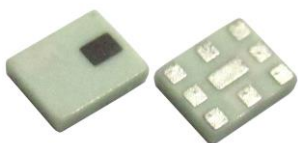


BTLT Series



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.

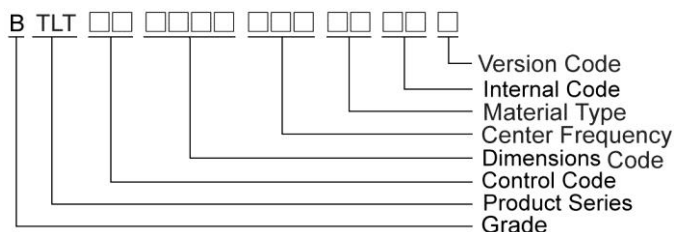
Features

- 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

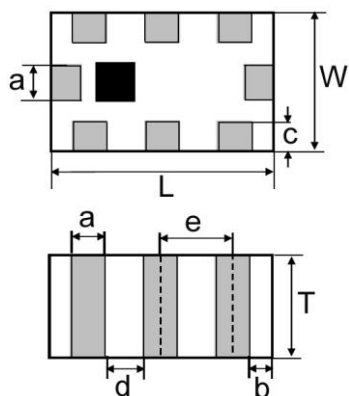
- WLAN ,Home RF, Bluetooth Module, WiMAX Modules, etc.

Product Identification

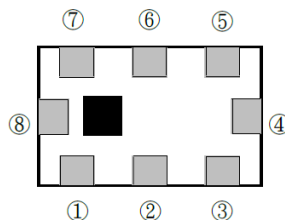


Shapes and Dimensions

FIG 1

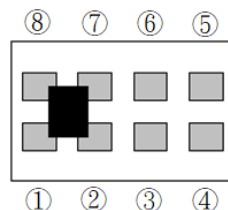
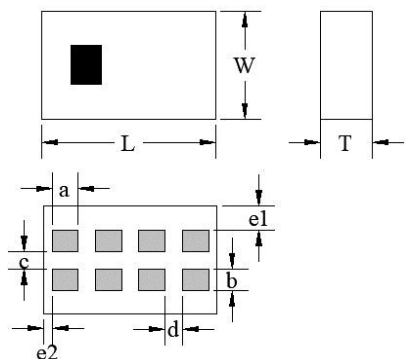


Terminal Configuration



Type	Port				GND
	High Freq.	Low Freq.	Common	Middle	
BTLT002012MKLJNA20	④	⑧	②	⑥	①③⑤⑦
BTLT002012MKLJMA20	⑥	④	②	⑧	①③⑤⑦

FIG 2

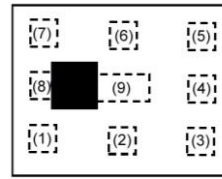
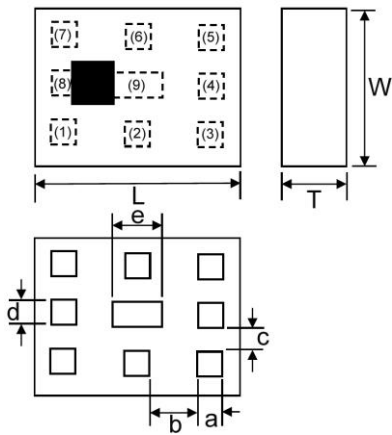


- ①③⑤⑦ GND ② Common ④ Low Band
 ⑧ High Band ⑤ Middle Band

Shapes and Dimensions

Terminal Configuration

FIG 3



Type	Port				GND
	High Freq.	Low Freq.	Common	Middle	
BTLT002520DHNKTA10	①	⑤	⑦	③	②④⑥⑧⑨
BTLT002520JNOKBA10	③	⑦	①	⑤	②④⑥⑧⑨
BTLT002520NOLKBA10	③	⑦	①	⑤	②④⑥⑧⑨

