GSDU1□AF Series

Fast Recovery Diode

Product Description

Reverse Voltage 200V to 1000V.
Forward Current 1.0A

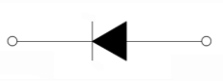
Features

- 50/75ns Max Reverse Recovery Time
- RoHS Compliant and Halogen Free

Mechanical Data

- SMA (DO-214AC) Package
- Polarity: Color Band denotes Cathode End

Package and Pin Assignment

SMA (DO-214AC)	Equivalent Circuit
	

Pin	Description
1	Anode
2	Cathode

Ordering and Marking Information

Ordering Information			
Part Number	**V_{RRM}**	**Marking Code**	**Quantity/Reel**
GSDU1DAF	200	US1D	5000 PCS
GSDU1GAF	400	US1G	5000 PCS
GSDU1MAF	1000	US1M	5000 PCS

- GSDU1DAF can be selected if required V_{RRM} of 50V, 100V and 150V.
- GSDU1MAF can be selected if required V_{RRM} of 600V and 800V.

GSDU1 1 A F

- **Product Code:** GSDU1
- **Voltage Code:** 1 is D. G or M stands for Maximum repetitive peak reverse voltage.
- **Package Code:** **A** for SMA (DO-214AC) Package
- **Green Level:** **F** for RoHS Compliant and Halogen Free

Marking Information	
US1 1	
- **Product Code:** US1	- **Voltage Code:** 1 is D. G or M stands for Maximum repetitive peak reverse voltage.

Electrical Characteristics (Ratings at 25°C Ambient Temperature Unless Otherwise Specified.)

Symbol	Conditions		U1D	U1G	U1M	Unit
V_{RRM}	Maximum Recurrent Peak Reverse Voltage		200	400	1000	V
V_{RMS}	Maximum RMS Voltage		140	280	700	V
V_{DC}	Maximum DC Blocking Voltage		200	400	1000	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current		1			A
I_{FSM}	Peak Forward Surge Current (8.3ms Single Half Sinewave)		30			A
V_F	Maximum Forward Voltage at 1.0A		1.0	1.3	1.7	V
I_R	Maximum Reverse Leakage Current at rated V_R	T_A = 25°C	5			μA
		T_A = 100°C	50			μA
trr	Maximum reverse recovery time (1)		50		75	ns
C_J	Typical Junction Capacitance (2)		15			pF
$R_{\theta JA}$	Typical Thermal Resistance (3)		60			°C/W
T_J	Operating Junction Temperature Range		-55 to +150			°C
T_{STG}	Storage Temperature Range		-55 to +150			°C

NOTES:
1. Measured with I_F=0.5A, I_R=1A, Irr=0.25A.
2. Measured at 1MHz and applied reverse voltage of 4.0V_{DC}
3. Mounted with 0.2 x 0.2” (5.0 x 5.0mm) Copper Pad Areas

Typical Characteristics (Ratings at 25°C Ambient Temperature Unless Otherwise Specified.)

