

BTLU Series



Chilisin offer multilayer devices of Low-Temperature Cofired Ceramics (LTCC) for applications in wireless communication as WLAN, Bluetooth etc. Our commitment is to meet your goals through extensive technological innovation, excellent quality, short lead time and high volume production capability.

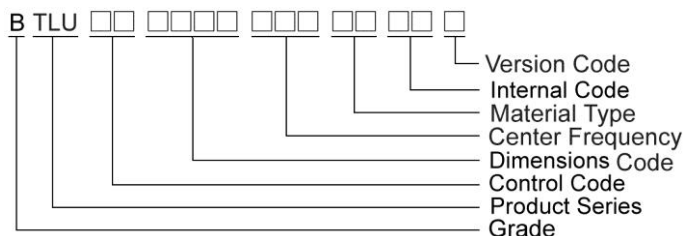
Features

- RoHS, Halogen Free and REACH Compliance
- Miniaturized.
- Low insertion loss
- Eliminate noise over a wide frequency range. Idea for high frequency and space limited designs.

Applications

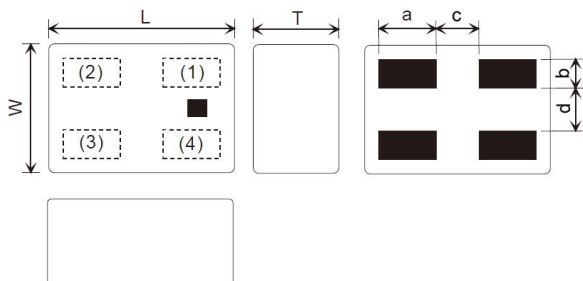
- WLAN ,Home RF, Bluetooth Module, etc.
- GSM/WCDMA/LTE mobile communication systems

Product Identification

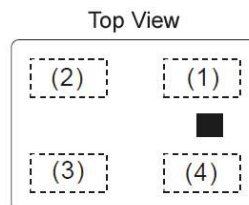


Shapes and Dimensions

BTLU000605xGxxxA10

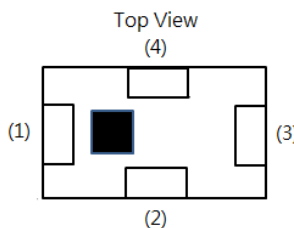
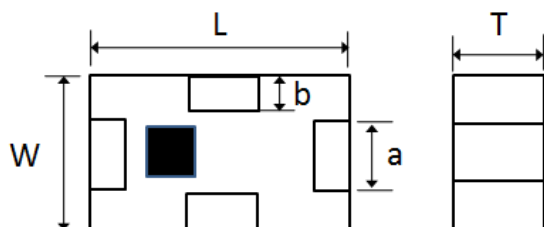


Terminal Configuration



- ① GND ② Unbalance Port ③ ④ Balance Port

BTLU0010050G7H6D10/BTLU0010052G0S1A10



- ① ③ Balance Port ② Unbalance Port ④ GND or DC Feed +RF GND

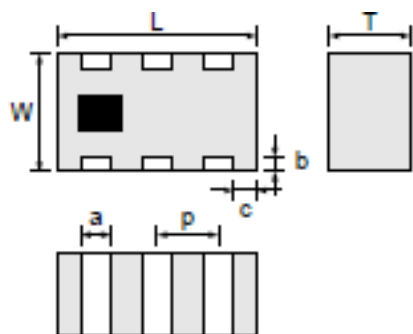
Dimension in mm

TYPE	L	W	T	a	b	c	d
BTLU000605xGxxxA10	0.65±0.1	0.5±0.1	0.4±0.1	0.2±0.05	0.1±0.05	0.2±0.05	0.25±0.05
BTLU0010050G7H6D10	1.0±0.05	0.5±0.05	0.5 Max.	0.3±0.1	0.15±0.1	-	-
BTLU0010052G0S1A10	1.0±0.05	0.5±0.05	0.45±0.05	0.3±0.1	0.15±0.1	-	-

Low Temperature Cofired Ceramic - BTLU Series

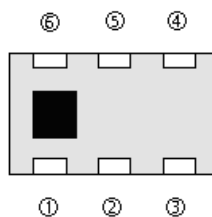
Shapes and Dimensions

BTLU001608xGxS1xx0



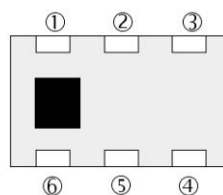
Terminal Configuration

BTLU0016082G4S1A10/BTLU0016083G8S1A20/BTLU0016084G0S1A10



- ① Unbalance Port
- ② GND or DC Feed + RF GND
- ③ Balance Port 1
- ④ Balance Port 2
- ⑤ GND
- ⑥ N.C

