

BTLD 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.

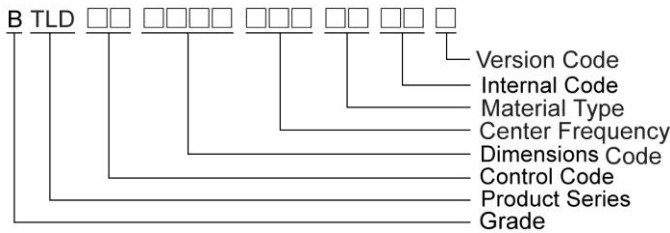
Features

- 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

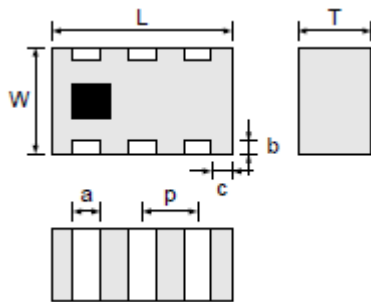
- WLAN ,Home RF, Bluetooth Module, etc.

Product Identification

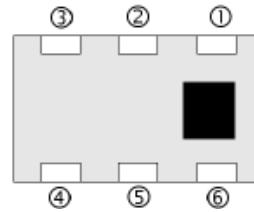


Shapes and Dimensions

FIG 1



Terminal Configuration

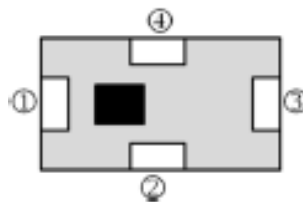
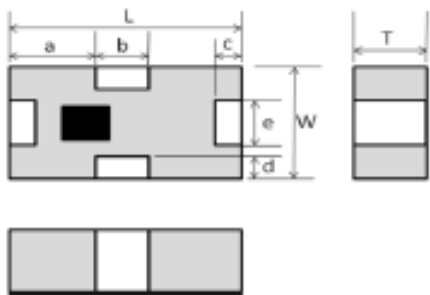


Type	Port			GND
	High Freq.	Low Freq.	Common	
BTLD0016080G9S3A10	④	⑥	②	①③⑤
BTLD0016082G4S1A70	①	③	⑤	②④⑥
BTLD0016082G4S3C00	③	①	⑤	②④⑥
BTLD0016082G4S3YE0	①	③	⑤	②④⑥
BTLD0016082G4S3WE0	①	③	⑤	②④⑥
BTLD0016082G4S3YF0	③	①	⑤	②④⑥
BTLD0016082G4S3WF0	③	①	⑤	②④⑥
BTLD001608MKXSMA10	①	③	⑤	②④⑥
BTLD001608K LXJMA10	①	③	⑤	②④⑥
BTLD001608MKXSPA10	③	①	⑤	②④⑥
BTLD001608K LXJPA10	③	①	⑤	②④⑥
BTLD0020120G9S3A10	③	①	⑤	②④⑥
BTLD0020120G9S3D10	③	①	⑤	②④⑥
BTLD0020122G4S1B50	③	①	⑤	②④⑥
BTLD0020122G4S1B60	①	③	⑤	②④⑥
BTLD0020122G4S1D20	④	⑥	②	①③⑤
BTLD0020122G4S3A70	①	③	⑤	②④⑥
BTLD0020122G4S3A80	③	①	⑤	②④⑥
BTLD0020122G4S3E80	④	⑥	②	①③⑤

Shapes and Dimensions

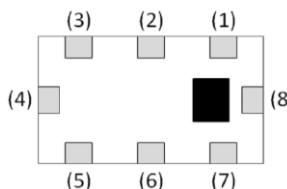
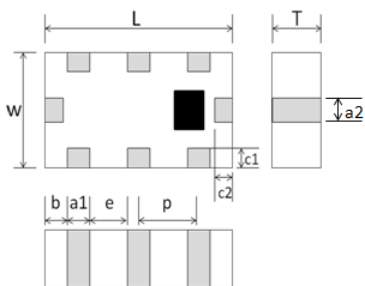
Terminal Configuration

FIG 2



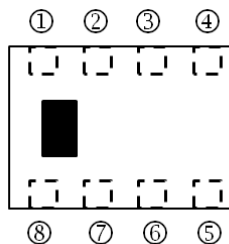
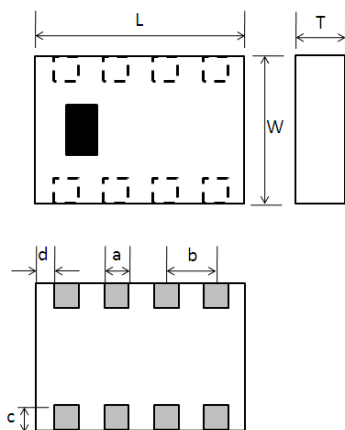
① Low Band ② Common ③ High Band ④ GND

FIG 3



Type	Port			GND	NC
	High Freq.	Low Freq.	Common		
BTLD001608KLXKNA20	①	③	⑥	② ⑤ ⑦	④ ⑧
BTLD001608KLXKQA20	③	①	⑥	② ⑤ ⑦	④ ⑧
BTLD0020122G4S1A30	④	⑧	②	① ③ ⑤ ⑥ ⑦	-
BTLD0020122G4S1A40	④	⑧	⑥	① ② ③ ⑤ ⑦	-