Dimension in mm

TYPE	FIG	L	W	T	a	b	c	d	e	
BTLT002012MKLJNA20	1	2±0.1	1.25±0.1	0.95±0.1	0.3±0.1	0.2±0.1	0.3 ^{+0.1} _{-0.2}	0.35±0.1	0.65±0.05	
BTLT002012MKLJMA10	1	2±0.1	1.25±0.1	0.95±0.1	0.3±0.1	0.2±0.1	0.3 ^{+0.1} _{-0.2}	0.35±0.1	0.65±0.05	
BTLT002520DHNKTA10	3	2.5±0.15	2±0.15	0.65Max	0.4±0.1	0.55±0.1	0.3±0.1	0.4±0.1	0.9±0.15	
BTLT002520JNOKBA10	3	2.5±0.15	2±0.15	0.65Max	0.4±0.1	0.55±0.1	0.3±0.1	0.4±0.1	0.9±0.15	
BTLT002520NOLKBA10	3	2.5±0.15	2±0.15	0.65Max	0.4±0.1	0.55±0.1	0.3±0.1	0.4±0.1	0.9±0.15	
TYPE	FIG	L	W	T	a	b	c	d	e1	e2
BTLT002012MKLJSA10	2	2±0.15	1.25±0.15	0.8Max	0.3±0.1	0.25±0.1	0.2±0.1	0.2±0.1	0.275±0.1	0.1±0.1

Low Temperature Cofired Ceramic - BTLT Series

Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)			Return Loss (dB)Min	Attenuation	Application
		Typ.	Max 25°C	Max -40~85°C			
BTLT002012MKLJNA20	1560~1606	-	0.9	-	10	15dB Min. @ 2400~2500 MHz 20dB Min. @ 4900~5950 MHz	GSM/ LTE WCDMA
	2400~2500	-	1.1	-	10	25dB Min. @ 1560~1606 MHz 20dB Min. @ 4900~5950 MHz	
	4900~5950	-	1	-	10	20dB Min. @ 1560~1606 MHz 25dB Min. @ 2400~2500 MHz 15dB Min. @ 9800~11900 MHz	
BTLT002012MKLJMA10	1560~1610	0.53	0.6	0.7	10	14dB Min./ 23dB Typ. @ 2400~2500 MHz 15dB Min./ 18.2dB Typ. @ 4800~6000 MHz	GSM/ LTE WCDMA
	2400~2500	0.56	0.73	0.81	10	8dB Min./ 9.8dB Typ. @ 3600~3750 MHz 20dB Min./ 32.4dB Typ. @ 4800~5000 MHz 8dB Min./ 11.4dB Typ. @ 7200~7500 MHz 10dB Min./ 16.4dB Typ. @ 9600~10000 MHz	
	4900~5950	0.66	0.8	0.92	10	24dB Min./ 26.5dB Typ. @ 860~960 MHz 24dB Min./ 30.9dB Typ. @ 1545~1605 MHz 25dB Min./ 33.9dB Typ. @ 1710~1990 MHz 30dB Min./ 37dB Typ. @ 2170 MHz 7dB Min./ 11.9dB Typ. @ 8100~8800 MHz 15dB Min./ 20.2dB Typ. @ 8820~9800 MHz 17dB Min./ 20dB Typ. @ 9800~11800 MHz	
BTLT002012MKLJSA10	1560~1606	1.22	TBD	-	10	TBDdB Min./ 29.1dB Typ. @ 2400~2500 MHz TBDdB Min./ 36.3dB Typ. @ 4900~5950 MHz	GPS/ BT/ WiFi
	2400~2500	0.89	TBD	-		TBDdB Min./ 16.3dB Typ. @ 1560~1606 MHz TBDdB Min./ 27.4dB Typ. @ 4800~5000 MHz TBDdB Min./ 30.7dB Typ. @ 7200~7500 MHz	
	4900~5950	0.52	TBD	-		TBDdB Min./ 43.8dB Typ. @ 1560~1606 MHz TBDdB Min./ 32.8dB Typ. @ 2400~2500 MHz TBDdB Min./ 21.7dB Typ. @ 10300~11700 MHz TBDdB Min./ 12.8dB Typ. @ 15300~16200 MHz	