BTLU001608xGxS1xx0



- ① N.C
- ② GND
- ③ Balance Port 1
- ④ Balance Port 2
- ⑤ GND or DC
- ⑥ Unbalance Port

Dimension in mm

TYPE	L	W	T	a	b	c	p
BTLU0016082G4S1A10	1.6±0.10	0.8±0.1	0.6±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	0.1±0.1	0.55±0.1
BTLU0016082G4S1A20	1.6±0.15	0.8±0.1	0.6±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	0.1±0.1	0.55±0.1
BTLU0016082G4S1C20	1.6±0.15	0.8±0.1	0.5±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	0.1±0.1	0.55±0.1
BTLU0016083G5S1A20	1.6±0.15	0.8±0.1	0.6±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	0.1±0.1	0.55±0.1
BTLU0016083G8S1A20	1.6±0.15	0.8±0.1	0.6±0.1	0.2±0.1	0.15±0.1	0.2±0.15	0.5±0.05
BTLU0016084G0S1A10	1.6±0.15	0.8±0.1	0.6±0.1	0.2±0.1	0.15±0.1	0.2±0.15	0.5±0.05
BTLU0016085G5S1E10	1.6±0.15	0.8±0.1	0.6±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	0.1±0.1	0.55±0.1

Low Temperature Cofired Ceramic - BTLU Series

Electrical Characteristics

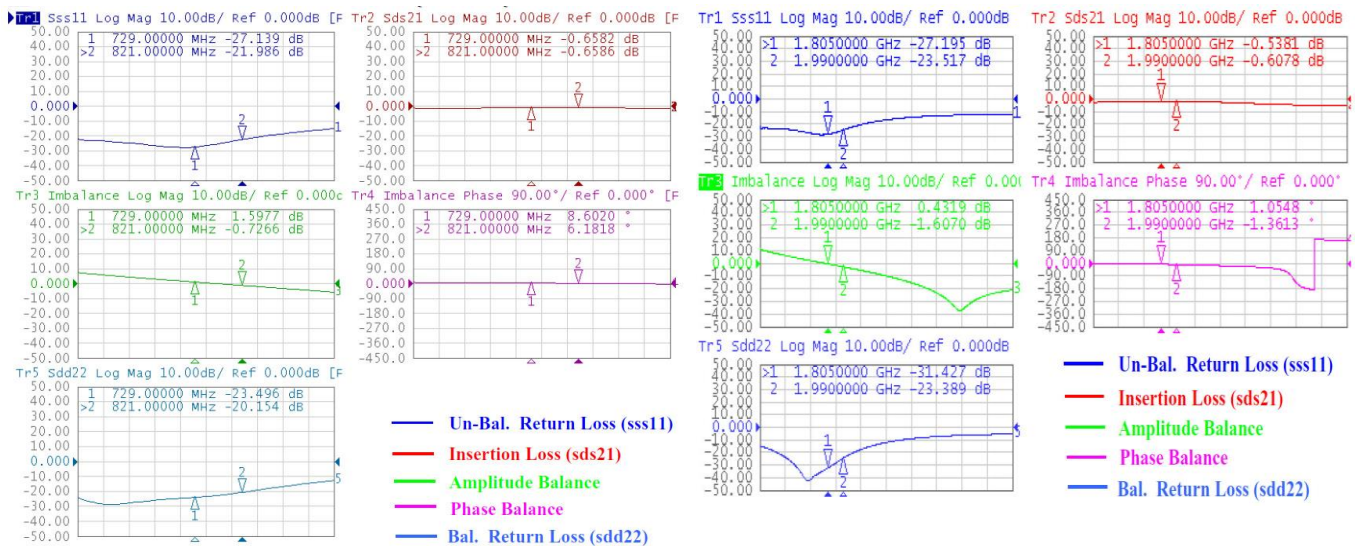
Part Number	Pass Band (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)Max	Balance Port		Application
		Unbalance	Balance			Amplitude Imbalance	Phase Difference	
BTLU0006050G7H6A10	729~821	50	100	10	0.7	2.0 dB Max	180 \pm 10 $^\circ$	LTE
BTLU0006051G8S5A10	1805~1990	50	100	10	0.7	2.0 dB Max	180 \pm 10 $^\circ$	LTE
BTLU0006052G5S5A10	2300~2700	50	100	10	0.7	2.5 dB Max	180 \pm 10 $^\circ$	WIMAX

