

BTLL 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.

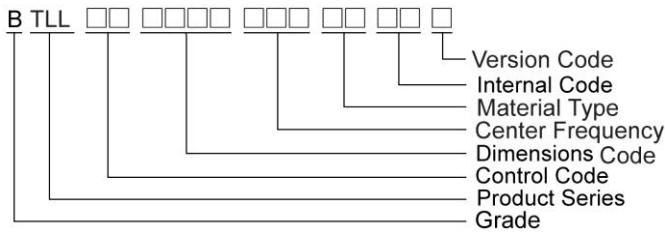
Features

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

Applications

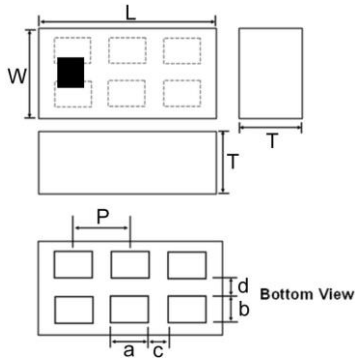
- WLAN ,Home RF, Bluetooth Module, WiMAX Modules, etc.

Product Identification



Shapes and Dimensions

FIG 1



Terminal Configuration

FIG 1.1

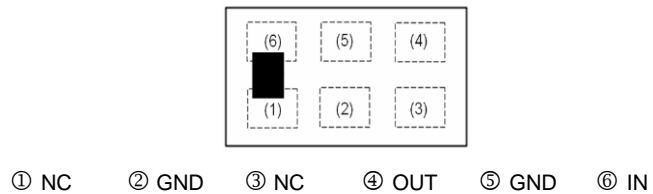


FIG 2

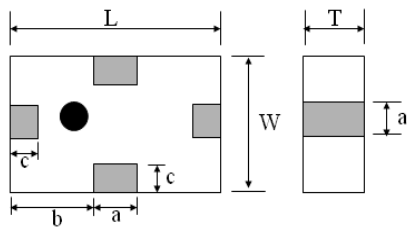
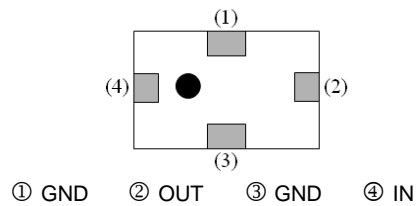
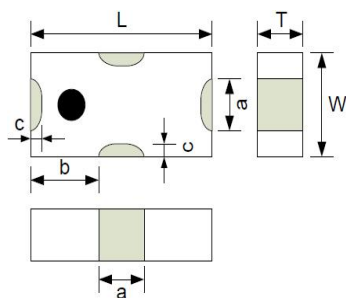


FIG 2.1



Shapes and Dimensions

FIG 3



Terminal Configuration

FIG 3.1

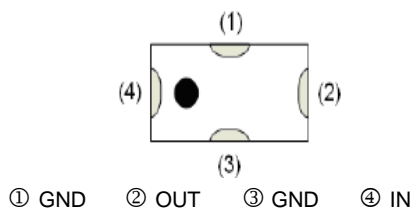


FIG 4

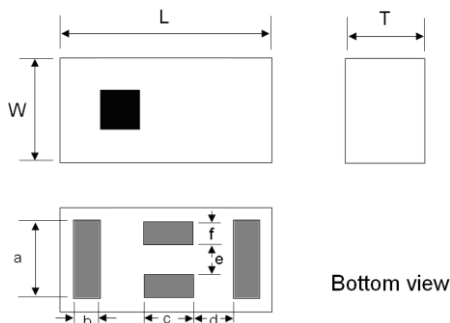


FIG 4.1

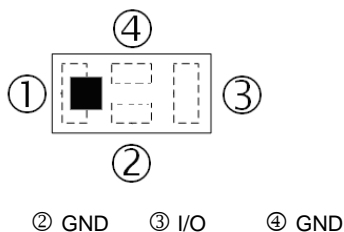


FIG 5

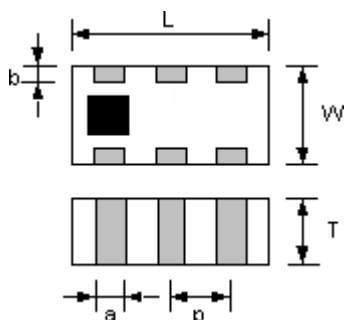
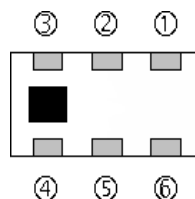


FIG 5.1~3



● 5.1	① IN	② GND	③ OUT	④ GND	⑤ OUT	⑥ GND
● 5.2	① GND	② IN	③ GND	④ GND	⑤ OUT	⑥ GND
● 5.3	① IN	② GND	③ OUT	④ NC	⑤ GND	⑥ NC

FIG 6

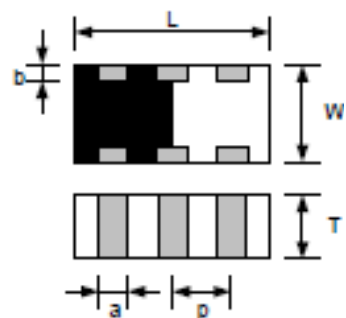
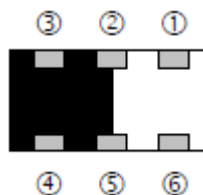


FIG 6.1



① GND ② IN ③ GND ④ GND ⑤ OUT ⑥ GND

FIG 7

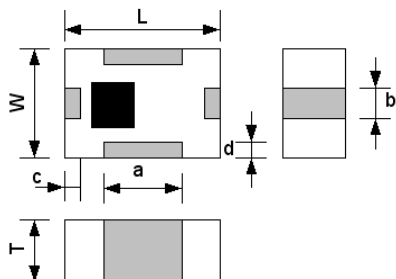
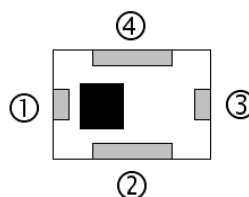