FIG 4



① TRXA ② ⑤ ⑥ ⑧ GND ③ RXG ④ TXG

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Dimension in mm

TYPE	FIG	L	W	T	a	b	c	p			
BTLD0016080G9S3A10	1	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			
BTLD0016082G4S1A70	1	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			
BTLD0016082G4S3C00	1	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			
BTLD0016082G4S3YE0	1	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			
BTLD0016082G4S3YF0	1	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			
BTLD0016082G4S3WE0	1	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			
BTLD0016082G4S3WF0	1	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			
BTLD001608MKXSMA10	1	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			
BTLD001608MKXSPA10	1	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			
BTLD001608KLXJMA10	1	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			
BTLD001608KLXJPA10	1	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			
BTLD0020120G9S3A10	1	2.0±0.15	1.25±0.1	0.9±0.1	0.3±0.15	0.2±0.1	0.2±0.15	0.65±0.15			
BTLD0020120G9S3D10	1	2.0±0.15	1.25±0.1	0.9±0.1	0.3±0.15	0.2±0.1	0.2±0.15	0.65±0.15			
BTLD0020122G4S1B50	1	2.0±0.15	1.25±0.15	0.5±0.1	0.3±0.2	0.3±0.2	0.2±0.2	0.65±0.2			
BTLD0020122G4S1B60	1	2.0±0.15	1.25±0.15	0.5±0.1	0.3±0.2	0.3±0.2	0.2±0.2	0.65±0.2			
BTLD0020122G4S1D20	1	2.0±0.15	1.25±0.15	0.95±0.1	0.3 ^{+0.1} _{-0.15}	0.3 ^{+0.1} _{-0.2}	0.2±0.2	0.65±0.2			
BTLD0020122G4S3A70	1	2.0±0.15	1.25±0.15	0.5±0.1	0.3±0.2	0.3±0.2	0.2±0.2	0.65±0.2			
BTLD0020122G4S3A80	1	2.0±0.15	1.25±0.15	0.5±0.1	0.3±0.2	0.3±0.2	0.2±0.2	0.65±0.2			
BTLD0020122G4S3E80	1	2.0±0.15	1.25±0.15	0.5±0.1	0.3±0.2	0.3±0.2	0.2±0.2	0.65±0.2			
TYPE	FIG	L	W	T	a	b	c	d	e		
BTLD0016082G4S3AL0	2	1.6±0.15	0.8 ^{+0.2} _{-0.1}	0.6 ^{+0.05} _{-0.1}	0.65±0.15	0.3 ^{+0.1} _{-0.15}	0.15±0.1	0.15±0.1	0.3 ^{+0.1} _{-0.15}		
BTLD0020152G4S1A10	4	2.0±0.1	1.5±0.1	0.65±0.1	0.25 ^{+0.1} _{-0.05}	0.5±0.05	0.25 ^{+0.1} _{-0.15}	0.125±0.1	-		
TYPE	FIG	L	W	T	a1	a2	b	c1	c2	e	p
BTLD001608KLXKNA20	3	1.6±0.1	0.8±0.1	0.7Max	0.2±0.1	0.2±0.1	0.2±0.15	0.15±0.1	0.15±0.1	0.3±0.1	0.5±0.05
BTLD001608KLXKQA20	3	1.6±0.1	0.8±0.1	0.7Max	0.2±0.1	0.2±0.1	0.2±0.15	0.15±0.1	0.15±0.1	0.3±0.1	0.5±0.05
BTLD0020122G4S1A30	3	2.0±0.15	1.25±0.1	0.95±0.1	0.3 ^{+0.1} _{-0.15}	0.3 ^{+0.1} _{-0.15}	0.2±0.15	0.3 ^{+0.1} _{-0.2}	0.3 ^{+0.1} _{-0.2}	0.35±0.1	0.65±0.2
BTLD0020122G4S1A40	3	2.0±0.15	1.25±0.1	0.95±0.1	0.3 ^{+0.1} _{-0.15}	0.3 ^{+0.1} _{-0.15}	0.2±0.15	0.3 ^{+0.1} _{-0.2}	0.3 ^{+0.1} _{-0.2}	0.35±0.1	0.65±0.2

Low Temperature Cofired Ceramic - BTLD Series

Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)Max	Return Loss (dB)Min	Attenuation	Application
BTLD0016080G9S3A10	704~960	0.5	14	15dB Min.@ 1710~2170 MHz 10dB Min.@ 2170~2690 MHz	LTE
	1710~1800	0.7	11.8	20dB Min.@ 704~960 MHz	
	1800~1990	0.6			
	1990~2170	0.55			
	2170~2690	1.4	6.5		
BTLD0016082G4S1A70	2400~2500	0.6	10	20dB Min.@ 4800~6000 MHz 20dB Min.@ 7200~7500 MHz	WLAN
	5100~5900	1.4	10	35dB Min.@ 2400~2500 MHz 18dB Min.@ 3300~3900 MHz 12dB Min.@ 9800~11900 MHz	
BTLD0016082G4S3AL0	2400~2500	0.4	12.74	20dB Min.@ 4900~5850 MHz	WLAN
	4900~5850	0.6	10.16	20dB Min.@ 2400~2500 MHz	
BTLD0016082G4S3C00	2400~2500	0.7	10	25dB Min.@ 4800~6000 MHz 23dB Min.@ 7200~7500 MHz	WLAN
	4900~5950	1.1	10	23dB Min.@ 1800~2700 MHz 15dB Min.@ 9800~11900 MHz	
BTLD0016082G4S3YE0	2400~2500	0.45	12.74	21dB Min.@ 4800~5000 MHz 23dB Min.@ 5000~6000 MHz 25dB Min.@ 7200~7500 MHz	WLAN
	4900~5950	0.75	11.73	27dB Min.@ 824~2170 MHz 32dB Min.@ 2400~2500 MHz 23dB Min.@ 9800~11900 MHz	
BTLD0016082G4S3YF0	2400~2500	0.45	12.74	21dB Min.@ 4800~5000 MHz 23dB Min.@ 5000~6000 MHz 25dB Min.@ 7200~7500 MHz	WLAN
	4900~5950	0.75	11.73	27dB Min.@ 824~2170 MHz 32dB Min.@ 2400~2500 MHz 23dB Min.@ 9800~11900 MHz	

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

Low Temperature Cofired Ceramic - BTLD Series

Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB) Max(Typ)	Return Loss (dB)Min	Isolation (dB)Min	Attenuation	Application
BTLD0016082G4S3WE0	2400~2500	0.5	10	30	21dB Min.@ 4800~5000 MHz 23dB Min.@ 5000~6000 MHz 25dB Min.@ 7200~7500 MHz	WLAN
	4900~5950	0.75	10	20	26dB Min.@ 824~1990 MHz 30dB Min.@ 2170~2500 MHz 10dB Min.@ 8100~8800 MHz 15dB Min.@ 8820~9800 MHz 23dB Min.@ 9800~11900 MHz	
BTLD0016082G4S3WF0	2400~2500	0.5	10	30	21dB Min.@ 4800~5000 MHz 23dB Min.@ 5000~6000 MHz 25dB Min.@ 7200~7500 MHz	WLAN
	4900~5950	0.75	10	20	26dB Min.@ 824~1990 MHz 30dB Min.@ 2170~2500 MHz 10dB Min.@ 8100~8800 MHz 15dB Min.@ 8820~9800 MHz 23dB Min.@ 9800~11900 MHz	
BTLD001608KLXKNA20 BTLD001608KLXKQA20	2400~2500	25°C 0.35(0.3) -40~85°C 0.45(0.3)	10.88	-	20dB Min.@ 4800~5000 MHz 26dB Typ.@ 4800~5000 MHz 22dB Min.@ 5000~5950 MHz 25.5dB Typ.@ 5000~5950 MHz 20dB Min.@ 7200~7500 MHz 26dB Typ.@ 7200~7500 MHz	WLAN
	4900~5950	25°C 0.50(0.4) -40~85°C 0.60(0.4)			26dB Min.@ 824~2170 MHz 27dB Typ.@ 824~2170 MHz 30dB Min.@ 2400~2500 MHz 40dB Typ.@ 2400~2500 MHz 25dB Min.@ 9800~11900 MHz 27.5dB Typ.@ 9800~11900 MHz 15dB Min.@ 15000~18000 MHz 25dB Typ.@ 15000~18000 MHz	
BTLD001608MKXSMA10 BTLD001608MKXSPA10	1550~1580	0.6	10	20	12dB Min.@ 2400~2500 MHz	GPS/WLAN
	1594~1610	0.7			12dB Min.@ 4900~6000 MHz	
	2400~2500	0.7		12	20dB Min.@ 1550~1610 MHz	
	4900~6000	0.6				
BTLD001608KLXJPA10 BTLD001608KLXJMA10	2400~2500	25°C 0.6 -40~105°C 0.8	10(24.1)	38(43.3)	30dB Min.@ 4800~5000 MHz 37.2dB Typ.@ 4800~5000 MHz 30dB Min.@ 5000~5950 MHz 38.1dB Typ.@ 5000~5950 MHz 30dB Min.@ 7200~7500 MHz 38.3dB Typ.@ 7200~7500 MHz	WLAN
	4900~5950	25°C 0.78 -40~105°C 0.98	10(15.2)	38(39.3)	26dB Min.@ 824~2170 MHz 31.9dB Typ.@ 824~2170 MHz 30dB Min.@ 2400~2500 MHz 43.2dB Typ.@ 2400~2500 MHz 25dB Min.@ 9800~11900 MHz 28.8dB Typ.@ 9800~11900 MHz 15dB Min.@ 14700~17850 MHz 18.5dB Typ.@ 14700~17850 MHz	