- Operating temperature range -40 $^\circ$ C ~ 85 $^\circ$ C

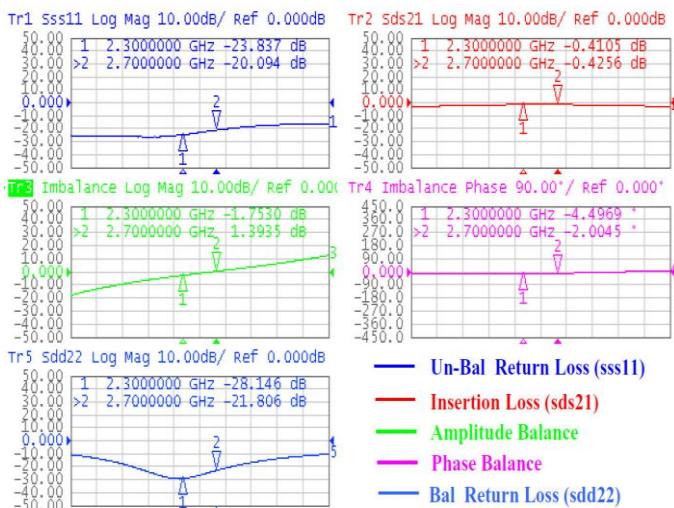
Test Instruments : Agilent E5071C Network Analyzer

BTLU0006050G7H6A10

BTLU0006051G8S5A10



BTLU0006052G5S5A10



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Low Temperature Cofired Ceramic - BTLU Series

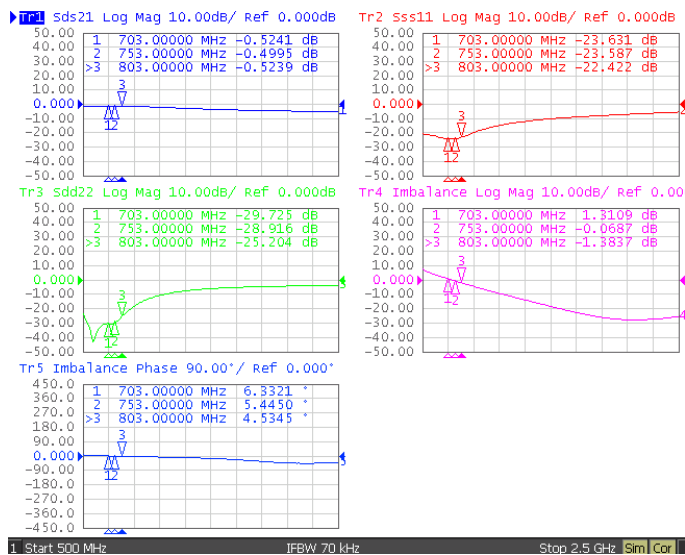
Electrical Characteristics

Part Number	Pass Band (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)Max	Balance Port		Application
		Unbalance	Balance			Amplitude Imbalance	Phase Difference	
BTLU0010050G7H6D10	703~803	50	100	10	0.8 at 25°C 1.0	2.0 dB Max	180 \pm 12°	GSM/WCDMA/LTE
BTLU0010052G0S1A10	1805~2170	50	100	10	1.2	1.2 dB Max	180 \pm 15°	LTE

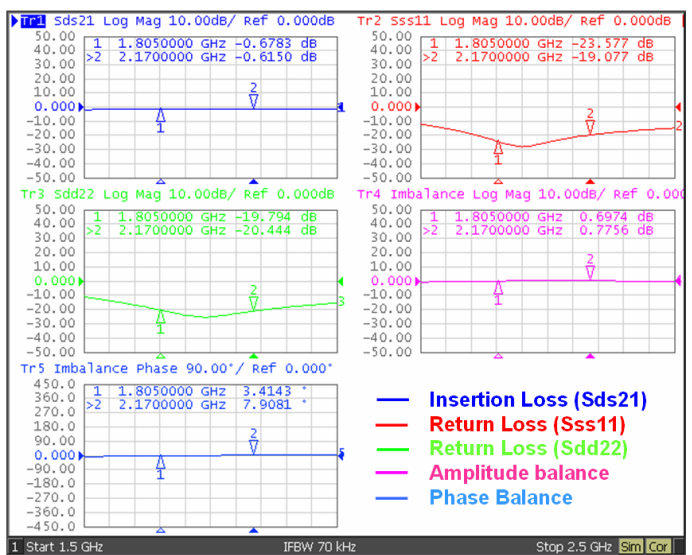
- Operating temperature range -40°C ~ 85°C