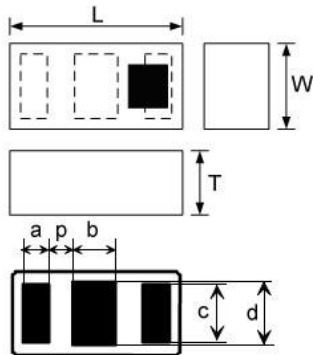
FIG 7.1



① IN ② GND ③ OUT ④ GND

Shapes and Dimensions

FIG 8



Terminal Configuration

FIG 8.1

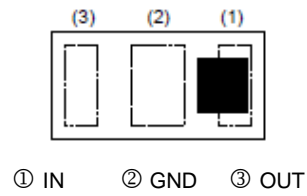


FIG 9

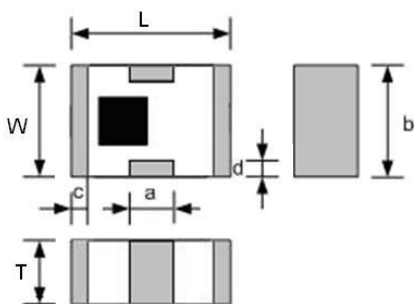


FIG 9.1

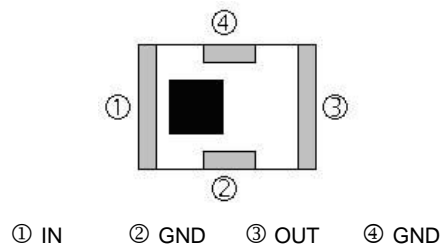


FIG 10

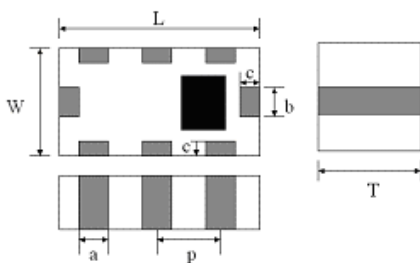


FIG 10.1

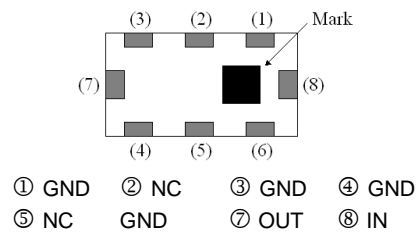


FIG 11

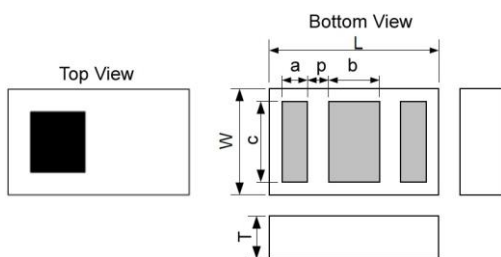
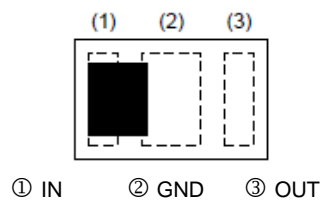


FIG 11.1



Low Temperature Cofired Ceramic - BTLL Series

Dimension in mm

TYPE	FIG	L	W	T	a	b	c	d	P	
BTLL0010050G9H6A30	1	1.0±0.05	0.5±0.05	0.4Max	0.18±0.05	0.125±0.05	0.18±0.05	0.15±0.05	0.36±0.05	
BTLL0010051G7H6A10	1	1.0±0.05	0.5±0.05	0.4±0.1	0.18±0.05	0.125±0.05	0.18±0.05	0.15±0.05	0.36±0.05	
BTLL001005EXVHBA10	1	1.0±0.05	0.5±0.05	0.38±0.05	0.18±0.05	0.125±0.05	0.18±0.05	0.15±0.05	0.36±0.05	
BTLL001005EXVHBB10	1	1.0±0.05	0.5±0.05	0.38±0.05	0.18±0.05	0.125±0.05	0.18±0.05	0.15±0.05	0.36±0.05	
BTLL0010052G4S1A30	2	1.0±0.05	0.5±0.05	0.4±0.05	0.3±0.1	0.35±0.1	0.15±0.05	-	-	
BTLL0010052G4S1G20	3	1.0±0.05	0.5±0.05	0.4±0.05	0.3±0.1	0.35±0.1	0.15±0.05	-	-	
BTLL0016080G8H6A30	5.1	1.6±0.1	0.8±0.1	0.6±0.1	0.2±0.1	0.15±0.1	0.2 ^{+0.1} _{-0.15}	-	0.5±0.05	
BTLL0016082G4S1A10	6	1.6±0.15	0.8±0.1	0.65±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	-	-	0.55±0.1	
BTLL0016082G4S1A30	7	1.6±0.1	0.8±0.1	0.6±0.1	0.7±0.15	0.3 ^{+0.1} _{-0.15}	0.15±0.1	0.15±0.1	-	
BTLL0016082G4S1A50	5.2	1.6±0.15	0.8±0.1	0.6±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	-	-	0.55±0.1	
BTLL0016082G4S1C10	5.2	1.6±0.15	0.8±0.1	0.65±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	-	-	0.55±0.1	
BTLL0016082G4S1C20	5.3	1.6±0.1	0.8±0.1	0.6±0.1	0.2±0.1	0.2 ^{+0.1} _{-0.15}	0.15±0.1	-	0.5±0.05	
BTLL0016082G5S1A20	5.2	1.6±0.15	0.8±0.1	0.65±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	-	-	0.55±0.1	
BTLL0016082G7S1B10	8	1.6±0.1	0.8±0.1	0.65Max	0.25±0.1	0.4±0.1	0.55±0.1	0.6±0.1	0.23±0.05	
BTLL0016083G5S1A20	5.1	1.6±0.1	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	
BTLL0016083G6S1A10	5.2	1.6±0.15	0.8±0.1	0.65±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	-	-	0.55±0.1	
BTLL0016085G5S1A20	9	1.6±0.1	0.8±0.1	0.6±0.1	0.5±0.1	0.8±0.1	0.2±0.1	0.2±0.1	-	
BTLL0020120G9S1B20	10	2±0.1	1.25±0.1	0.85±0.1	0.3±0.1	0.3±0.1	0.3 ^{+0.1} _{-0.2}	-	0.65±0.1	
BTLL0020122G0S1A20	11	1.6±0.1	0.8±0.1	0.65Max	0.25±0.1	0.4±0.1	0.55±0.1	-	0.6±0.1	
BTLL0020125G5S1A20	10	2±0.2	1.25±0.2	0.9±0.1	0.3 ^{+0.1} _{-0.15}	0.3 ^{+0.1} _{-0.15}	0.2±0.15	-	0.65±0.15	
TYPE		L	W	T	a	b	c	d	e	f
BTLL0016080G8H6A10	4	1.6±0.1	0.8±0.1	0.6±0.1	0.65±0.1	0.225±0.05	0.4±0.05	0.3±0.05	0.21±0.05	0.225±0.05

