GSDU3xCF Series

High Efficiency Diode

Product Description

Reverse Voltage 200V to 1000V.
Current 3A

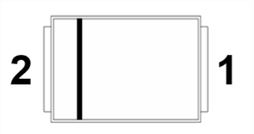
Features

- High Forward Surge Current Capability
- Low Reverse Leakage Current
- Glass Passivated Chip Junction

Mechanical Data

- SMC (DO-214AB) Package
- The Color Band denotes Cathode End
- RoHS Compliant and Halogen Free

Package and Pin Assignment

<table>
<tr><th colspan="2">SMC (DO-214AB)</th><th colspan="2">Equivalent Circuit</th></tr>
<tr><td colspan="2"> </td><td colspan="2"> </td></tr>
<tr><th>Pin</th><th>Description</th><th>Pin</th><th>Description</th></tr>
<tr><td>1</td><td>Anode</td><td>2</td><td>Cathode</td></tr>
</table>

Ordering and Marking Information

Ordering Information				
Part Number	**Marking Code**	**V_{RRM}**	**Package**	**Quantity/Reel**
GSDU3DCF	US3D	200V	SMC (DO-214AB)	3,000 PCS
GSDU3GCF	US3G	400V		
GSDU3MCF	US3M	1000V		

Maximum Ratings and Electrical Characteristics (T_A=25ºC unless otherwise specified)

Symbol	Description		U3D	U3G	U3M	Unit
V_{RRM}	Maximum Repetitive Peak Reverse Voltage		200	400	600	V
V_{RMS}	Maximum RMS Voltage		140	280	420	
V_{DC}	Maximum DC Blocking Voltage		200	400	600	
$I_{(AV)}$	Maximum Average Forward Rectified Current		3			A
I_{FSM}	Peak Forward Surge Current, 8.3ms Single Half-Sine-Wave Superimposed on rated Load (JEDEC Method)		100			A
V_F	Maximum Forward Voltage at 3.0A		1	1.3	1.7	V
I_R	Maximum Reverse Current at Rated DC Blocking Voltage	T_J=25℃	5			µA
		T_J=100℃	100			
t_{rr}	Maximum Reverse Recovery Time [1]		50		75	ns
C_J	Typical Junction Capacitance [2]		75		63	pF
$R_{θJA}$	Typical Thermal Resistance [3]		47			°C/W
T_J	Junction Temperature Range		-55 to 150			°C
T_{STG}	Storage Temperature Range		-55 to 150			°C

NOTE:

1. Reverse recovery condition IF=0.5A, IR=1.0A, Irr=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0 V_{DC}.
3. Mounted with 0.4” x 0.4” (10.0 x 10.0mm) Copper Pad Areas

Typical Characteristics (T$_A$=25℃ unless otherwise specified)