Test Instruments : Agilent E5071C Network Analyzer

BTLU0010050G7H6D10



BTLU0010052G0S1A10



- Insertion Loss (Sds21)
- Return Loss (Sss11)
- Return Loss (Sdd22)
- Amplitude balance
- Phase Balance

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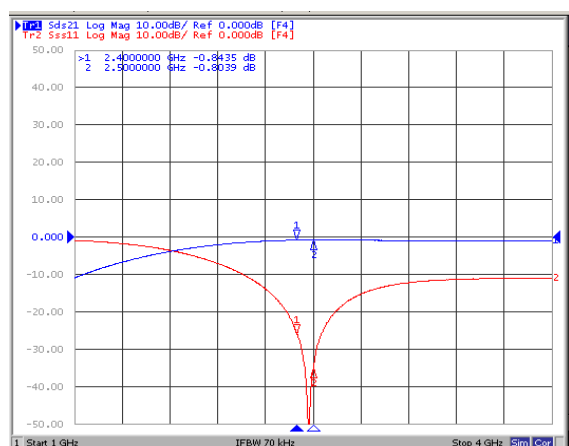
Electrical Characteristics

Part Number	Pass Band (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)Max		Balance Port		Application
		Unbalance	Balance				Amplitude Imbalance	Phase Difference	
BTLU0016082G4S1A10	2400~2500	50	100	10	1.2		2 dB Max	180 \pm 10 $^\circ$	WLAN/BT
BTLU0016082G4S1A20	2400~2500	50	50	10	1.2		2 dB Max	180 \pm 10 $^\circ$	WLAN/BT
BTLU0016082G4S1C20	2400~2500	50	50	10	1.0		2 dB Max	180 \pm 10 $^\circ$	WLAN/BT
BTLU0016083G5S1A20	3300~3800	50	50	10	1.2		2 dB Max	180 \pm 15 $^\circ$	WIMAX
BTLU0016083G8S1A20	3300~4200	50	50	10	1.2		1.5 dB Max	180 \pm 15 $^\circ$	LTE/5G
BTLU0016084G0S1A10	3100~5000	50	100	10	25 $^\circ$ C	1.1	1.2 dB Max	180 \pm 10 $^\circ$	LTE/5G
					-40~85 $^\circ$ C	1.3	1.4 dB Max	180 \pm 12 $^\circ$	
BTLU0016085G5S1E10	4900~5900	50	100	10	1.2		2 dB Max	180 \pm 10 $^\circ$	WLAN

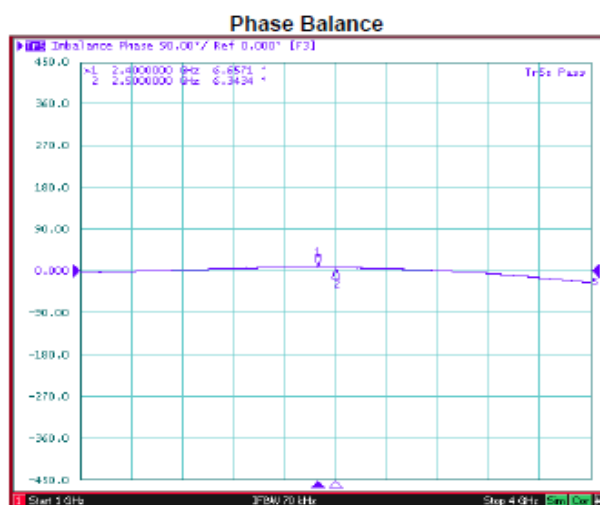
- Operating temperature range -40 $^\circ$ C ~85 $^\circ$ C