Low Temperature Cofired Ceramic - BTLL Series

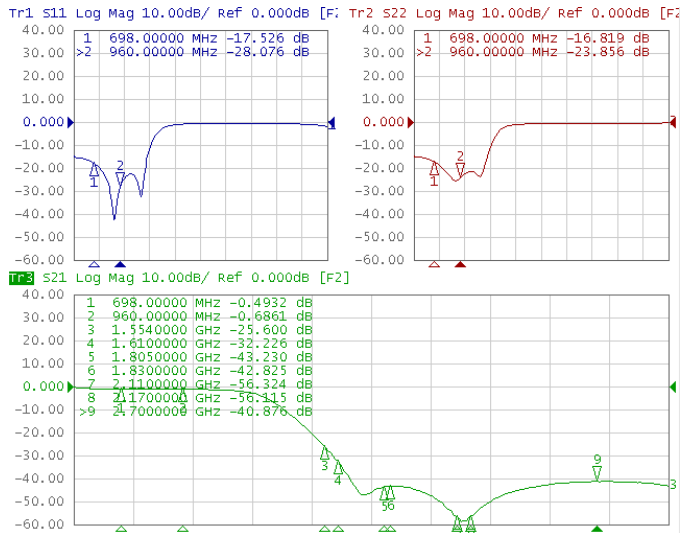
Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)Max	Return Loss (dB)Min	Attenuation	Application
BTLL0010050G9H6A30	698~960	0.9	10	13dB Min. @ 1554~1610 MHz 35dB Min. @ 1805~1830 MHz 35dB Min. @ 2110~2170 MHz 30dB Min. @ 1710~2700 MHz	GSM/WCDMA/LTE
BTLL0010051G7H6A10	1695~2180	0.6	10	20dB Min. @ 3350~4360 MHz 45dB Min. @ 5085~6540 MHz	GSM/WCDMA/LTE
BTLL0010052G4S1A30	2400~2500	0.45(25°C)	11.7	21dB Min. @ 4800~5000 MHz	WLAN/BT
		0.55(-40~85°C)	-	21dB Min. @ 7200~7500 MHz	
BTLL0010052G4S1G20	2400~2500	0.75(25°C)	12.7	30dB Min. @ 4800~5000 MHz	WLAN/BT
		0.9(-40~85°C)	10	35dB Min. @ 7200~7500 MHz	
BTLL001005EXVHBA10	1880~2025	1.4(25°C)	10	10dB Min. @ 2400~2500 MHz 25dB Min. @ 3760~4050 MHz 25dB Min. @ 5150~5850 MHz 25dB Min. @ 5640~6075MHz 25dB Min. @ 7520~8100 MHz	GSM/WCDMA/LTE
		1.6(-40~85°C)		22dB Min. @ 9400~10125 MHz	
BTLL001005EXVHBB10	1710~2025	1.4(25°C)	10	10dB Min. @ 2400~2500 MHz 25dB Min. @ 3420~4050 MHz 25dB Min. @ 5150~5850 MHz 25dB Min. @ 5130~6075 MHz	GSM/WCDMA/LTE
		1.6(-40~85°C)		25dB Min. @ 6840~8100 MHz 22dB Min. @ 8550~10125 MHz	

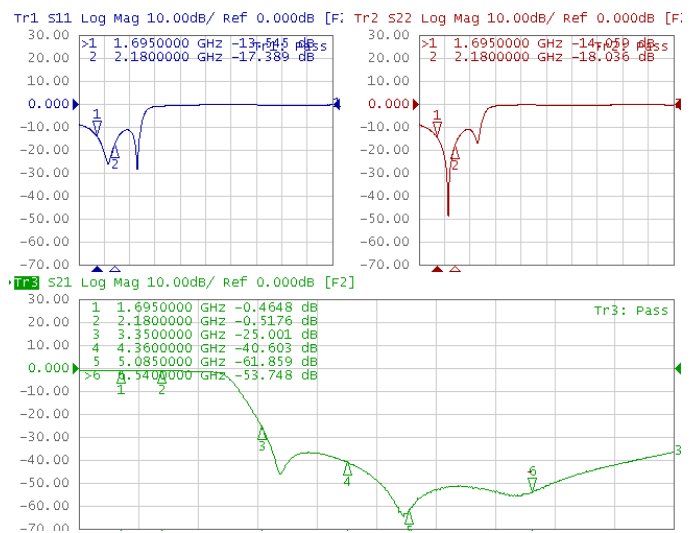
- Operating temperature range -40°C ~ 85°C

