BGF111

TV-Out Filter and ESD Protection

Small Signal Discretes

Never stop thinking

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BGF111

Revision History: 2008-05-28, V2.0

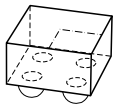
Previous Version: 2007-04-26

Page	Subjects (major changes since last revision)
All	Preliminary status removed

BGF111

Features

- TV-Out Filter
- Wafer level package with SnAgCu solder balls
- Integrated ESD protection up to 15 kV contact discharge according to IEC61000-4-2
- Low bias voltage dependency of low pass frequency
- RoHS and WEEE compliant package



WLP-4-1-3D

RoHS

Description

BGF111 is a 75 Ω TV-Out filter with low pass characteristic offering a high stop band attenuation up to 6 GHz in mobile phone, consumer and IT applications. Wafer technology is optimized to provide low variation of the low pass frequency versus bias voltage. ESD protection at both pins exceeds 15 kV contact discharge according to IEC61000-4-2. The wafer level package is a green leadfree package with a size of only 0.75 mm x 0.75 mm and a total height of 0.6 mm.

Type	Package	Marking	Chip
BGF111	WLP-4-1	11	N0724

Table 1 Maximum Ratings

Parameter	Symbol	Values			Unit	Note / Test Condition
		Min.	Typ.	Max.		
Voltage at all pins to GND		0	–	5	V	–
Operating temperature range	T_{OP}	-40	–	85	°C	–
Storage temperature range	T_{STG}	-65	–	150	°C	–
DC current A1 to B1	I_{max}	–	–	35	mA	–
Electrostatic Discharge According to IEC61000-4-2						
Contact discharge between all pins	V_{ESD}	-15	–	+15	kV	–

Table 2 Electrical characteristics at T_A = 25°C

Parameter	Symbol	Values			Unit	Note / Test Condition
		Min.	Typ.	Max.		
Resistor R1	R_1	71.25	75	78.75		–
Leakage currents, A1 or B1 to GND	I_R	– –	0.1 0.1	120 120	nA µA	V_R = ±3 V V_R = ±14 V
Line capacitance to GND	C_L	–	44	–	pF	V = 0 V
Insertion loss at 0 V bias voltage Pin A1 to B1	IL	–	30	–	dB	f = 0.8... 2 GHz, $Z_S = Z_L$ = 75 Ω

