GSDE2*AF Series

Fast Recovery Diode

Product Description

Reverse Voltage 200V to 600V.
Forward Current 2.0A

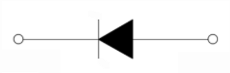
Features

- 35ns 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

<table>
<tr><th colspan="2">SMA (DO-214AC)</th><th>Equivalent Circuit</th></tr>
<tr><td colspan="2"> </td><td rowspan="4"></td></tr>
<tr><th>Pin</th><th>Description</th></tr>
<tr><td>1</td><td>Anode</td></tr>
<tr><td>2</td><td>Cathode</td></tr>
</table>

Ordering and Marking Information

Ordering Information			
Part Number	**V_{RRM}**	**Marking Code**	**Quantity/Reel**
GSDE2DAF	200	ER2D	5000 PCS
GSDE2GAF	400	ER2G	5000 PCS
GSDE2JAF	600	ER2J	5000 PCS

✷ GSDE2DAF can be selected if required V_{RRM} of 50V, 100V and 150V.

GSDE2 1 A F

- **Product Code:**
  GSDE2
- **Voltage Code:**
  1 is D. G or J 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

ER2 1

- **Product Code:**
  ER2
- **Voltage Code:**
  1 is D. G or J stands for Maximum repetitive peak reverse voltage.

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

Symbol	Conditions		E2D	E2G	E2J	Unit
V_{RRM}	Maximum Recurrent Peak Reverse Voltage		200	400	600	V
V_{RMS}	Maximum RMS Voltage		140	280	420	V
V_{DC}	Maximum DC Blocking Voltage		200	400	600	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current		2			A
I_{FSM}	Peak Forward Surge Current (8.3ms Single Half Sinewave)		50			A
V_F	Maximum Forward Voltage at 2.0A		0.95	1.25	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)		35			Ns
C_J	Typical Junction Capacitance (2)		60			pF
$R_{\theta JA}$	Typical Thermal Resistance (3)		40			°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

