

GSDSS1xxA Series

Surface Mount Schottky Rectifiers

Product Description

Reverse Voltage 20V to 200V 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
- Low forward voltage drop
- High current capability
- High surge capability
- High reliability
- Halogen-Free

Mechanical Data

- Case : Molded plastic, SMA Package
- Epoxy meets flammability requirements per UL 94V-0
- Terminals : Axial leads, solderable per MIL-STD-750, method 2026 guaranteed
- Polarity: Color band denotes cathode end

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Packages



SMA

Ordering and Marking Information

P/N	Package	Marking	Quantity
GSDSS12AF	SMA	SS12	5000 PCS
GSDSS13AF	SMA	SS13	5000 PCS
GSDSS14AF	SMA	SS14	5000 PCS
GSDSS15AF	SMA	SS15	5000 PCS
GSDSS16AF	SMA	SS16	5000 PCS
GSDSS18AF	SMA	SS18	5000 PCS
GSDSS110AF	SMA	SS110	5000 PCS
GSDSS115AF	SMA	SS115	5000 PCS
GSDSS120AF	SMA	SS120	5000 PCS

Electrical Characteristics

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

Symbol	Conditions	12AF	13AF	14AF	15AF	16AF	Unit
V_{RRM}	Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	V
V_{RMS}	Maximum RMS Voltage	14	21	28	35	42	V
V_{DC}	Maximum DC Blocking Voltage	20	30	40	50	60	V
V_F	Maximum Forward Voltage at 1.0A (Note1)	0.55			0.7		V
I_R	Maximum Reverse Leakage Current at rated V_R	$T_A = 25^\circ\text{C}$	0.5				mA
		$T_A = 100^\circ\text{C}$	10				
$I_{F(AV)}$	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	-65 to +125					$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-65 to +150					$^\circ\text{C}$

Symbol	Conditions	18AF	110AF	115AF	120AF	Unit	
V_{RRM}	Maximum Recurrent Peak Reverse Voltage	80	100	150	200	V	
V_{RMS}	Maximum RMS Voltage	57	71	105	140	V	
V_{DC}	Maximum DC Blocking Voltage	80	100	150	200	V	
V_F	Maximum Forward Voltage at 1.0A (Note1)	0.85		0.95		V	
I_R	Maximum Reverse Leakage Current at rated V_R	$T_A = 25^\circ\text{C}$	0.5		0.2		mA
		$T_A = 100^\circ\text{C}$	10		5		
$I_{F(AV)}$	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 (Note2)	35	$^{\circ}C/W$
T_J	Operating Temperature Range	-65 to +150	$^{\circ}C$
T_{STG}	Storage Temperature Range	-65 to +150	$^{\circ}C$

NOTES:

1. Pulse test: 300 μ s pulse width, 1% duty cycle
2. P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas

Typical Characteristics

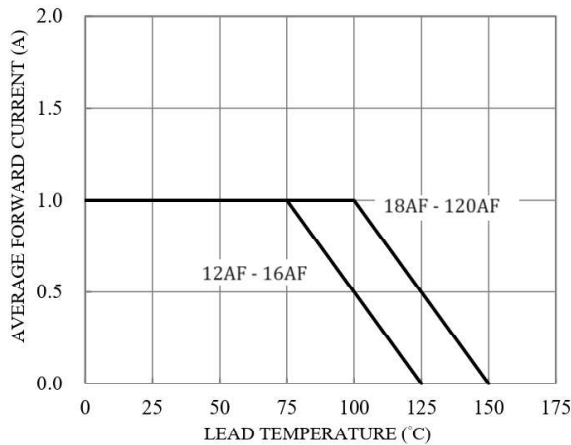


Fig.1-FORWARD CURRENT DERATING CURVE

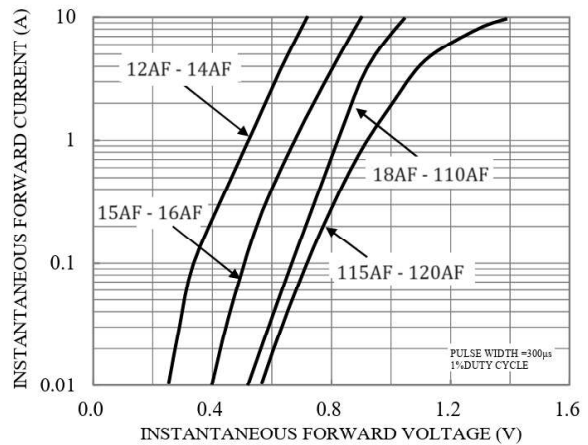


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

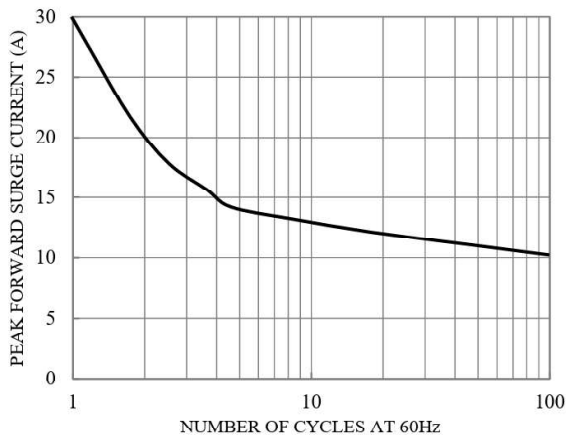
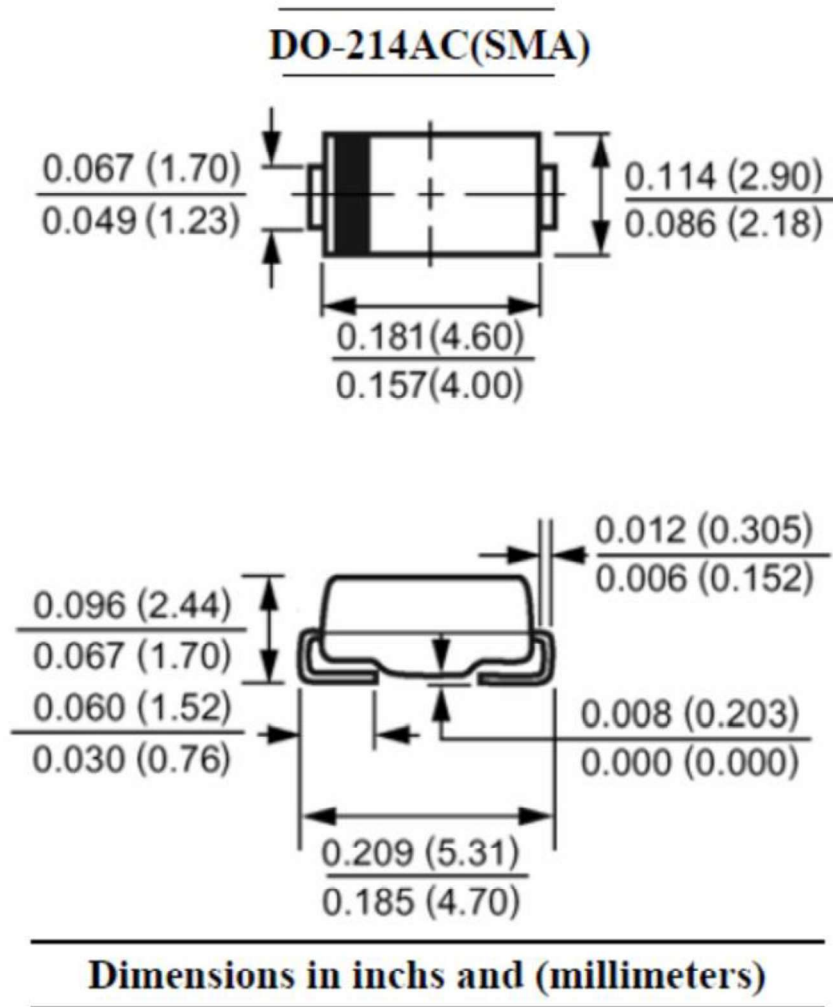


Fig.3-MAXIMUM NON-REPETITIVE SURGE CURRENT





Package Dimension





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