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

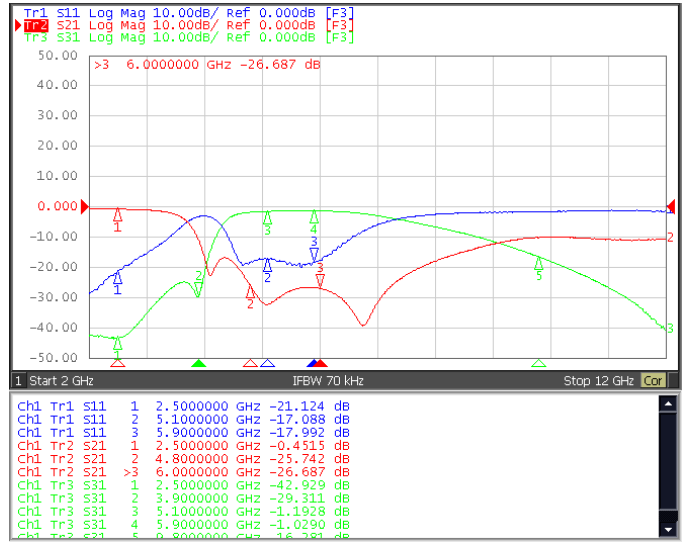
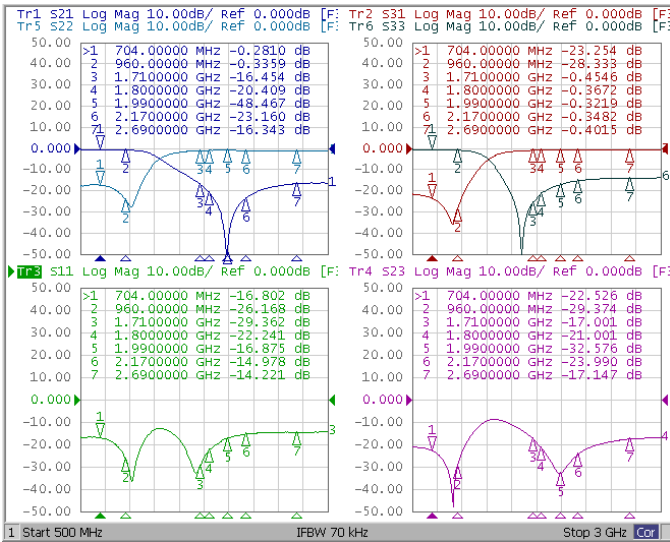
Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin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

Low Temperature Cofired Ceramic - BTLD Series

Test Instruments : Agilent E5071C Network Analyzer

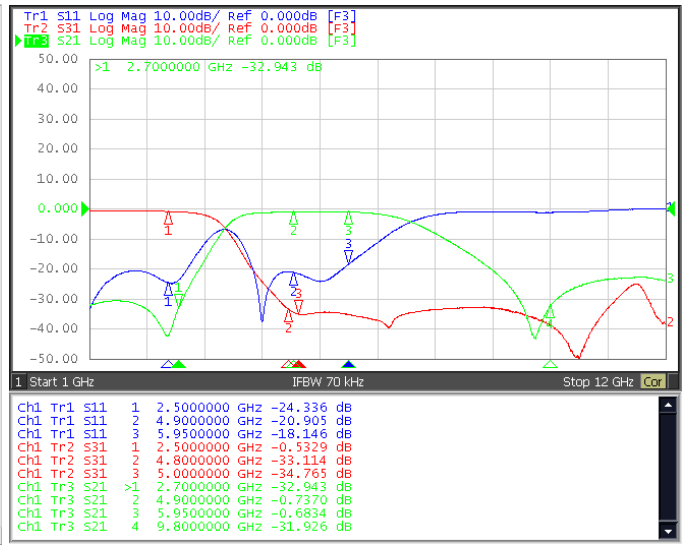
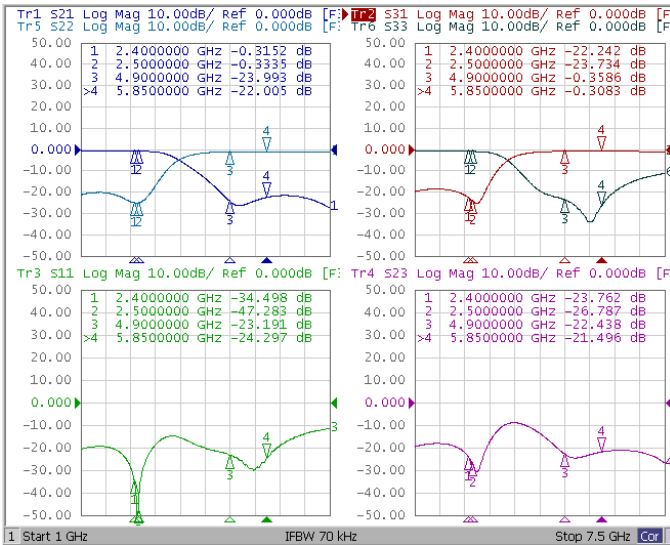
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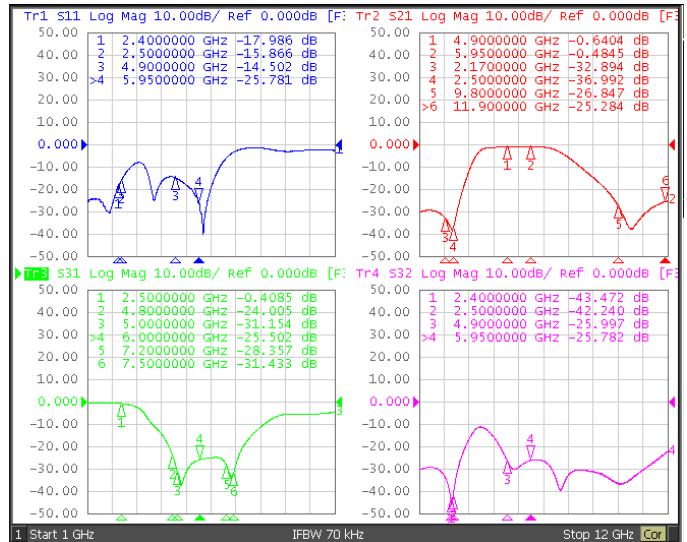
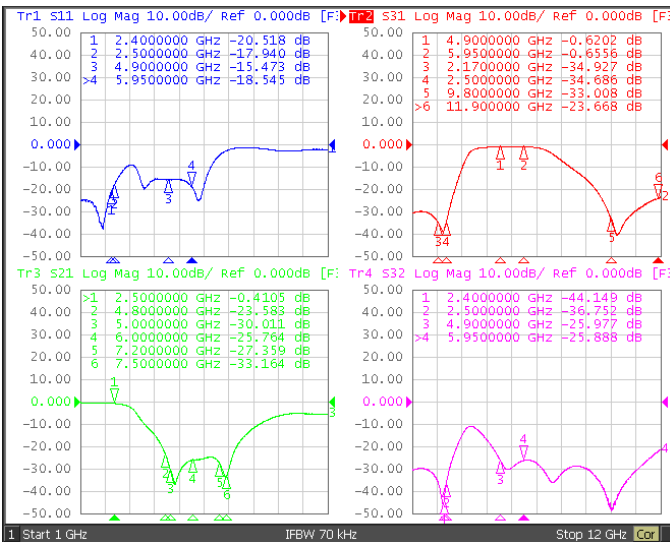
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BTLD0016082G4S3C00