FIG. 1- FORWARD CURRENT DERATING CURVE

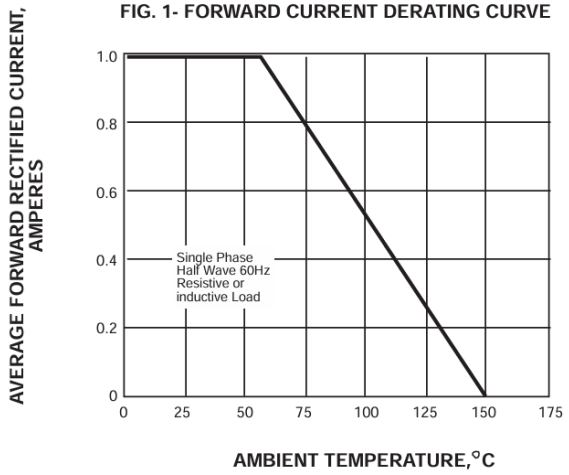


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

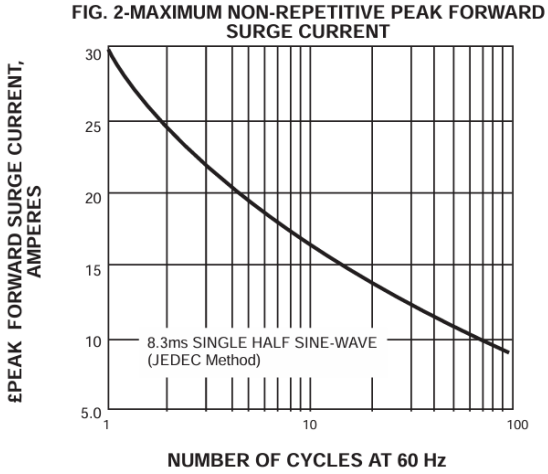


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

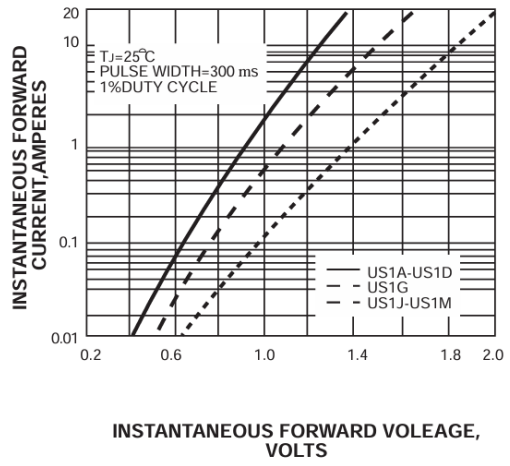


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

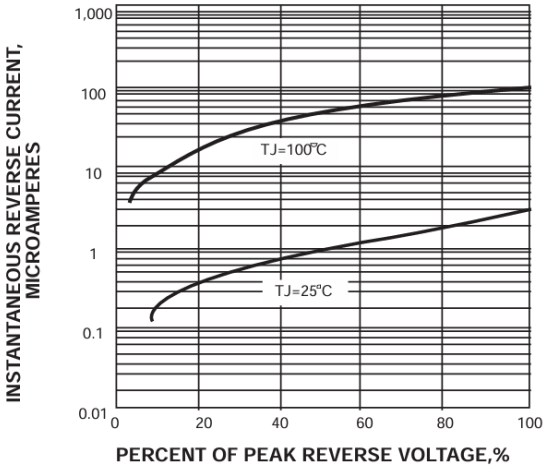


FIG. 5-TYPICAL JUNCTION CAPACITANCE

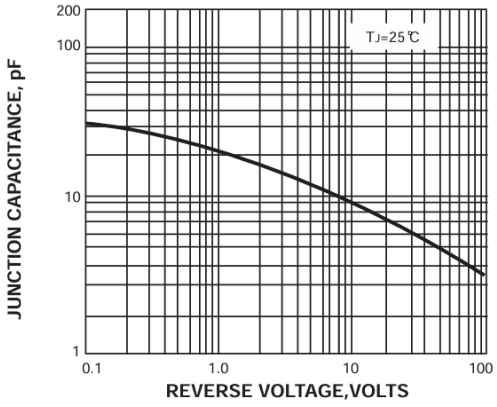
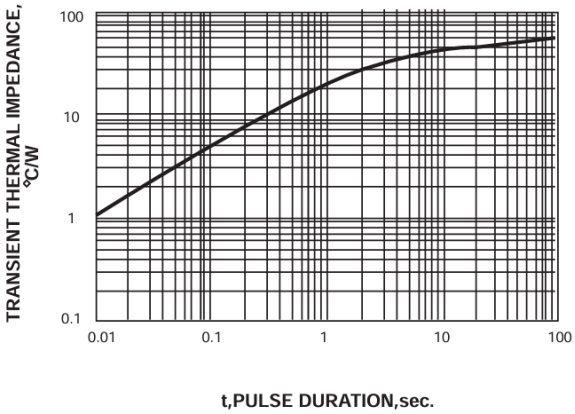
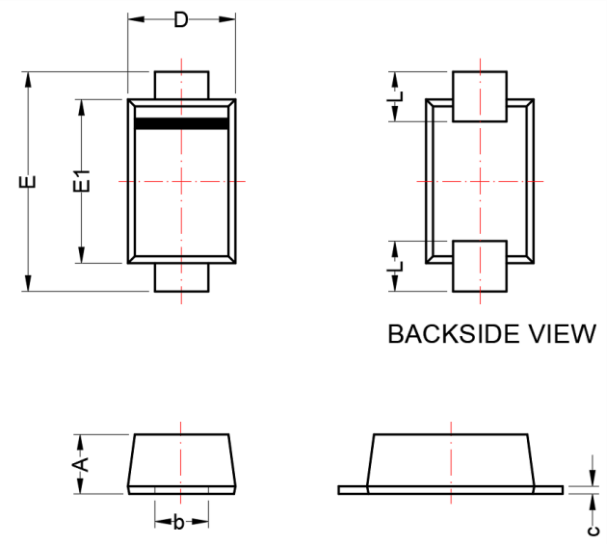


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

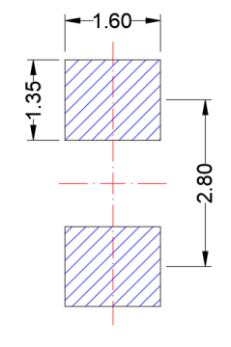


SMA (DO-214AC)

Package Dimension



Recommended Land Pattern



(Unit: mm)

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.10	0.031	0.043
b	0.50	1.20	0.020	0.047
D	1.50	1.90	0.059	0.075
E	3.30	3.80	0.130	0.150
E1	2.45	2.75	0.096	0.108
c	0.05	0.20	0.002	0.008
L	0.70	0.90	0.028	0.035

NOTE:

1. Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.
2. Terminals are partially uncovered on the bottom of package body

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