Test Instruments : Agilent E5071C Network Analyzer

BTLL0010050G9H6A30



BTLL0010051G7H6A10

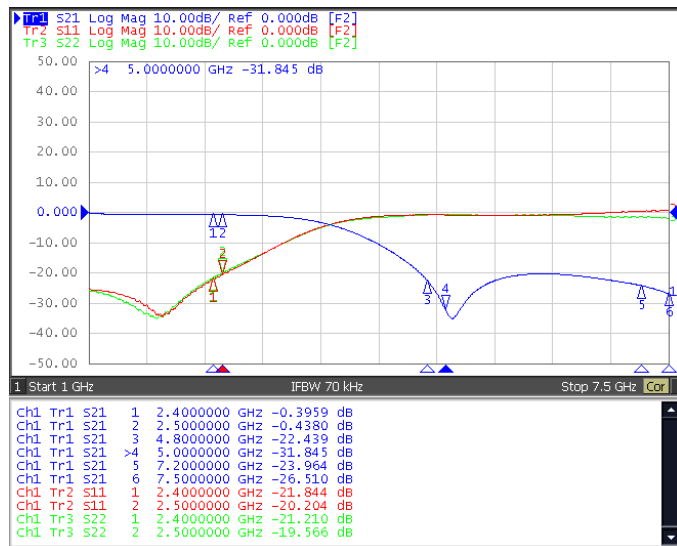


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

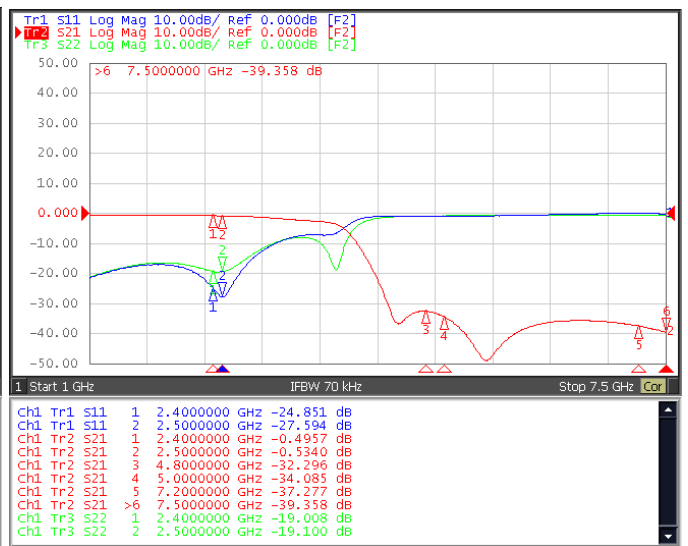
Low Temperature Cofired Ceramic - BTLL Series

Test Instruments : Agilent E5071C Network Analyzer

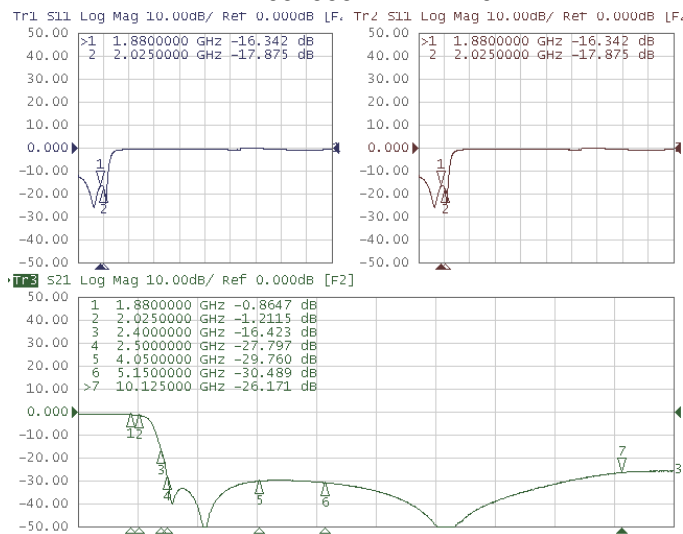
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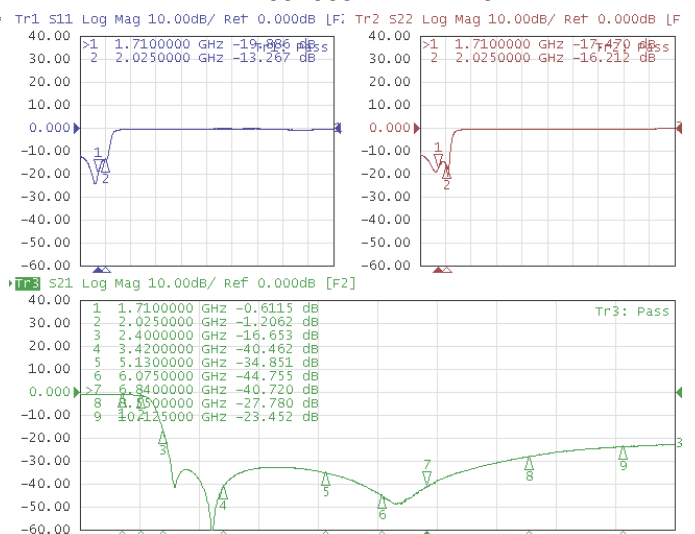
BTLL0010052G4S1G20