BTLD0016082G4S3YE0

BTLD0016082G4S3YF0



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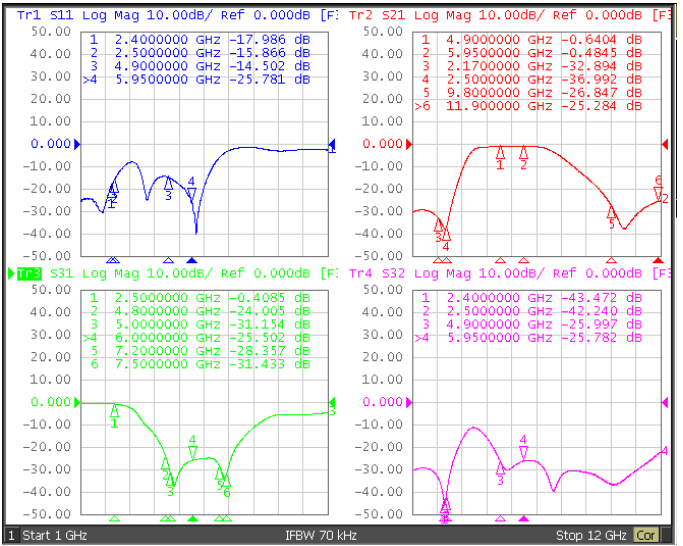
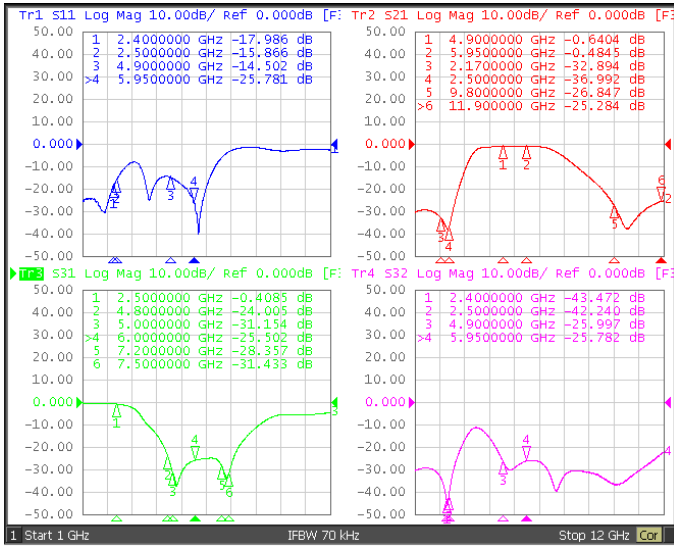


Low Temperature Cofired Ceramic - BTLD Series

Test Instruments : Agilent E5071C Network Analyzer

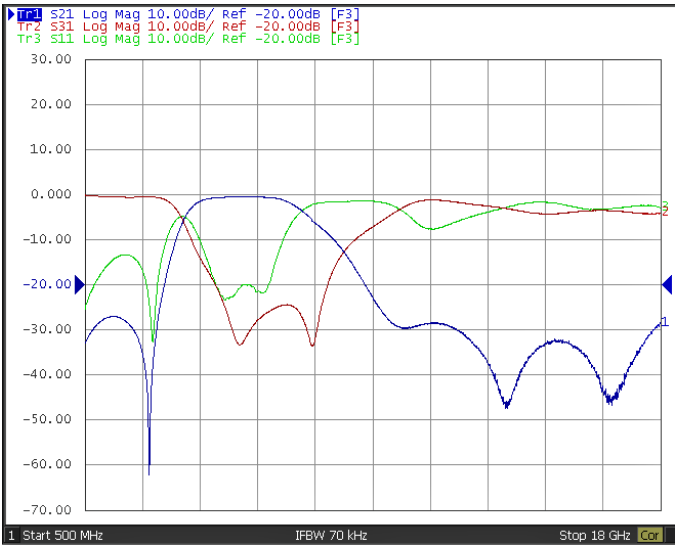
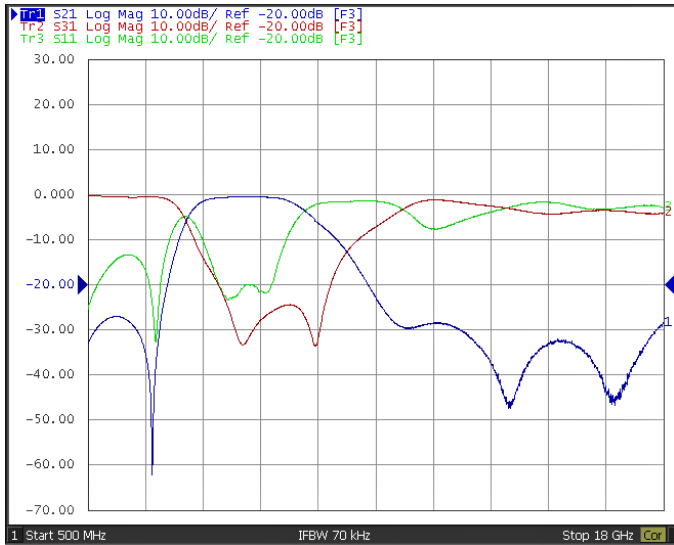
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BTLD0016082G4S3WF0