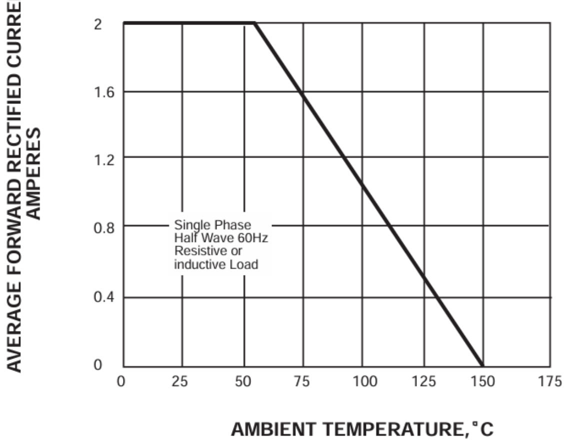


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

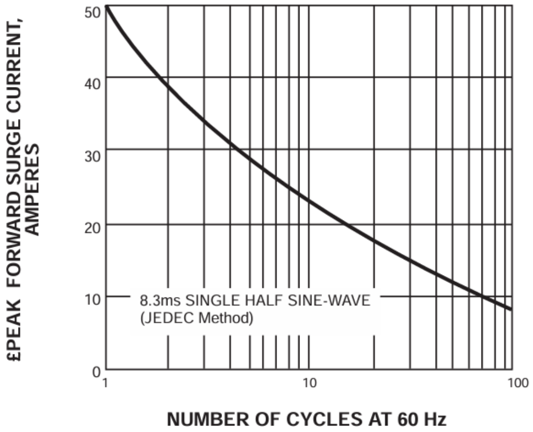


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

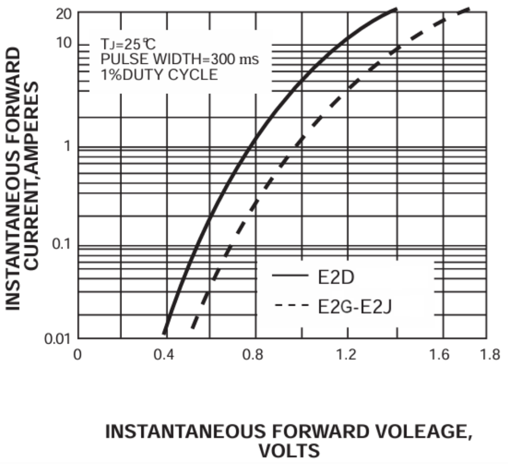


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

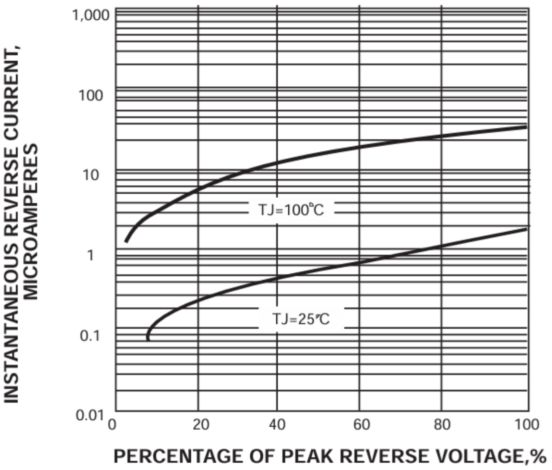


FIG. 5-TYPICAL JUNCTION CAPACITANCE

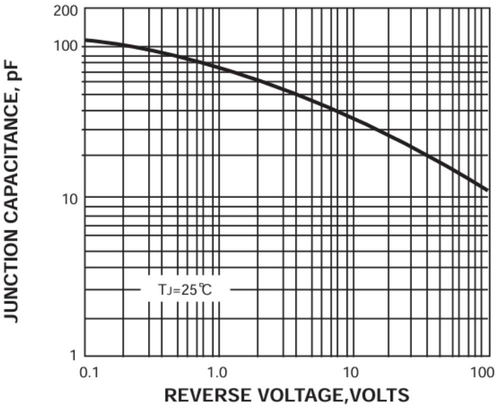
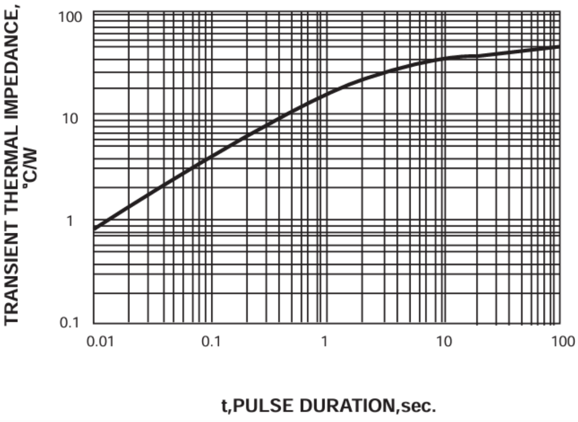
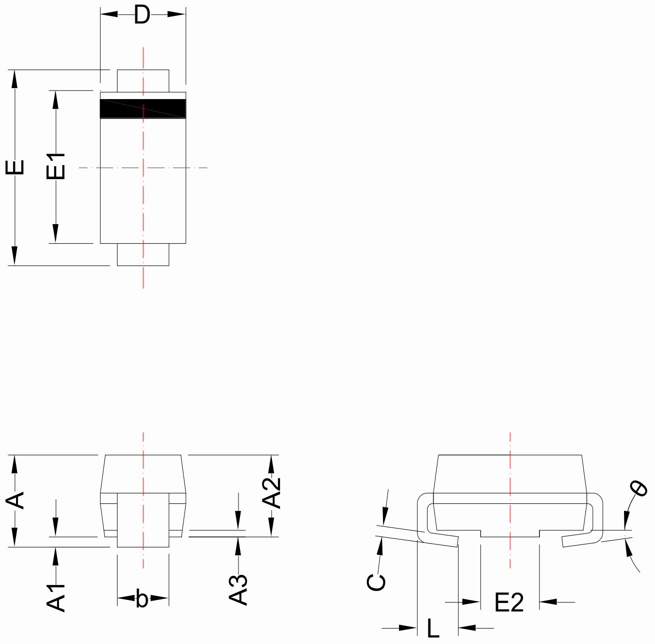


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

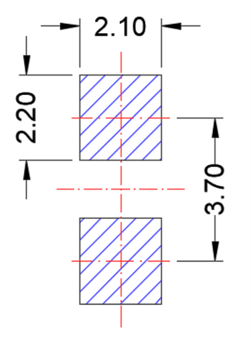


SMA (DO-214AC)

Package Dimension



Recommended Land Pattern



(Unit: mm)

Dimensions				
Symbol	**Millimeters**		**Inches**	
	Min	**Max**	**Min**	**Max**
A	1.70	2.90	0.067	0.114
A1	1.70	---	0.067	---
A2	0.00	0.20	0.000	0.008
A3	0.05	0.30	0.002	0.012
b	1.20	1.70	0.047	0.067
c	0.15	0.41	0.006	0.016
D	2.18	2.95	0.086	0.116
E	4.70	5.60	0.185	0.220
E1	3.90	4.70	0.154	0.185
E2	1.40	1.90	0.055	0.075
L	0.75	1.6	0.030	0.063
θ	0°	8°	0°	8°

Note:
Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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