Test Instruments : Agilent E5071C Network Analyzer

BTLU0016082G4S1A10



BTLU0016082G4S1A10



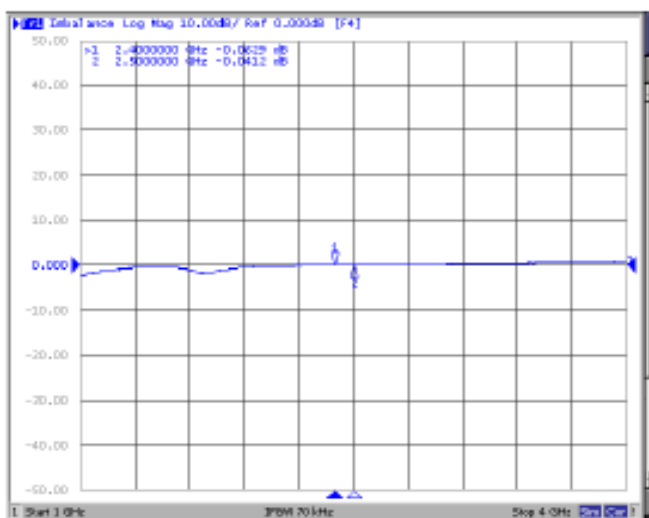
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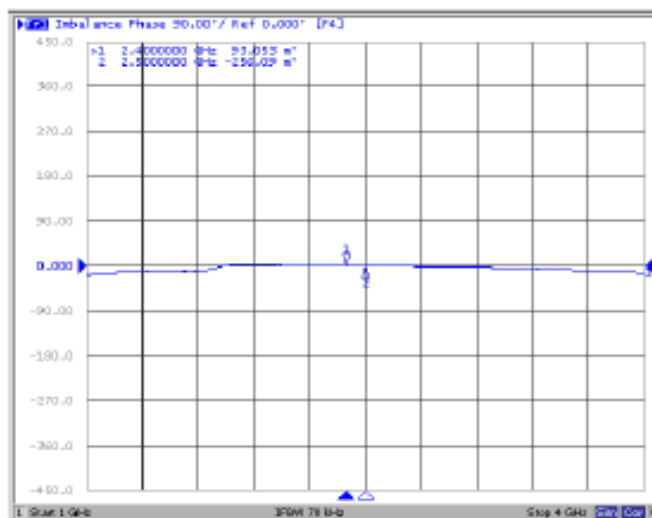
Low Temperature Cofired Ceramic - BTLU Series