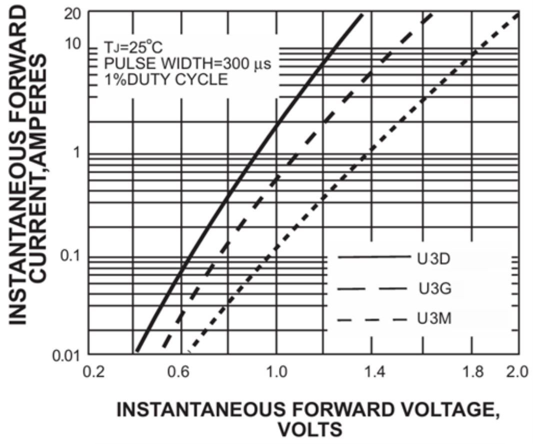


FIG.1 Forward Characteristics

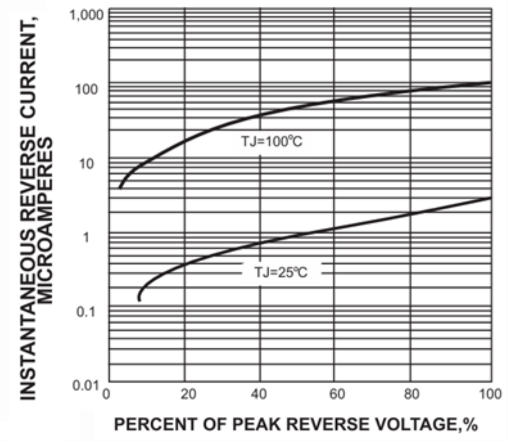


FIG.2 Reverse Characteristics

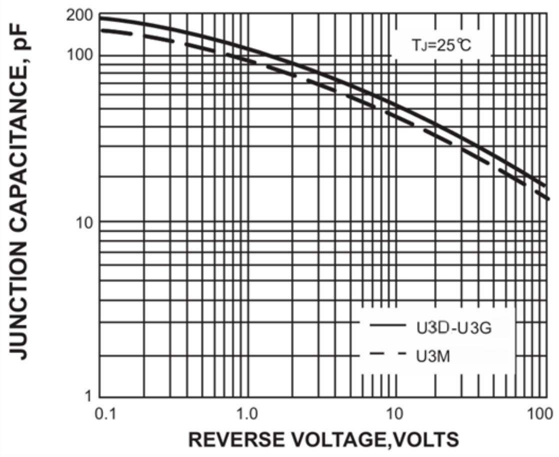


FIG.3 Junction Capacitance

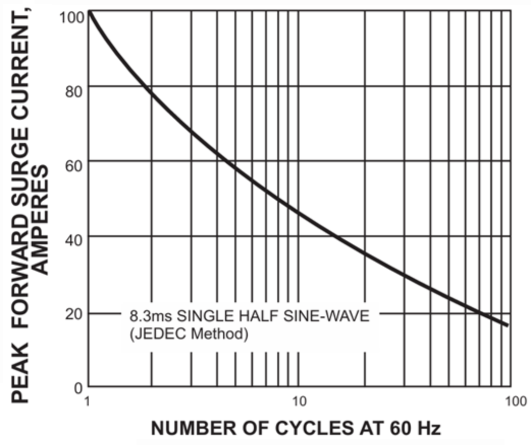


FIG.4 Maximum Non-Repetitive Peak Forward Surge Current

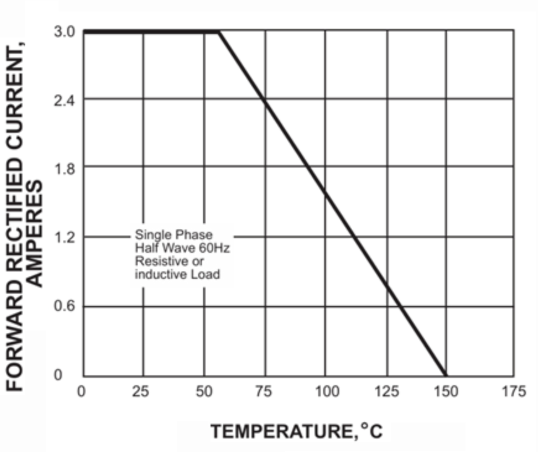


FIG.5 Forward Current Derating Curve

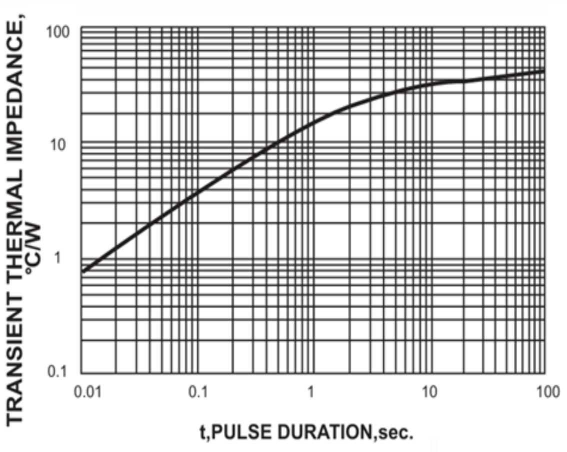
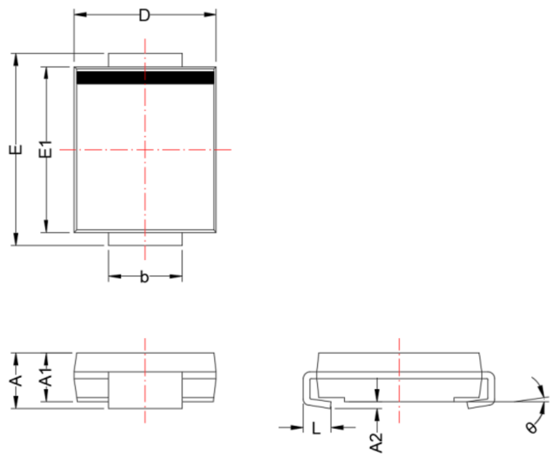


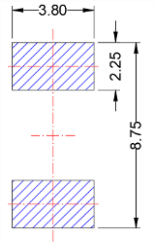
FIG.6 Transient Thermal Impedance

SMC (DO-214AB)

Package Dimension



Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	**Millimeters**		**Inches**	
	MIN	**MAX**	**MIN**	**MAX**
A	1.95	2.80	0.077	0.110
A1	1.90	-	0.075	-
A2	0.00	0.30	0.000	0.012
b	2.90	3.20	0.114	0.126
D	5.55	6.25	0.219	0.246
E	7.75	8.15	0.305	0.321
E1	6.60	7.15	0.260	0.281
L	0.75	1.60	0.030	0.063
θ	0°	8°	0°	8°

NOTE:

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

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