BTLL001005EXVHBA10



BTLL001005EXVHBB10



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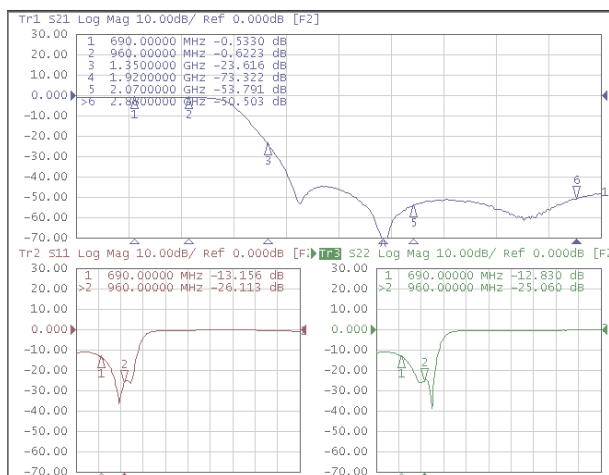
Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)Max	Return Loss (dB)Min	Attenuation	Application
BTLL0016080G8H6A10	690~960	0.9(25°C)	10	20dB Min. @ 1350~1920 MHz	GSM/WCDMA/LTE
		1.1(-40~85°C)		48dB Min. @ 2070~2880 MHz	
BTLL0016080G8H6A30	699~787	0.6	10	30dB Min. @ 1427~1920 MHz	GSM/WCDMA/LTE
	787~960	0.7		30dB Min. @ 2097~2880 MHz	
BTLL0016082G4S1A10	2400~2500	0.55	10	25dB Min. @ 4800~5000 MHz 20dB Min. @ 7200~7500 MHz	WLAN/BT
BTLL0016082G4S1A30	2300~2690	0.8	10	25dB Min. @ 4600~5400 MHz 25dB Min. @ 6900~8070 MHz	WLAN/BT
BTLL0016082G4S1A50	2400~2500	1	10	15dB Min. @ 3200 MHz 20dB Min. @ 3600 MHz 25dB Min. @ 4800~5000 MHz 20dB Min. @ 7200~7500 MHz	WLAN/BT
BTLL0016082G4S1C10	2400~2500	0.48	14	35dB Min. @ 4800~5000 MHz 27dB Min. @ 7200~7500 MHz	WLAN/BT
BTLL0016082G4S1C20	2400~2500	0.5	10	27dB Min. @ 4800~5000 MHz 30dB Min. @ 7200~7500 MHz	WLAN/BT
BTLL0016082G5S1A20	2400~2700	0.45	10	30dB Min. @ 4800~5400 MHz 23dB Min. @ 7200~8100 MHz	WLAN/BT
BTLL0016082G7S1B10	673~2690	0.5(25°C)	10	35dB Min. @ 4950~6000 MHz 37dB Min. @ 6000~7500 MHz	LTE
		0.7(-40~85°C)		23dB Min. @ 7500~8100 MHz 20dB Min. @ 8100~12500 MHz	
BTLL0016083G5S1A20	3300~3800	0.5	10	17dB Min. @ 6600~7600 MHz 20dB Min. @ 9900~11400 MHz	WiMAX
BTLL0016083G6S1A10	3300~3800	0.55	10	35dB Min. @ 6600~7600 MHz 25dB Min. @ 9900~11400 MHz	WiMAX
BTLL0016085G5S1A20	4900~5950	0.7	10	20dB Min. @ 9800 MHz 30dB Min. @ 11900 MHz	WLAN

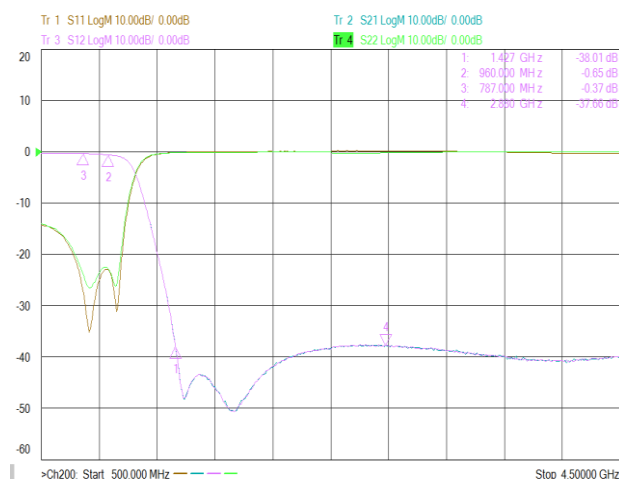
- Operating temperature range -40°C ~ 85°C