BTLU0016082G4S1A20

Amplitude Balance

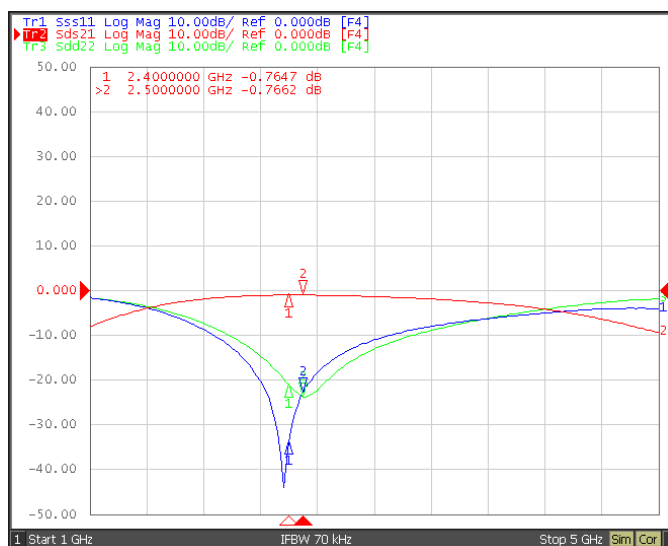


Phase Balance

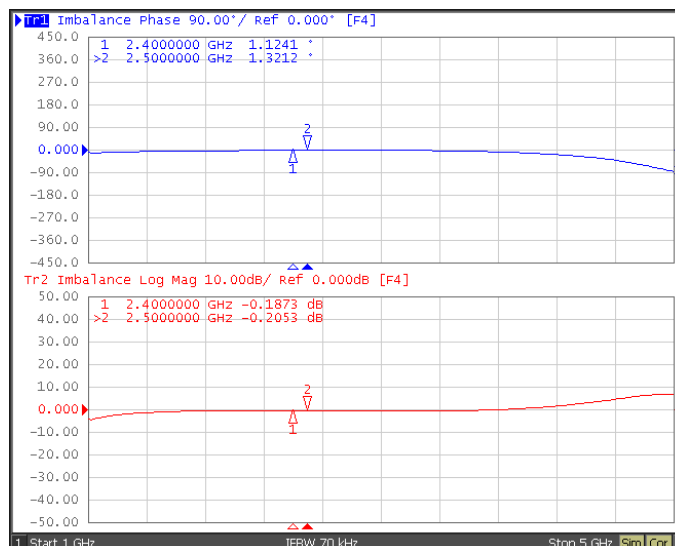


BTLU0016082G4S1C20

Insertion Loss / Return Loss

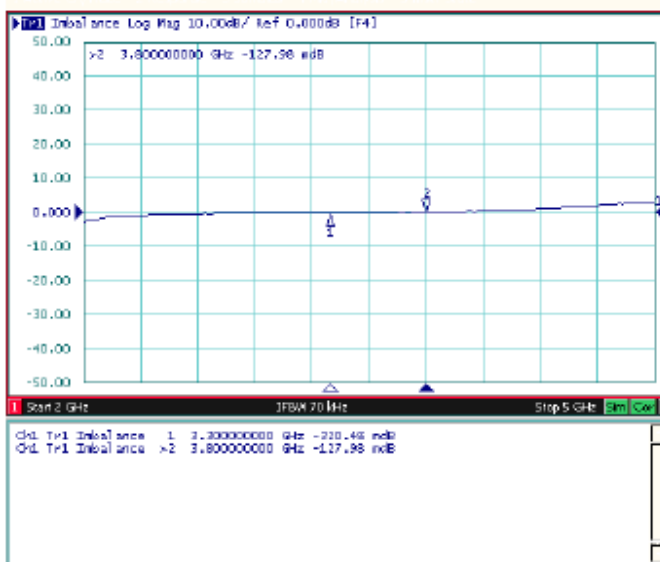
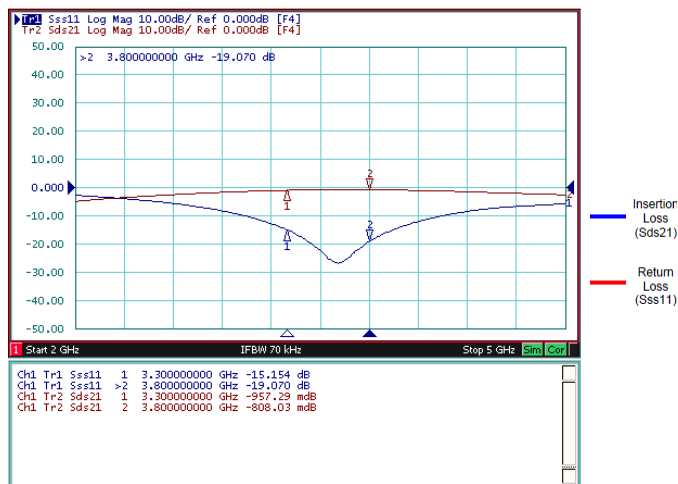


Phase / Amplitude



BTLU0016083G5S1A20

Amplitude Balance

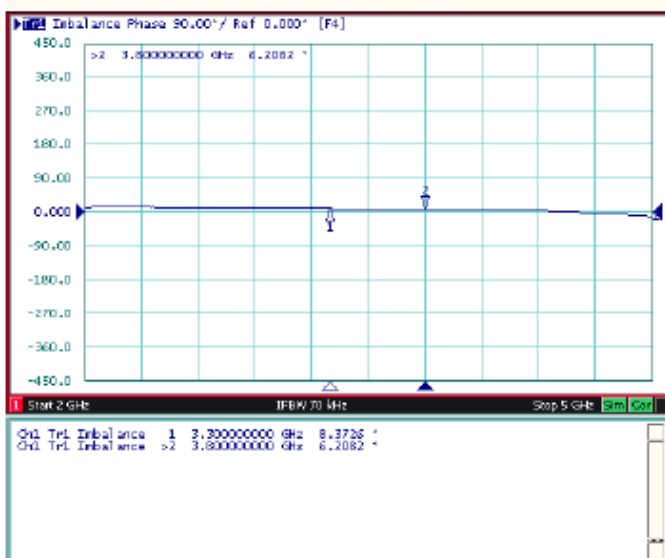


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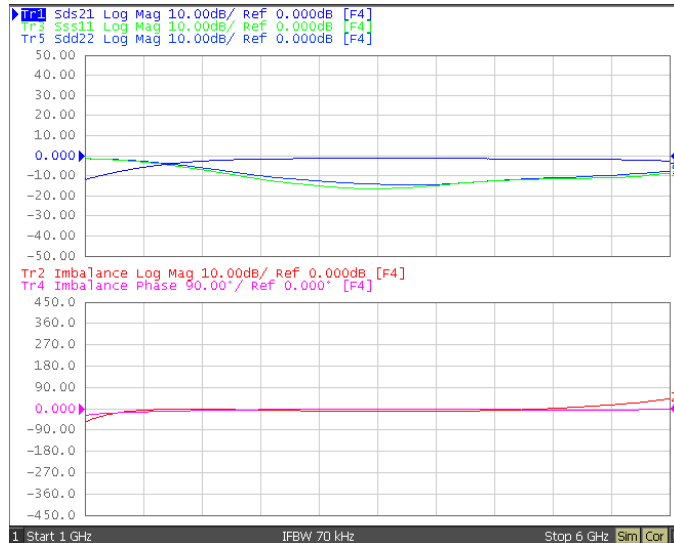
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BTLU0016083G5S1A20

