

# GSDSS12W Series

## Surface Mount Schottky Rectifiers

### Product Description

Reverse Voltage 20V to 100V Forward Current 1.0A

### Features

- Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity diodes in surface mount applications
- Schottky barrier junction, majority carrier conduction
- Guard ring for stress protection
- Low forward voltage drop
- High current capability
- High surge capability
- High reliability
- Lead(Pb)-Free

### Mechanical Data

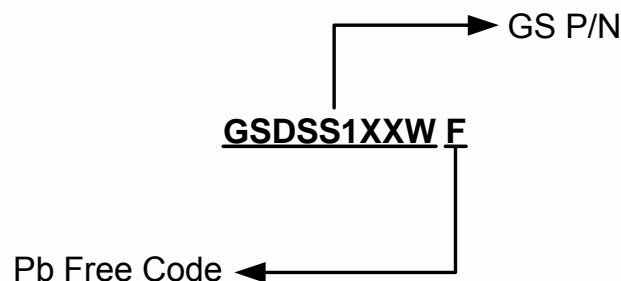
- Case : Molded plastic, SMA(W) Package
- Epoxy meets flammability requirements per UL 94V-0
- All terminal leads are readily solderable
- Weight approx : 70 mg

### Packages



**SMA(W)**  
Color Band Denotes CATHODE

### Ordering Information



Part Number	Package	Quantity
GSDSS12WF Series	SMA(W)	5000 PCS

## Marking Information

P/N	Part Marking	Package
GSDSS12WF	S12W	SMA(W)
GSDSS13WF	S13W	SMA(W)
GSDSS14WF	S14W	SMA(W)
GSDSS15WF	S15W	SMA(W)
GSDSS16WF	S16W	SMA(W)
GSDSS18WF	S18W	SMA(W)
GSDSS110WF	S1AW	SMA(W)

## Electrical Characteristics

(Rating 25°C Ambient Temperature Unless Otherwise Specified.)

Symbol	Conditions	GSDSS12WF	GSDSS13WF	GSDSS14WF	GSDSS15WF	Unit
$V_{RRM}$	Maximum Recurrent Peak Reverse Voltage	20	30	40	50	V
$V_{RMS}$	Maximum RMS Voltage	14	21	28	35	V
$V_{DC}$	Maximum DC Blocking Voltage	20	30	40	50	V
$V_F$	Maximum Instantaneous At 1.0A DC	0.45	0.55		0.70	V
Symbol	Conditions	GSDSS16WF	GSDSS18WF	GSDSS110WF		Unit
$V_{RRM}$	Maximum Recurrent Peak Reverse Voltage	60	80	100		V
$V_{RMS}$	Maximum RMS Voltage	42	56	70		V
$V_{DC}$	Maximum DC Blocking Voltage	60	80	100		V
$V_F$	Maximum Instantaneous At 1.0A DC	0.70	0.85			V
$I_R$	Maximum Reverse Leakage Current at rated $V_R$	$T_J = 25^\circ\text{C}$	0.5			mA
		$T_J = 125^\circ\text{C}$	20			
$I_{F(AV)}$	Maximum Average Forward Rectified Current	1.0				A
$I_{FSM}$	Peak Forward Surge Current (8.3ms Single Half Sine-Wave)	30				A
$R_{\theta JL}$	Typical Thermal Resistance (Junction to lead)	35				$^\circ\text{C/W}$
$T_J$	Operating Temperature Range	-55 to +125				$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +150				$^\circ\text{C}$