Test Instruments : Agilent E5071A Network Analyzer

BTLL0016080G8H6A10



BTLL0016080G8H6A30

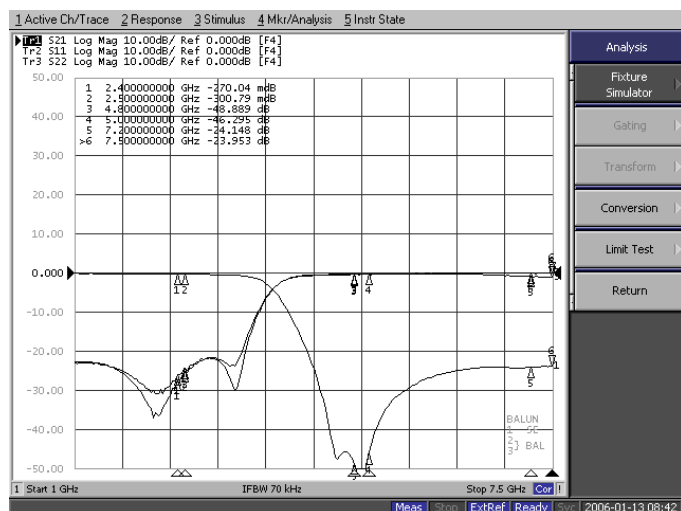


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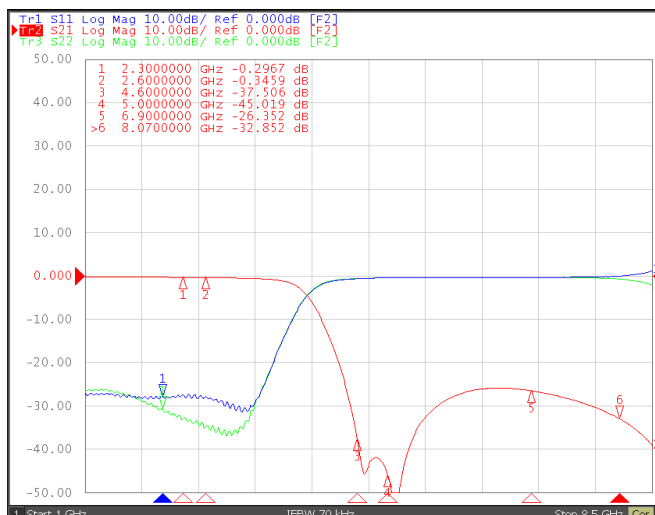
Low Temperature Cofired Ceramic - BTLL Series