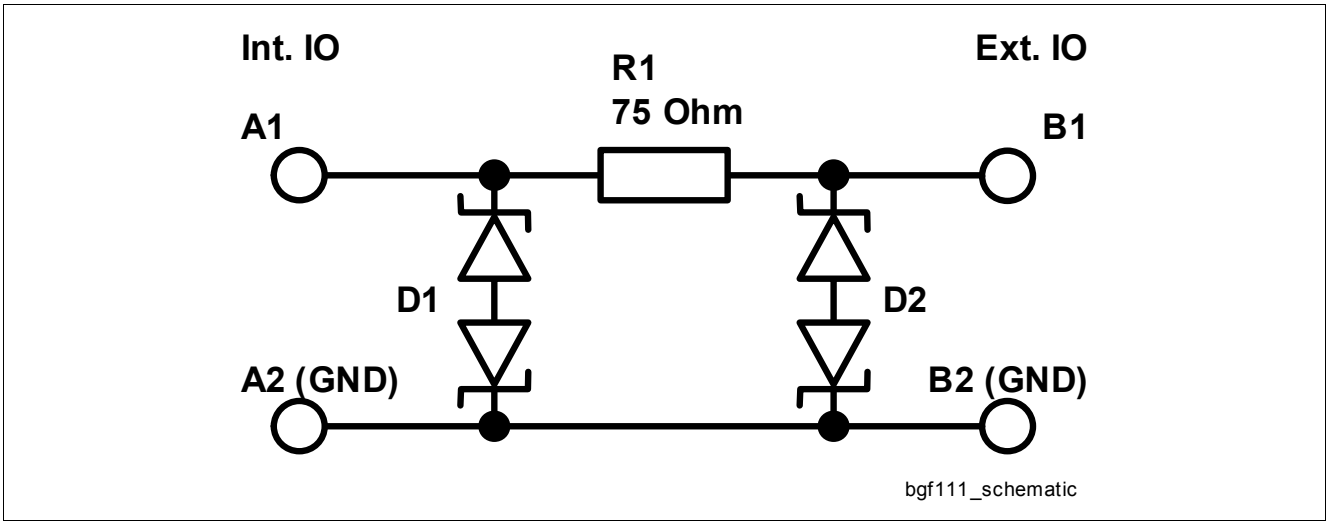


Figure 1 Schematic

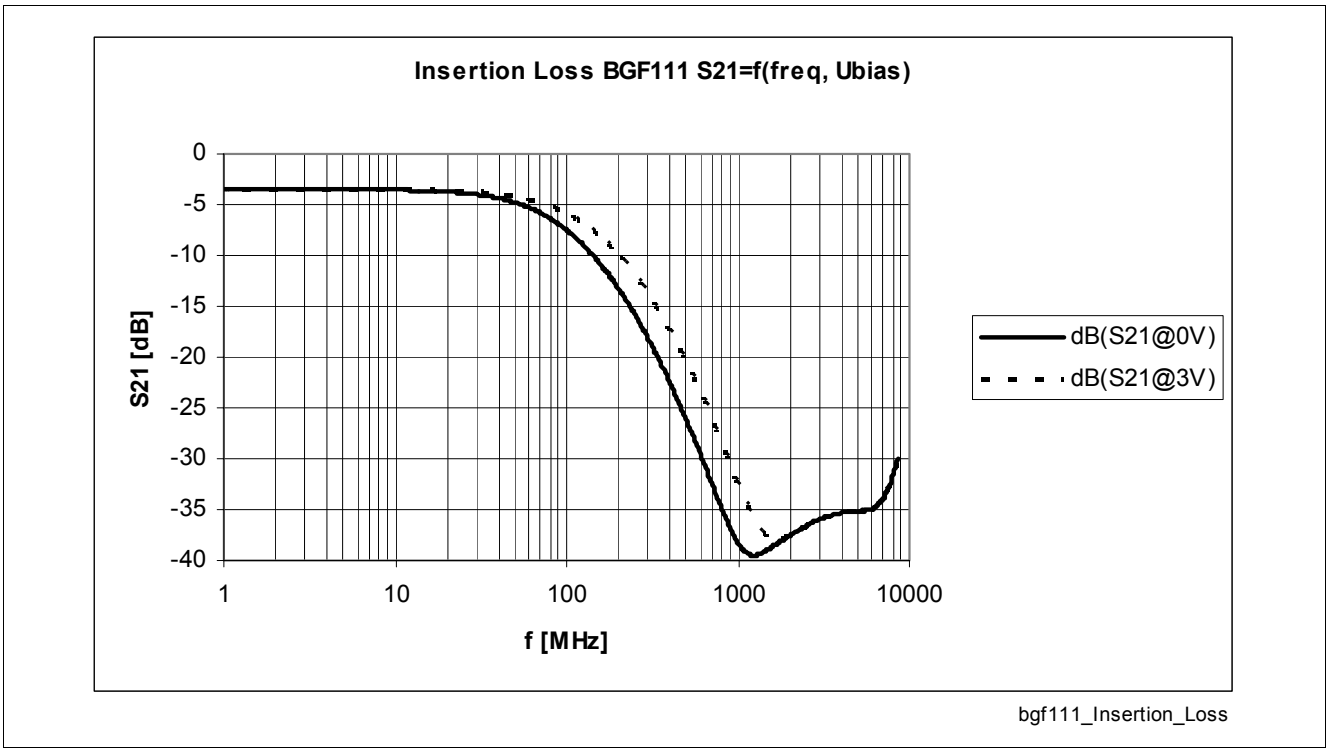


Figure 2 Insertion loss as function of bias voltage, $Z_S = Z_L = 75\ \Omega$

Package Outline