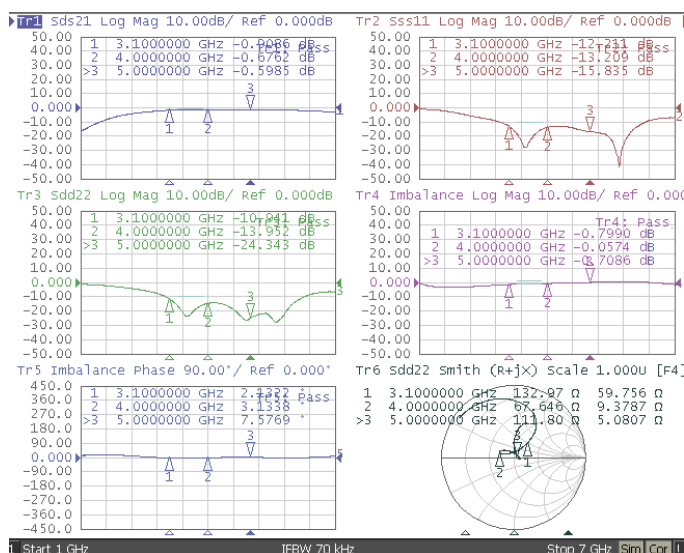
Phase Balance



BTLU0016083G8S1A20



BTLU0016084G0S1A10

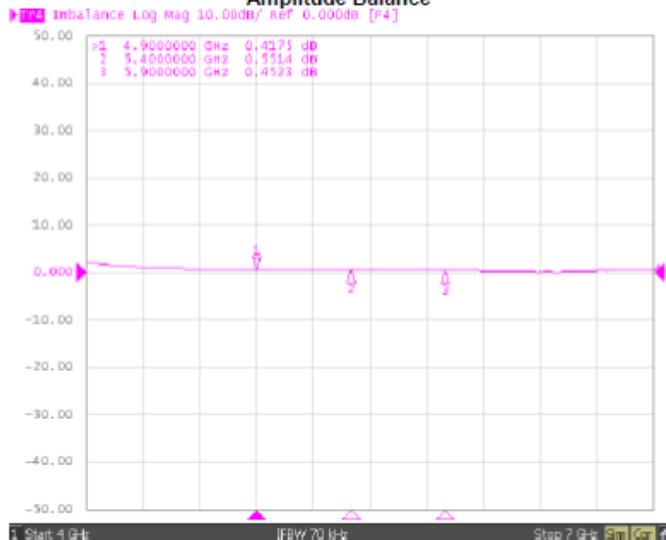


BTLU0016085G5S1E10

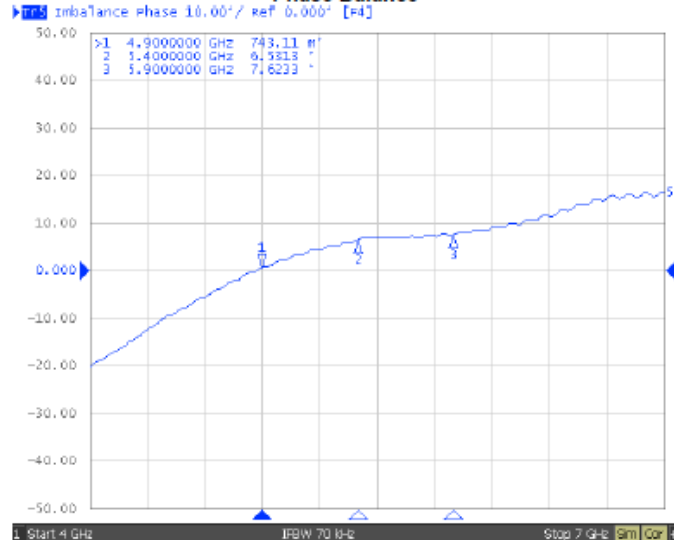


BTLU0016085G5S1E10

Amplitude Balance



Phase Balance



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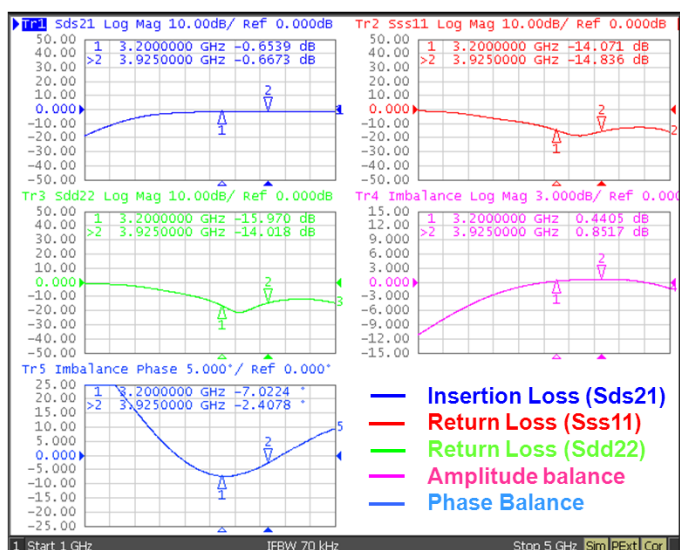
Electrical Characteristics

Part Number	Pass Band (MHz)	Impedance(Ω)		Return Loss (dB)Min	Insertion Loss (dB)Max	Balance Port		Application
		Unbalance	Balance			Amplitude Imbalance	Phase Difference	
BTLU0020123G6S1A30	3200~3925	50	200	10	1.2	1 dB Max	180 \pm 10 $^\circ$	WiMAX

