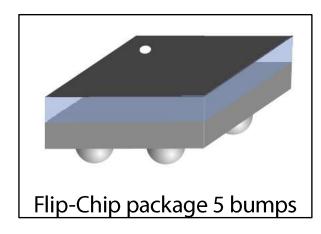
BALF-CC26-05D3



50 Ω nominal input / conjugate match balun CC2610, CC2620, CC2630, CC2640, CC2650 MHz, with integrated harmonic filter

Datasheet - production data



Features

- 2.45 GHz balun with integrated matching network
- Matching optimized for CC26 series 5x5 external differential
- Low insertion loss
- Low amplitude imbalance
- Low phase imbalance
- Coated Flip-Chip on glass
- Small footprint < 1.5 mm²

Benefits

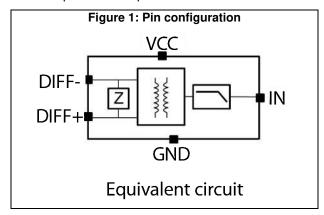
- Very low profile
- High RF performance
- PCB space saving versus discrete solution
- RF BOM and size reduction
- · Efficient manufacturability

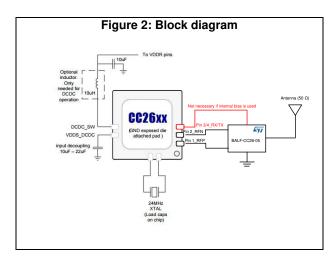
Description

STMicroelectronics' BALF-CC26-05D3 is an ultra-miniature balun, integrating both matching network and harmonics filter.

Matching impedance has been customized for the TI CC26xx series 5x5 SimpleLink™ multistandard wireless MCU.

The device uses STMicroelectronics' IPD technology on a non-conductive glass substrate, which optimizes RF performance.





Characteristics BALF-CC26-05D3

1 Characteristics

Table 1: Absolute maximum ratings (limiting values)

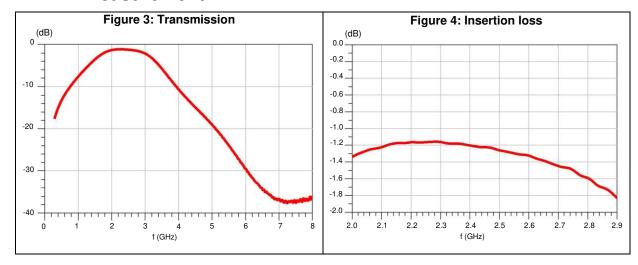
Symbol	Parameter	Value	Unit	
Pin	Input power RFIN	20	dBm	
V _{ESD}	ESD ratings MIL STD883C (HBM: C = 100 pF, R = 1.5 Ω , air discharge)	900	V	
	ESD ratings machine model (MM: C = 200 pF, R = 25 W, L = 500 nH)	100		
T _{OP}	Operating temperature	-40 to +105	°C	

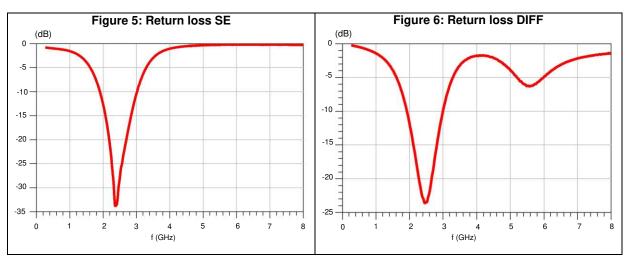
Table 2: Electrical characteristics (Tamb = 25 °C)