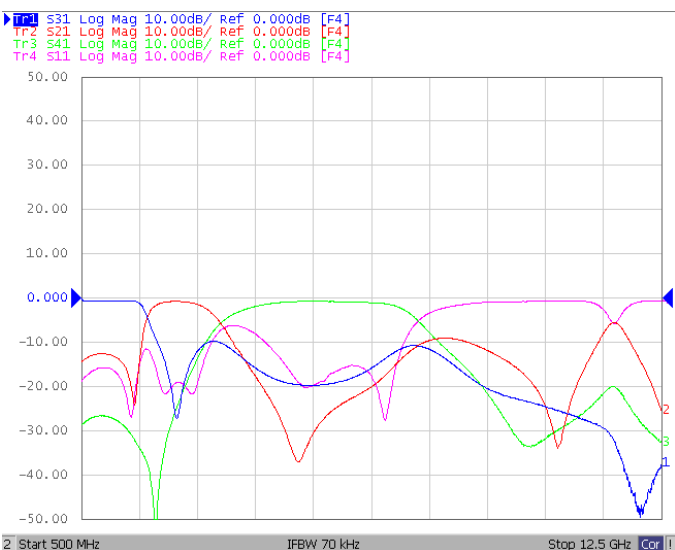
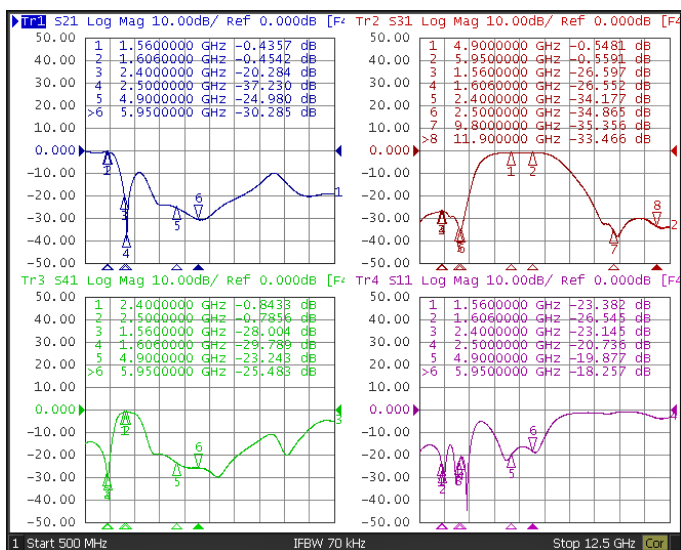
- Operating temperature range $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Low Temperature Cofired Ceramic - BTLT Series

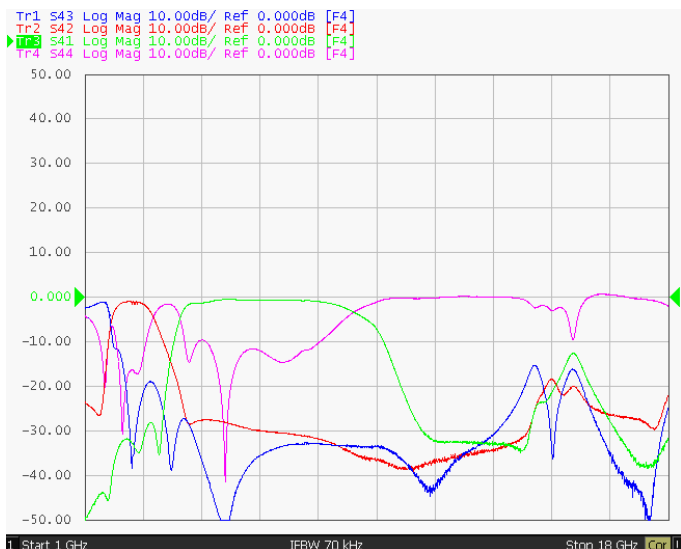
Test Instruments : Agilent E5071 Network Analyzer