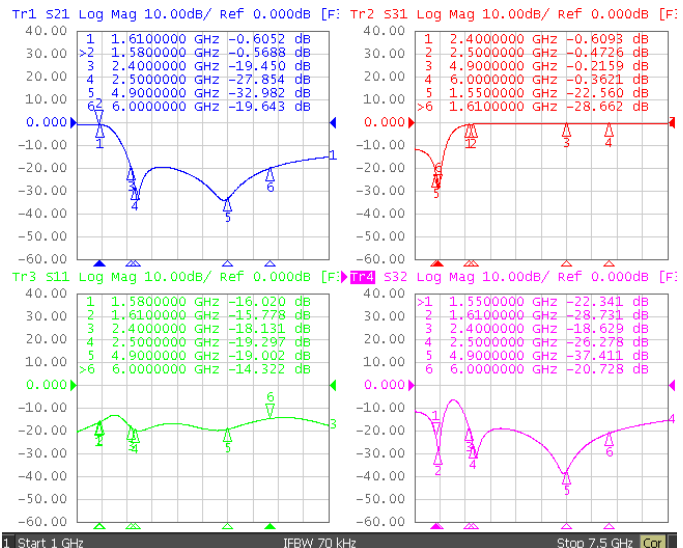
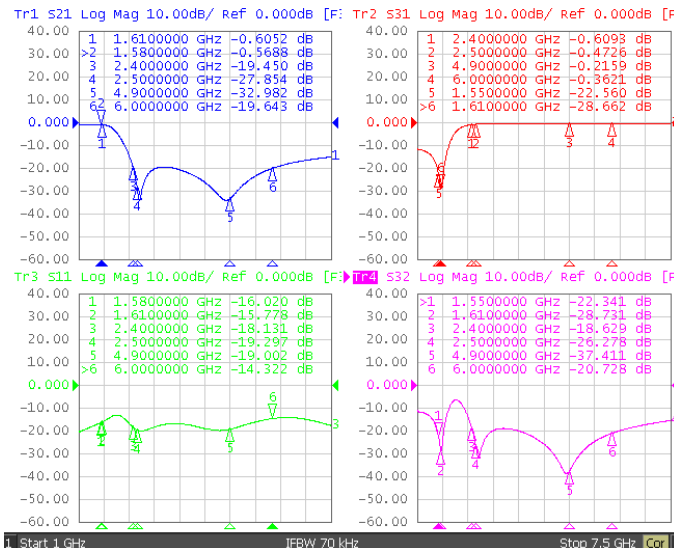
BTLD001608KLXKNA20

BTLD001608KLXKQA20



BTLD001608MKXSMA10

BTLD001608MKXSPA10



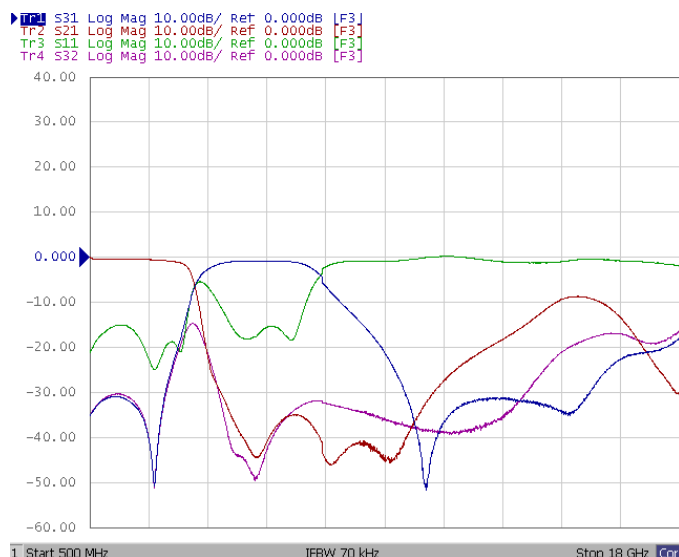
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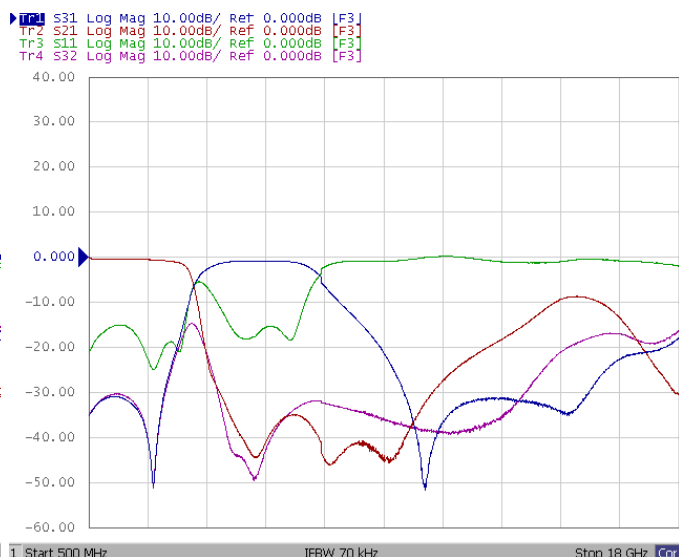
Low Temperature Cofired Ceramic - BTLD Series

Test Instruments : Agilent E5071C Network Analyzer

BTLD001608KLXIPA10



BTLD001608KLXJMA10



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Low Temperature Cofired Ceramic - BTLD Series

Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)Max	Return Loss (dB)Min	Attenuation	Isolation (dB)Min	Application
BTLD0020120G9S3A10	824~960	0.45	15	13dB Min. @ 1710~2170 MHz	19	LTE
	1710~2170	0.65	13	15dB Min. @ 824~960 MHz	13	
BTLD0020120G9S3D10	698~960	0.45	10	13dB Min. @ 1710~2690 MHz	19	LTE
	1710~2690	0.55	10	19dB Min. @ 698~960 MHz	13	
BTLD0020122G4S1A30	2400~2500	0.7	11.73	20dB Min. @ 4800~6000 MHz	-	WLAN
	4900~5850	0.9	10.88	20dB Min. @ 2400~2500 MHz	-	
BTLD0020122G4S1A40	2400~2500	0.7	11.73	20dB Min. @ 4800~6000 MHz	-	WLAN
	4900~5850	0.9	10.88	20dB Min. @ 2400~2500 MHz	-	
BTLD0020122G4S1B50	2400~2500	25°C 0.5	10	20dB Min. @ 4800~5000 MHz	-	WLAN
		-40~85°C 0.65		20dB Min. @ 7200~7500 MHz		
	4900~5950	25°C 1	10	20dB Min. @ 2400~2500 MHz	-	
		-40~85°C 1.15		15dB Min. @ 9800~11900 MHz		
BTLD0020122G4S1B60	2400~2500	25°C 0.5	10	20dB Min. @ 4800~5000 MHz	-	WLAN
		-40~85°C 0.7		20dB Min. @ 7200~7500 MHz		
	4900~5950	25°C 1	10	20dB Min. @ 1800~2500 MHz	-	
		-40~85°C 1.2		15dB Min. @ 9800~11900 MHz		
BTLD0020122G4S1D20	2400~2500	0.7	10	20dB Min. @ 4800~6000 MHz	-	WLAN
				15dB Min. @ 7200~7500 MHz		
	4900~5950	1	10	20dB Min. @ 1800~2500 MHz	-	
				25dB Min. @ 9800~11900 MHz		
				15dB ref. @ 14700~17850 MHz	-	
BTLD0020122G4S3A70	2400~2500	0.5	10	20dB Min. @ 4800~6000 MHz	-	WLAN
				22dB Min. @ 7200~7500 MHz		
	4900~5950	0.65	10	22dB Min. @ 824~915 MHz	-	
				22dB Min. @ 1800~2500 MHz		
				15dB Min. @ 9800~11900 MHz	-	
BTLD0020122G4S3A80	2400~2500	0.5	10	20dB Min. @ 4800~6000 MHz	-	WLAN
				22dB Min. @ 7200~7500 MHz		
	4900~5950	0.65	10	22dB Min. @ 824~915 MHz	-	
				22dB Min. @ 1800~2500 MHz		
				15dB Min. @ 9800~11900 MHz	-	
BTLD0020122G4S3E80	2400~2500	0.5	10	20dB Min. @ 4800~6000 MHz	-	WLAN
				22dB Min. @ 7200~7500 MHz		
	4900~5950	0.65	10	22dB Min. @ 824~915 MHz	-	
				25dB Min. @ 1800~2500 MHz		
				20dB Min. @ 9800~11900 MHz	-	

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

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Low Temperature Cofired Ceramic - BTLD Series

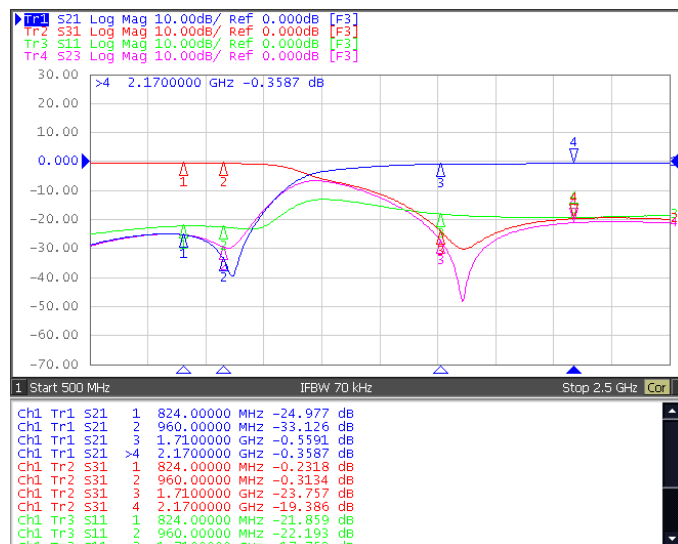
Electrical Characteristics

Part Number	Pass Band (MHz)	Impedance(Ω)		Insertion Loss (dB)Max	Return Loss (dB)Min	Attenuation	Isolation (dB)Min	Application
		ANT Port	RX/TX Port					
BTLD0020152G4S3A10	2400~2500	50	RX: Conj. match to MT7668	25°C 2.2 105°C 2.5	10	21dB Min.@ 4800~5000 MHz 23dB Min.@ 5000~5950 MHz 20dB Min.@ 7200~7500 MHz	30dB Min @ 4900~5950 MHz	WLAN/BT
	2400~2500	50	TX: Conj. match to MT7668	25°C 1.5 105°C 1.8	10	27dB Min.@ 4800~5000 MHz 23dB Min.@ 5000~5950 MHz 20dB Min.@ 7200~7500 MHz		
	4900~5950	50	50	25°C 1.3 105°C 1.6	10	30dB Min.@ 2400~2500 MHz 10dB Min.@ 8100~8800 MHz 15dB Min.@ 8820~9800 MHz 23dB Min.@ 9800~11900 MHz	25dB Min @ 2400~2500 MHz	

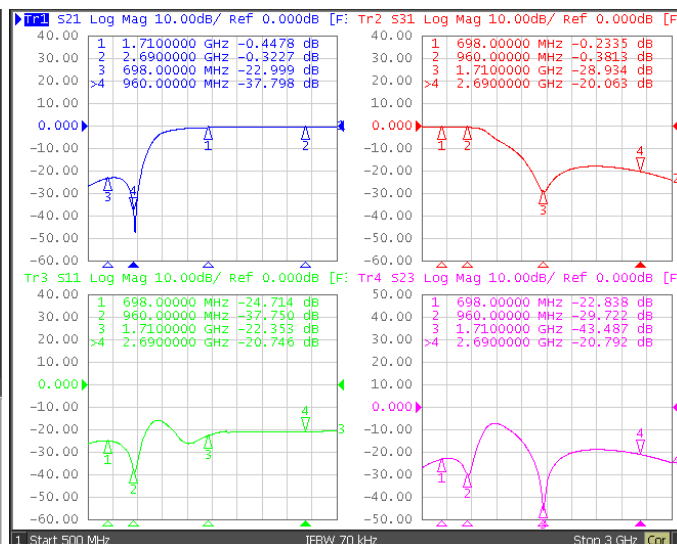
- Operating temperature range $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Test Instruments : Agilent E5071C Network Analyzer