Test Instruments : Agilent E5071A Network Analyzer

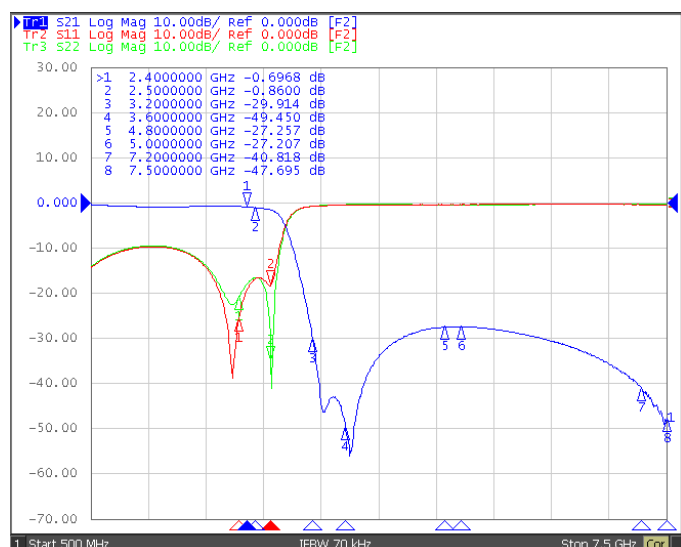
BTLL0016082G4S1A10



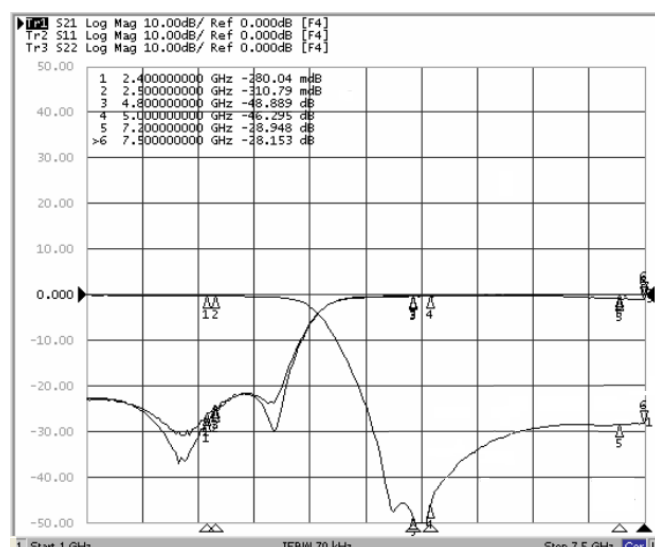
BTLL0016082G4S1A30



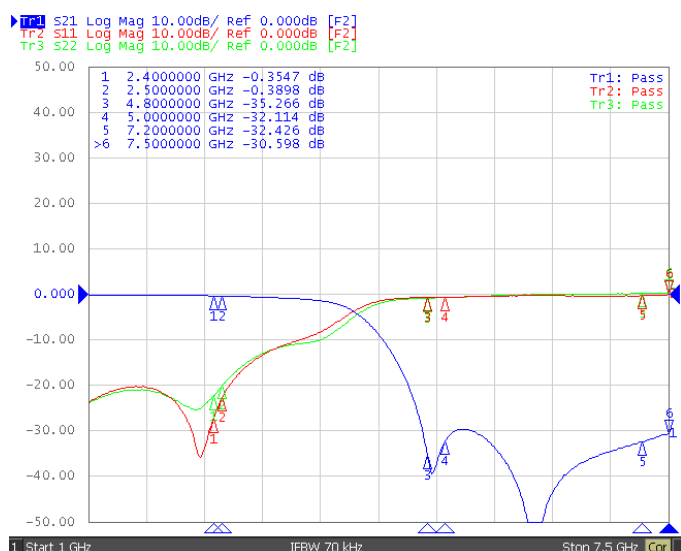
BTLL0016082G4S1A50



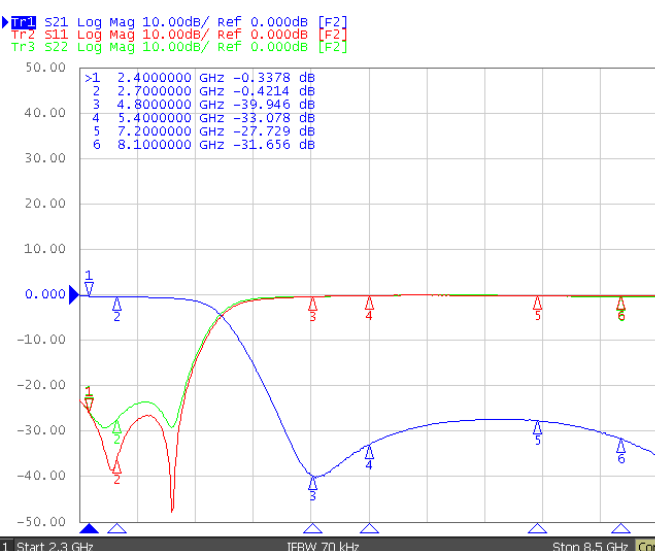
BTLL0016082G4S1C10



BTLL0016082G4S1C20



BTLL0016082G5S1A20

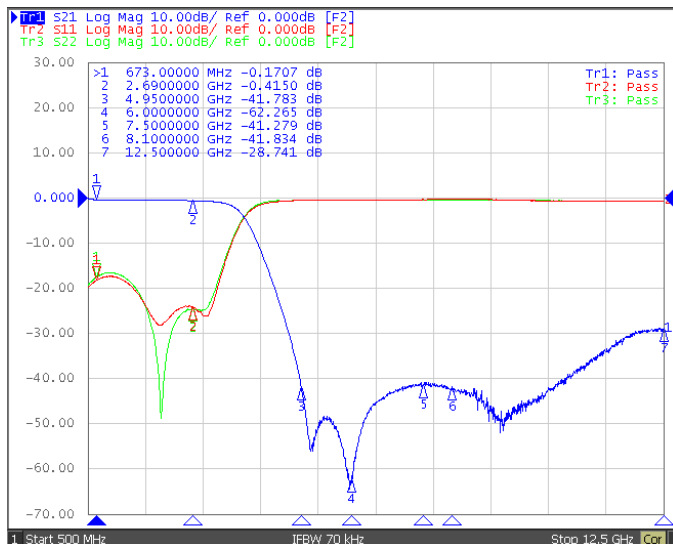


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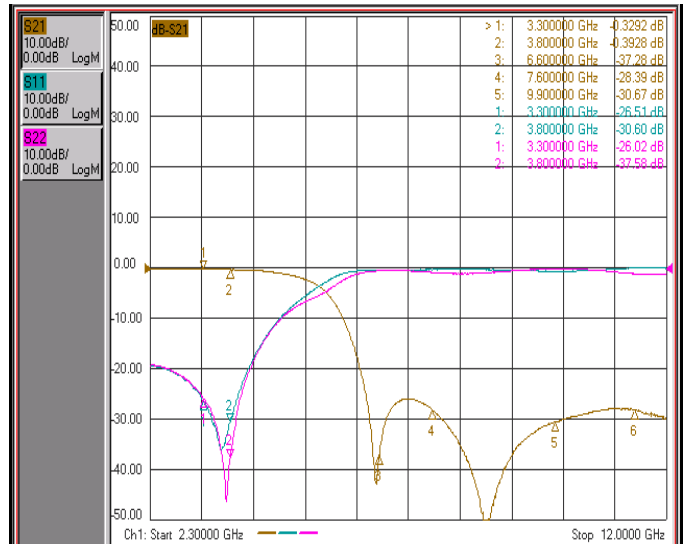
Low Temperature Cofired Ceramic - BTLL Series