## Typical Characteristics

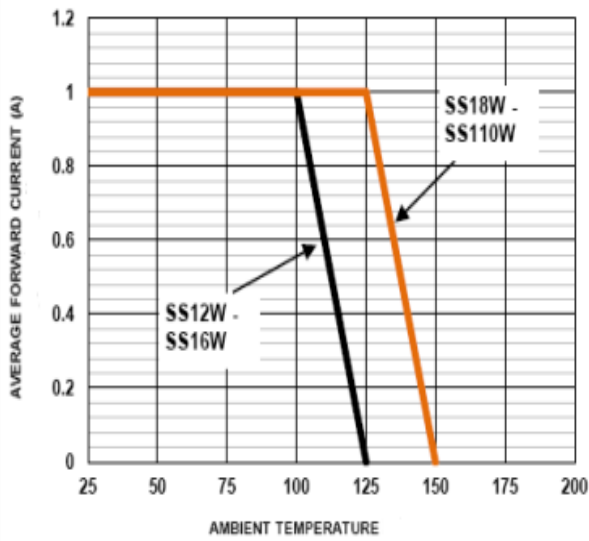


Figure 1. Forward Current Derating Curve

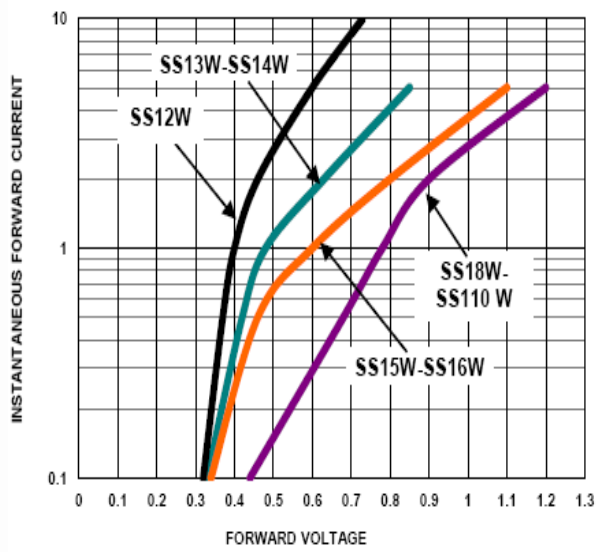


Figure 2. Forward Voltage Characteristics

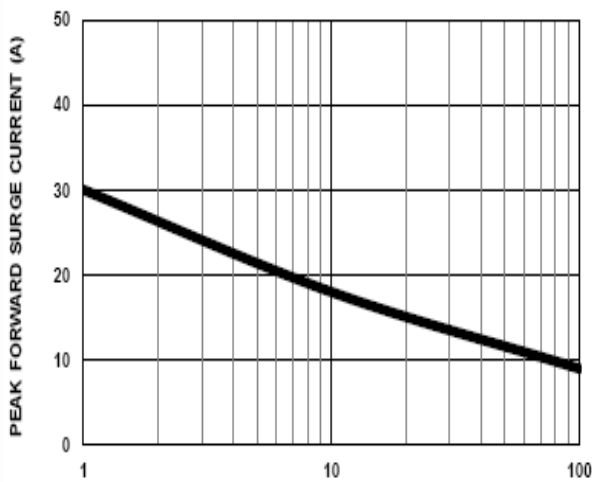


Figure 3. Non-Repetitive Surge Current

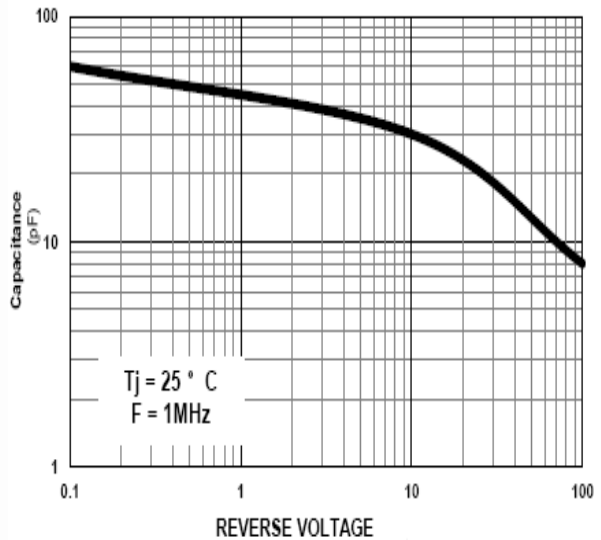
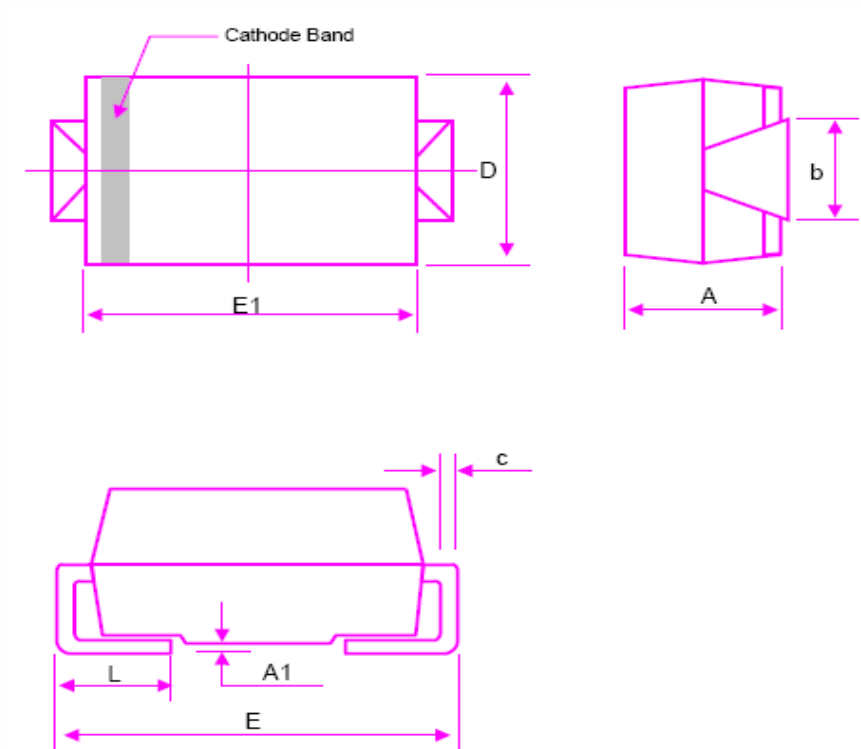


Figure 4. Junction Capacitance

## Package Dimension

### SMA(W)



Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	1.70	2.31	0.067	0.091
<b>A1</b>	0.10	0.20	0.004	0.008
<b>b</b>	1.29	1.70	0.051	0.067
<b>c</b>	0.15	0.31	0.006	0.012
<b>D</b>	2.18	2.79	0.086	0.110
<b>E</b>	4.70	5.31	0.185	0.209
<b>E1</b>	4.06	4.57	0.160	0.180
<b>L</b>	0.89	1.50	0.035	0.059

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