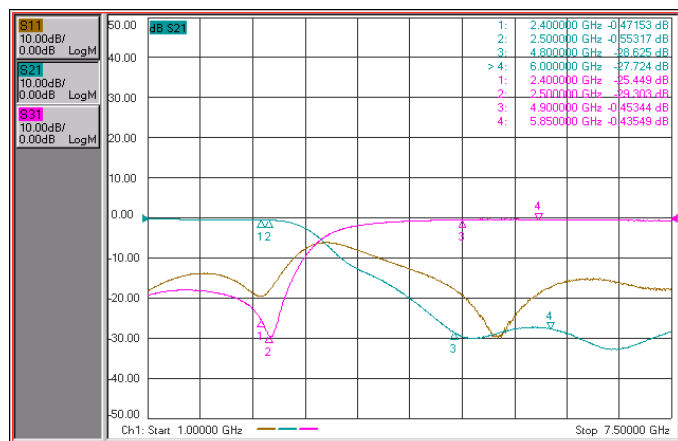
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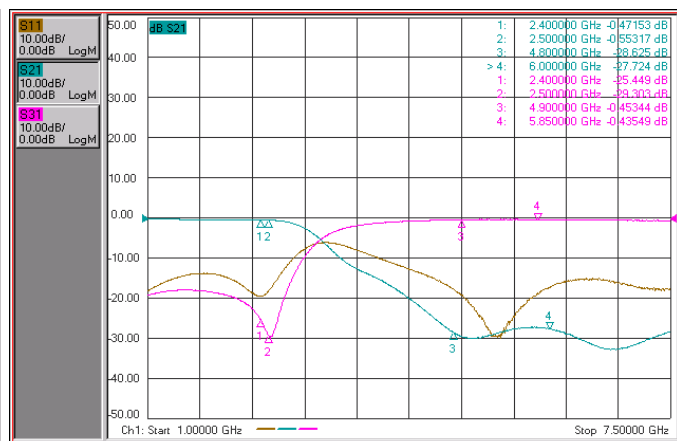
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BTLD0020122G4S1A30



BTLD0020122G4S1A40



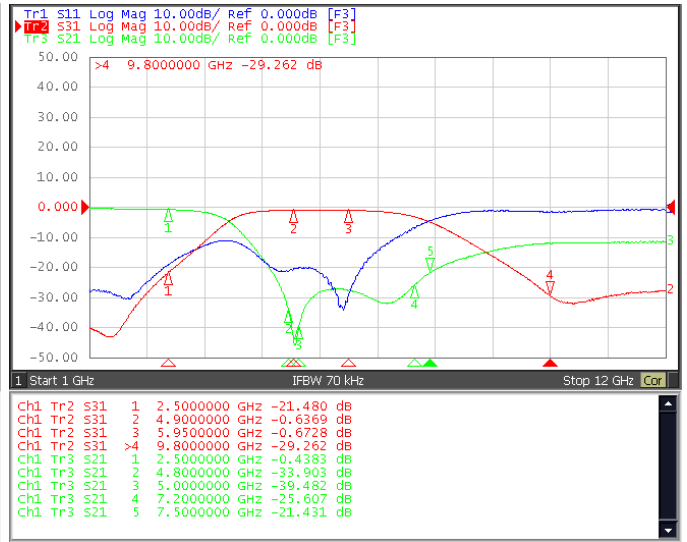
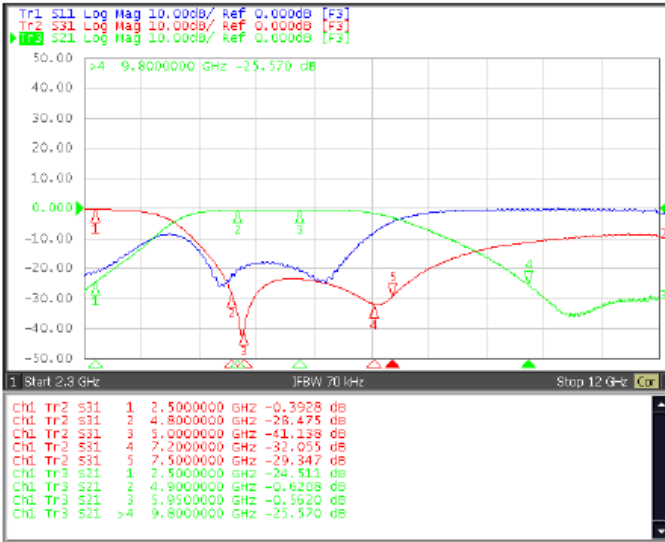
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Low Temperature Cofired Ceramic - BTLD Series

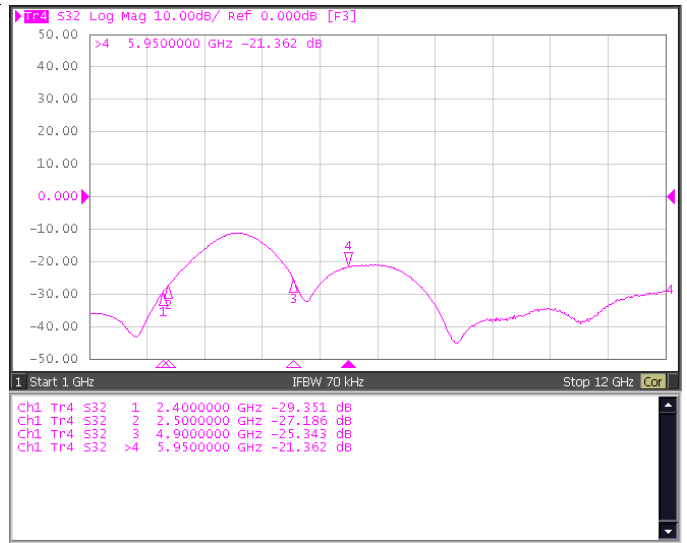
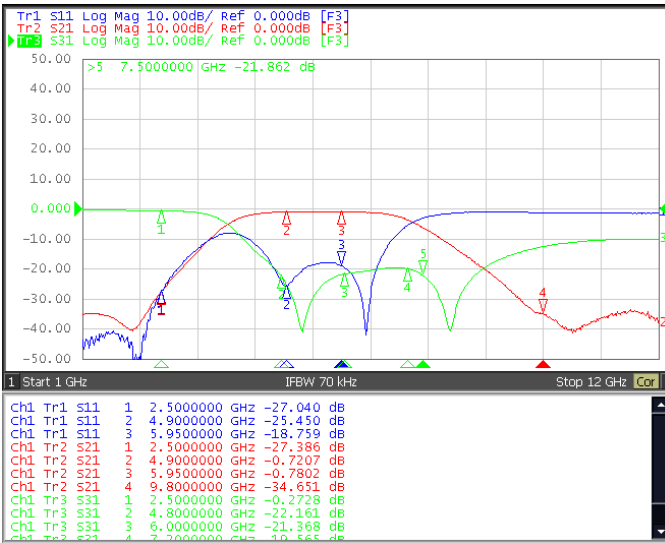
Test Instruments : Agilent E5071C Network Analyzer