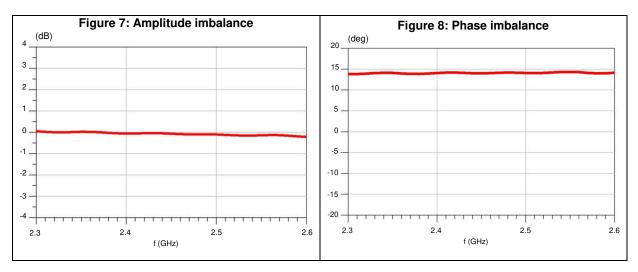
Combal	Devemeter	Value			I I to i A	
Symbol	Parameter	Min.	Тур.	Max.	Unit	
Zout	Nominal differential output impedance	Match to 5x5 CC26xx series		xx series	Ω	
Z _{IN}	Nominal input impedance		50		Ω	
f	Frequency range (bandwidth)	2400		2500	MHz	
IL	Insertion loss in bandwidth		1.2	1.5	dB	
RL SE	Single Ended Return loss in bandwidth		-27	-18	dB	
RL DIFF	Differential Return loss in bandwidth		-23	-20	dB	
Phase_imbal	Phase imbalance	-16		16	0	
Ampl_imbal	Amplitude imbalance	-0.3		0.3	dB	
H2	Second harmonic rejection		-18	-17		
H3	Third harmonic rejection		-37	-35		

BALF-CC26-05D3 Characteristics

1.2 RF measurement







Package information BALF-CC26-05D3

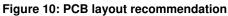
2 **Package information**

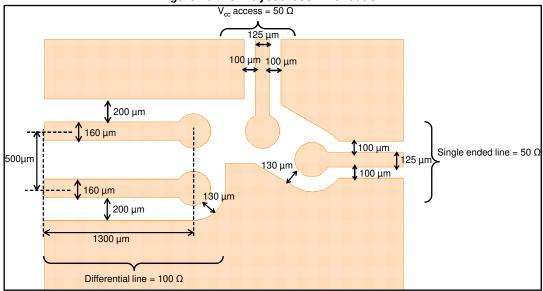
In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK® packages, depending on their level of environmental compliance. ECOPACK® specifications, grade definitions and product status are available at: www.st.com. ECOPACK® is an ST trademark.

Flip-Chip CSPG 0.4 package information 2.1

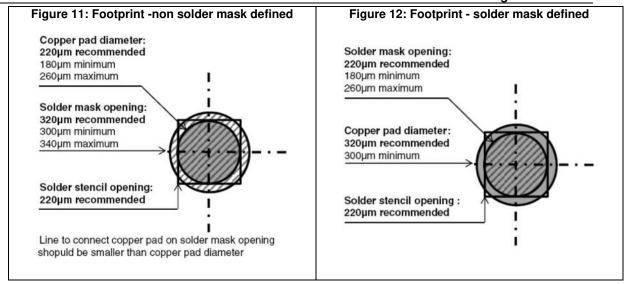
630 +/- 60 µm 604 µm 224 µm 224 µm 433 µm 뛾 260 DIFF2 Ш 250 띮 250 DIFF GŅD Щ 260 Bump side view

Figure 9: Flip-Chip CSPG 0.4 package outline



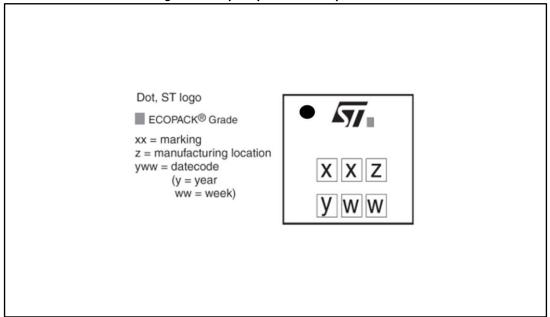


BALF-CC26-05D3 Package information



2.2 Flip-chip CSPG 0.4 packing information

Figure 13: Flip-chip CSPG 0.4 tape outline



 $\begin{array}{c} 2.0 \pm 0.05 \\ \hline 0.22 \pm 0.02 \\ \hline 0.71 \pm 0.05 \\ \hline \end{array}$

Figure 14: Flip-chip CSPG 0.4 tape outline

BALF-CC26-05D3 Ordering information

3 Ordering information

Table 3: Ordering information

Order code	Marking	Package	Weight	Base qty.	Delivery mode
BALF-CC26-05D3	TH	Flip-Chip CSPG 0.4	1.724 mg	5000	Tape and reel (7")

4 Revision history

Table 4: Document revision history

Date	Revision	Changes
27-Jul-2016	1	First issue.

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