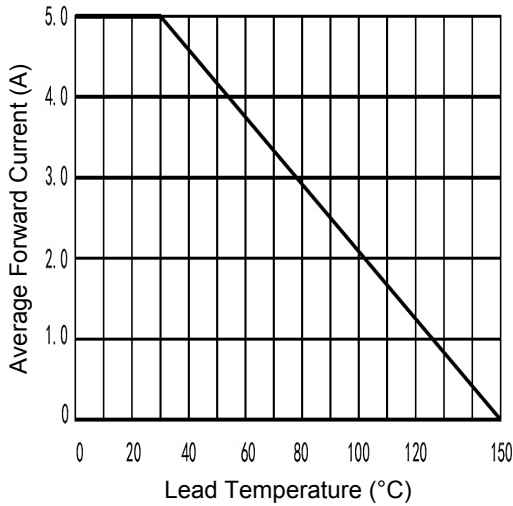


Figure 1. Forward Current Derating Curve

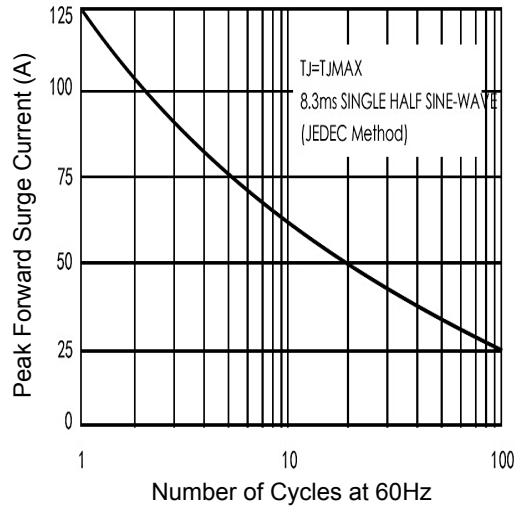


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

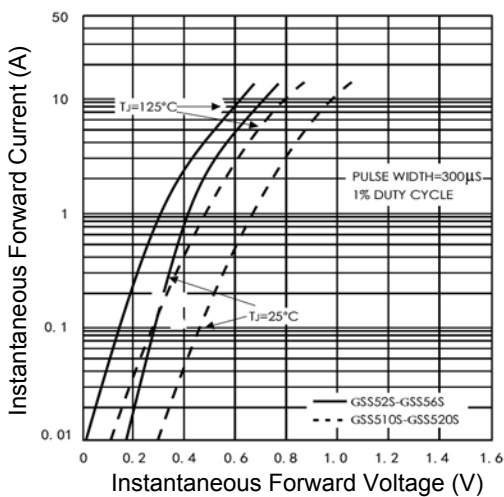


Figure 3. Typical Instantaneous Forward Characteristics

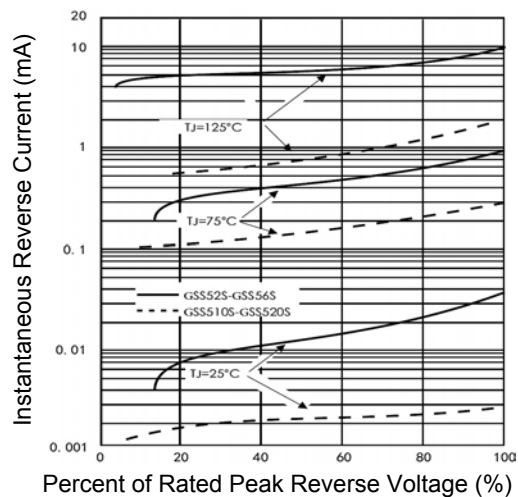


Figure 4. Typical Reverse Characteristics

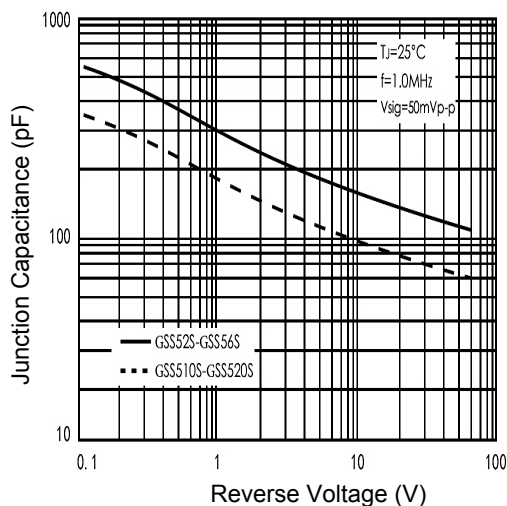
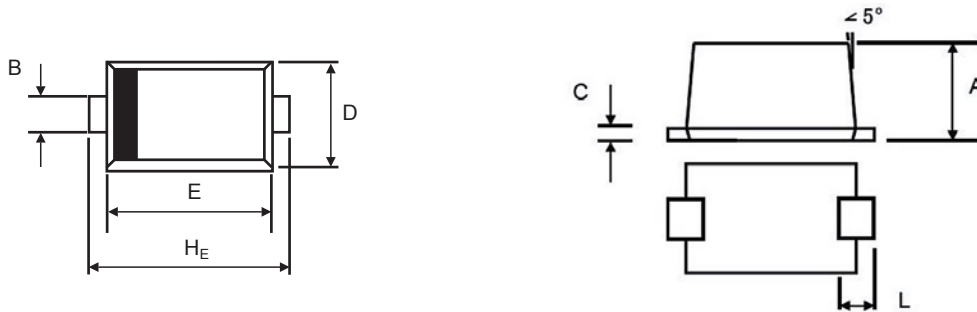


Figure 5. Typical Junction Capacitance

GSS52S thru GSS520S

Surface Mount Schottky Barrier Rectifiers
 Reverse Voltage 20V to 200V Forward Current 5A

Package Outline Dimensions (SMAF)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.90	1.50	0.035	0.059
B	1.30	1.60	0.051	0.063
C	0.10	0.30	0.004	0.012
D	2.40	2.80	0.094	0.110
E	3.25	3.70	0.128	0.146
HE	4.35	4.90	0.172	0.193
L	0.60	1.20	0.028	0.047

Order Information

Device	Package	Marking	Carrier	Quantity
GSS52S	SMAF	SS52S	Tape & Reel	3,000 Pcs / Reel
GSS53S	SMAF	SS53S	Tape & Reel	3,000 Pcs / Reel
GSS54S	SMAF	SS54S	Tape & Reel	3,000 Pcs / Reel
GSS56S	SMAF	SS56S	Tape & Reel	3,000 Pcs / Reel
GSS510S	SMAF	SS510S	Tape & Reel	3,000 Pcs / Reel
GSS515S	SMAF	SS515S	Tape & Reel	3,000 Pcs / Reel
GSS520S	SMAF	SS520S	Tape & Reel	3,000 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com