BTLT002012MKLJNA20

BTLT002012MKLJMA10



BTLT002012MKLJSA10



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 - BTLT Series

Electrical Characteristics

Part Number	Pass Band (MHz)	Insertion Loss (dB)		Return Loss (dB)Min	Attenuation	Application		
		Typ	Max					
BTLT002520DHNKTA10	500~798	0.45	0.65	10(18Typ)	12dB Min./ 14dB Typ. @ 1427~2690 MHz 22dB Min./ 24dB Typ. @ 1575~1610 MHz 40dB Min./ 46dB Typ. @ 3300~3400 MHz 40dB Min./ 48dB Typ. @ 3400~3800 MHz 40dB Min./ 50dB Typ. @ 3800~4200 MHz 40dB Min./ 46dB Typ. @ 4400~5000 MHz 35dB Min./ 41dB Typ. @ 5150~5925 MHz	LTE/ NR		
	815~894	0.55	0.7					
	880~915	0.59	0.75					
	915~960	0.71	0.95					
	1427~1511	1.15	1.45		10(13Typ)		18dB Min./ 20dB Typ. @ 500~960 MHz 20dB Min./ 23dB Typ. @ 3300~3400 MHz 23dB Min./ 25dB Typ. @ 3400~3800 MHz 30dB Min./ 33dB Typ. @ 3800~4200 MHz 30dB Min./ 33dB Typ. @ 4500~5000 MHz 27dB Min./ 30dB Typ. @ 5150~5925 MHz	
	1710~1880	0.67	1					
	1880~1920	0.6	0.95					
	1930~2200	0.59	0.95					
	2300~2400	0.71	1	10(15Typ)			19dB Min./ 21dB Typ. @ 500~960 MHz 15dB Min./ 17dB Typ. @ 1427~2690 MHz 19dB Min./ 22dB Typ. @ 10300~11850 MHz	
	2496~2690	1.12	1.45					
	3300~3400	0.73	0.95					
	3400~3600	0.61	0.85					
	3600~3800	0.53	0.8					
	BTLT002520JNOKBA10	617~1990	0.53	0.8	10(14.1Typ)		15dB Min./ 17.2dB Typ. @ 3300~3700 MHz 15dB Min./ 17dB Typ. @ 3700~3800 MHz 15dB Min./ 17dB Typ. @ 3800~4200 MHz 25dB Min./ 35.1dB Typ. @ 4400~5000 MHz 25dB Min./ 42.8dB Typ. @ 5150~5925 MHz 10dB Min./ 18dB Typ. @ 5925~12750 MHz	LTE/ NR
		2300~2496	0.68	0.9				
2496~2690		1.1	1.35					
4400~5000		0.91	1.35	10(14Typ)	16dB Min./ 18.1dB Typ. @ 617~2690 MHz 14dB Min./ 16dB Typ. @ 2170~3150 MHz 14dB Min./ 16.9dB Typ. @ 3300~3600 MHz 17dB Min./ 21.1dB Typ. @ 3600~3800 MHz 2.1dB Typ. @ 3800~4200 MHz 15dB Min./ 17.1dB Typ. @ 8800~10000 MHz 5dB Min./ 11.9dB Typ. @ 13200~15000 MHz			
BTLT002520NOLKBA10	3300~4100	1.85	TBD	10(14.3Typ)	TBDdB Min./ 17.2dB Typ. @ 4500~4600 MHz TBDdB Min./ 29.9dB Typ. @ 5150~7125 MHz	LTE/ NR		
	4500~4600	2.09	TBD	10(21.1Typ)	TBDdB Min./ 15.1dB Typ. @ 3300~4100 MHz TBDdB Min./ 29.9dB Typ. @ 5150~7125 MHz			
	5150~7125	1.82	TBD	10(15.2Typ)	TBDdB Min./ 21dB Typ. @ 3300~4100 MHz TBDdB Min./ 22.7dB Typ. @ 4500~4600 MHz			