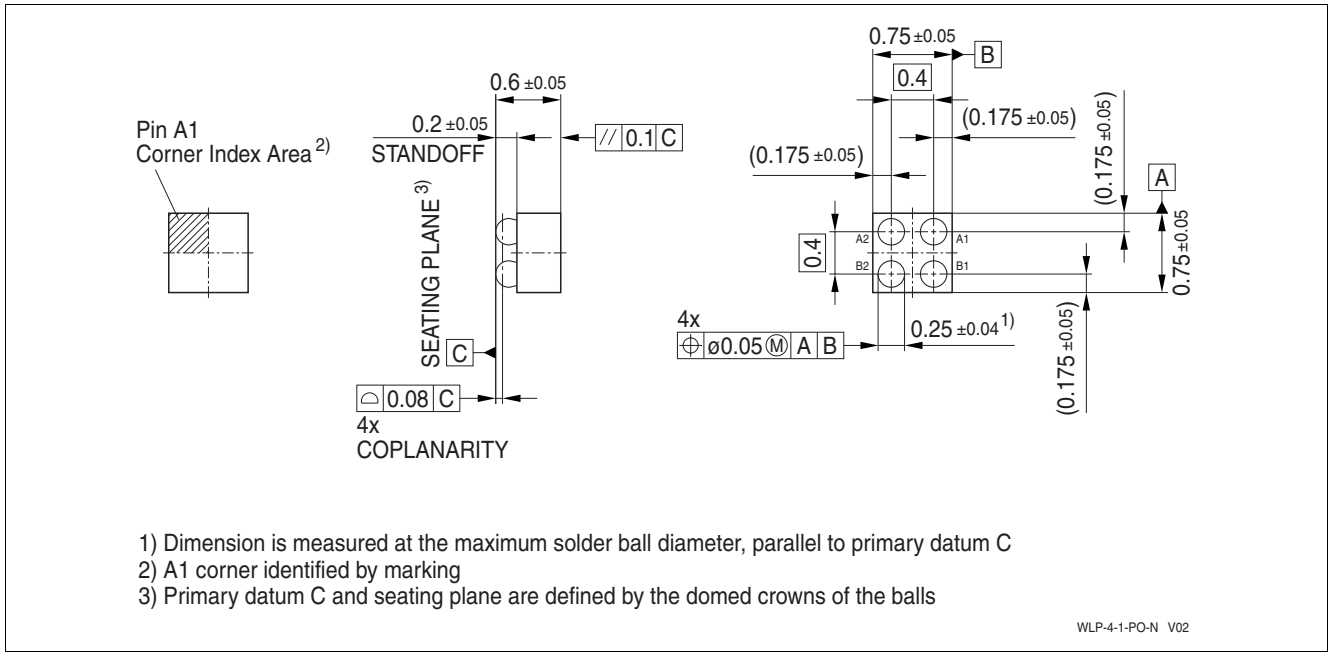


Figure 3 Package outline

Tape for BGF111

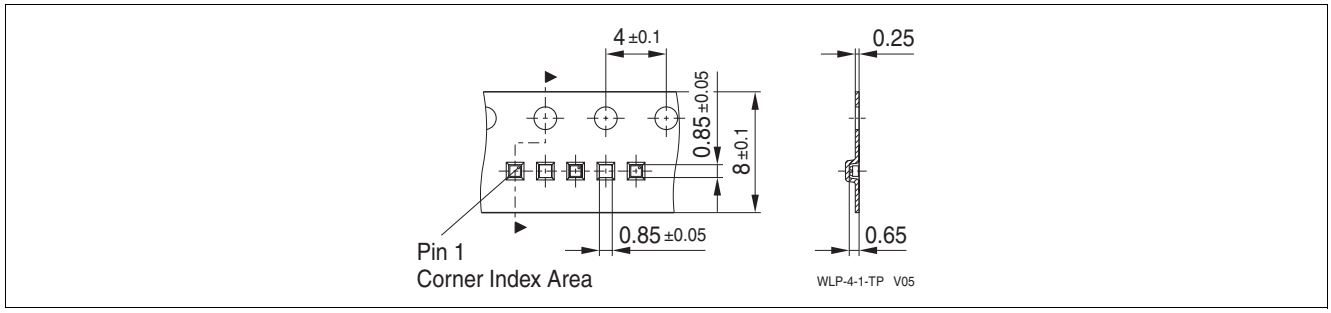


Figure 4 Tape for BGF111 / WLP-4-1

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