Test Instruments : Agilent E5071A Network Analyzer

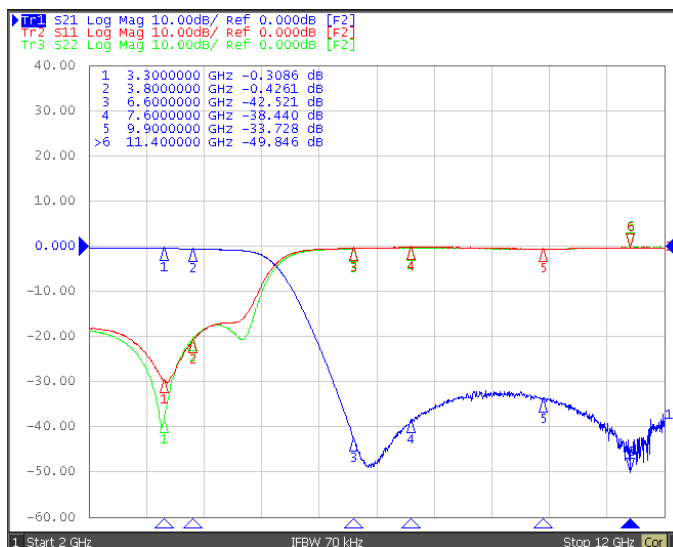
BTLL0016082G7S1B10



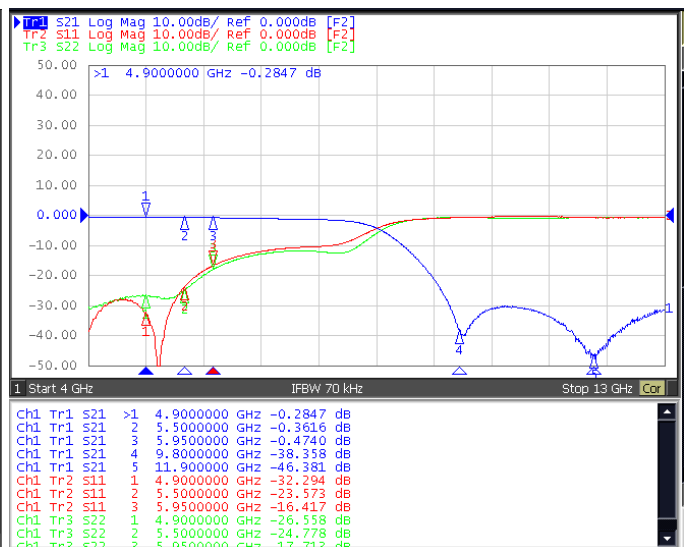
BTLL0016083G5S1A20



BTLL0016083G6S1A10



BTLL0016085G5S1A20



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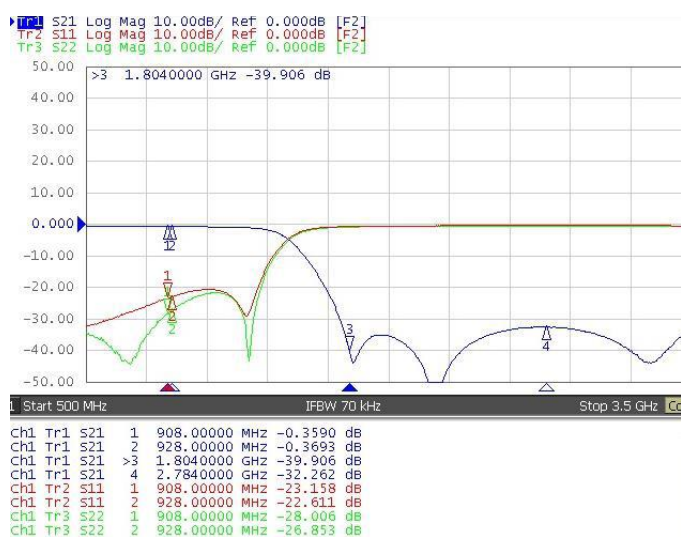
Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)Max	Return Loss (dB)Min	Attenuation	Application
BTLL0020120G9S1B20	902~928	0.65	10	25dB Min. @ 2 x f0 25dB Min. @ 3 x f0	zigbee
BTLL0020122G0S1A20	1880~2025	1.4	10	30dB Min. @ 2400~2500 MHz 25dB Min. @ 4020~4045 MHz 30dB Min. @ 6030~6075 MHz	LTE
BTLL0020125G5S1A20	5149~5875	0.7	10	30dB Min. @ 2 x (f0±363)MHz 20dB Min. @ 3 x (f0±363)MHz	WLAN

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

Test Instruments : Agilent E5071A Network Analyzer

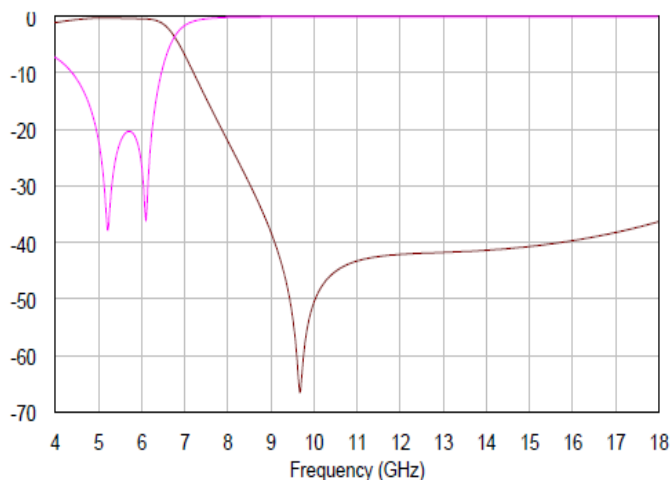
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BTLL0020122G0S1A20



BTLL0020125G5S1A20

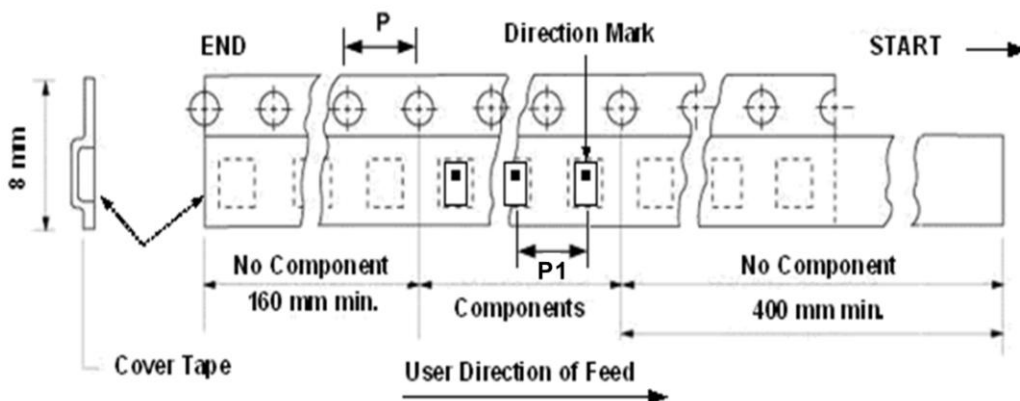


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

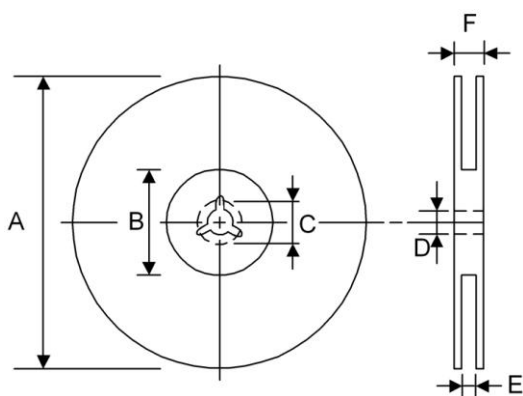
Low Temperature Cofired Ceramic - BTLL Series

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	
BTLL001005	4	2	178	60	-	13	9	12	10000
BTLL001608	4	4	178	60	-	13	9	12	4000
BTLL002012	4	4	178	60	-	13	9	12	4000

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[BD1722J50200AHF](#)