BTLD0020122G4S1B50

BTLD0020122G4S1B60

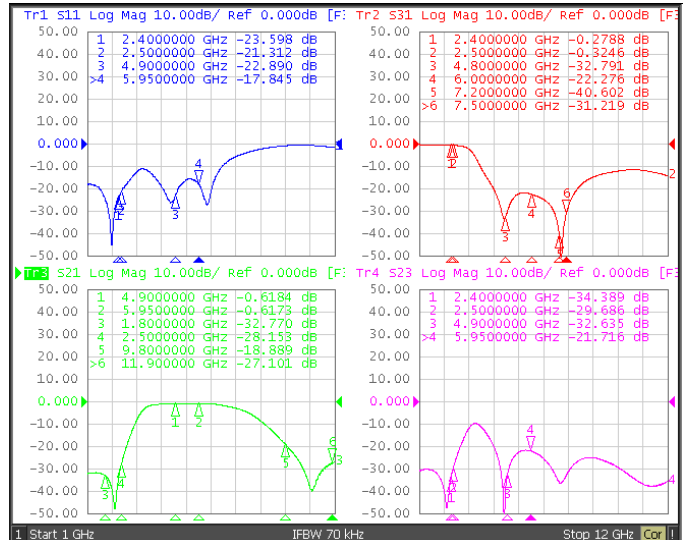
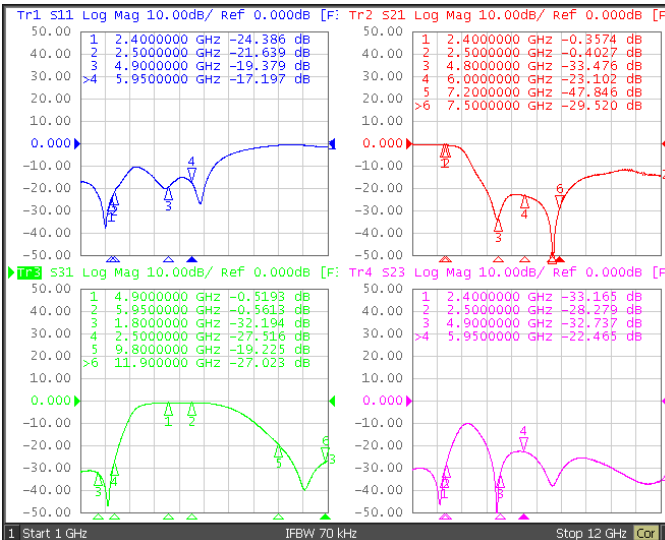


BTLD0020122G4S1D20



BTLD0020122G4S3A70

BTLD0020122G4S3A80



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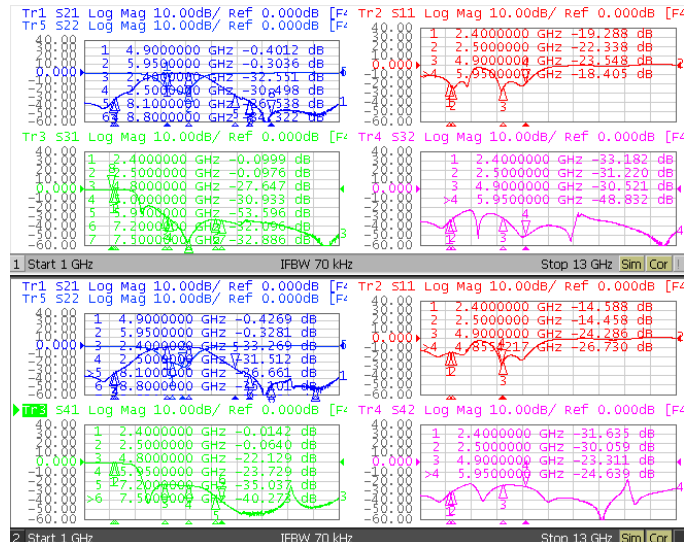
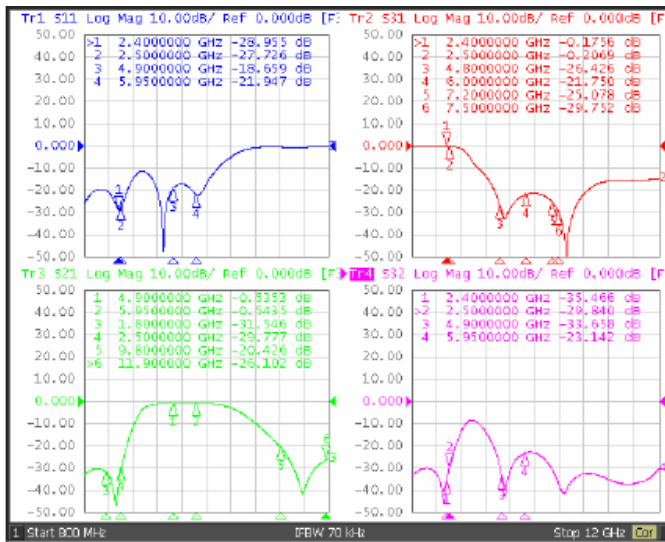


Low Temperature Cofired Ceramic - BTLD Series

Test Instruments : Agilent E5071C Network Analyzer

BTLD0020122G4S3E80

BTLD0020152G4S3A10



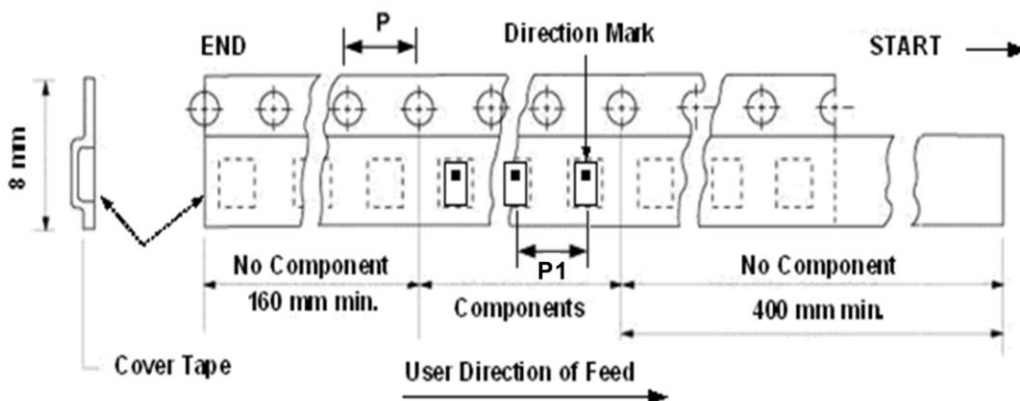
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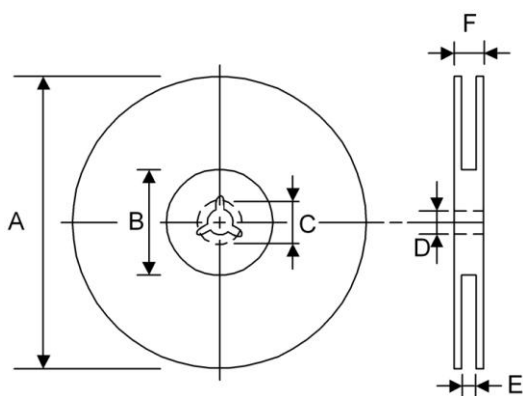
Low Temperature Cofired Ceramic - BTLD Series

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	
BTLD001608	4	4	178	60	-	13	9	12	4000
BTLD002012	4	4	178	60	-	13	9	12	4000

单击下面可查看定价，库存，交付和生命周期等信息

[>>CHILISIN\(奇力新\)](#)