- Operating temperature range $-40^\circ\text{C} \sim 85^\circ\text{C}$

Test Instruments : Agilent E5071C Network Analyzer

BTLU0020123G6S1A30

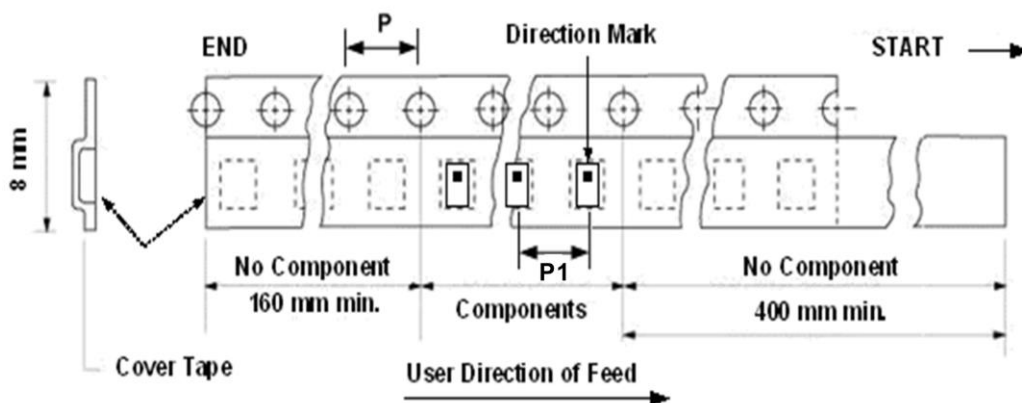


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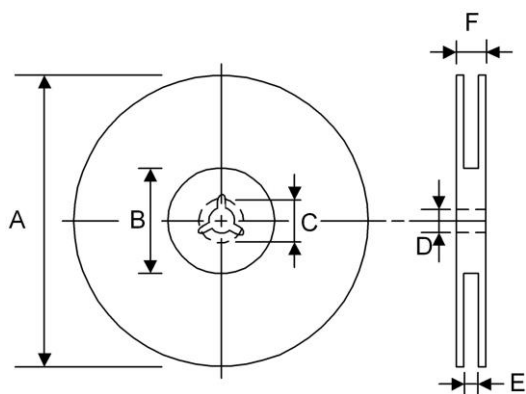
Low Temperature Cofired Ceramic - BTLU Series

Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions		Reel Dimensions						Quantity PCS / REEL
	P	P1	A	B	C	D	E	F	
BTLU000605	4	2	178	60	-	13	9	12	10000
BTLU001005	4	2	178	60	-	13	9	12	10000
BTLU001608	4	4	178	60	-	13	9	12	4000
BTLU002012	4	4	178	60	-	13	9	12	4000