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

Low Temperature Cofired Ceramic - BTLT Series

Electrical Characteristics

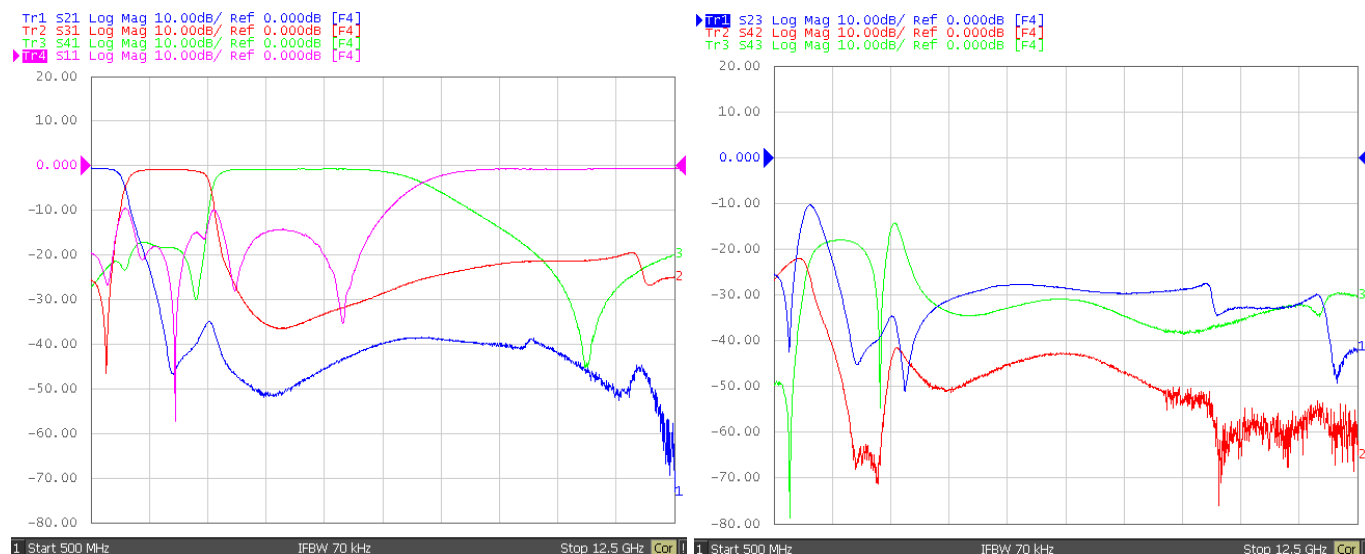
Part Number	Pass Band (MHz)	Isolation (dB)					
		Low to Middle band		Middle to High band		Low to High band	
		Min	Typ	Min	Typ	Min	Typ
BTLT002520DHNKTA10	500~960	19	21	35	40	19	21
	1427~2690	10	13	15	18	30	32
	3300~5925	25	27	21	23	35	42
BTLT002520JNOKBA10	617~960	16	18.4	25	43.4	22	25.6
	1427~1606	-	-	25	38.9	18	21.3
	1695~1710	15	17	-	-	18	20.8
	1710~2200	15	17	25	28	16	18.4
	2300~2690	14	15.3				
	3300~3600	-	-	16	18.2	-	-
	3600~3800	-	-	16	24.3	-	-
	3300~3800	14	16.6	-	-	22	41.5
	4400~5000	-	-	15	16.8	28	31.6
	5150~5925	18	22.1	-	-	30	45.2
BTLT002520NOLKBA10	3300~4100	TBD	16.6	TBD	18.3	TBD	24.1
	4500~4600	TBD	20.2	TBD	26	TBD	39.6
	5150~7125	TBD	14.1	TBD	17.4	TBD	34

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

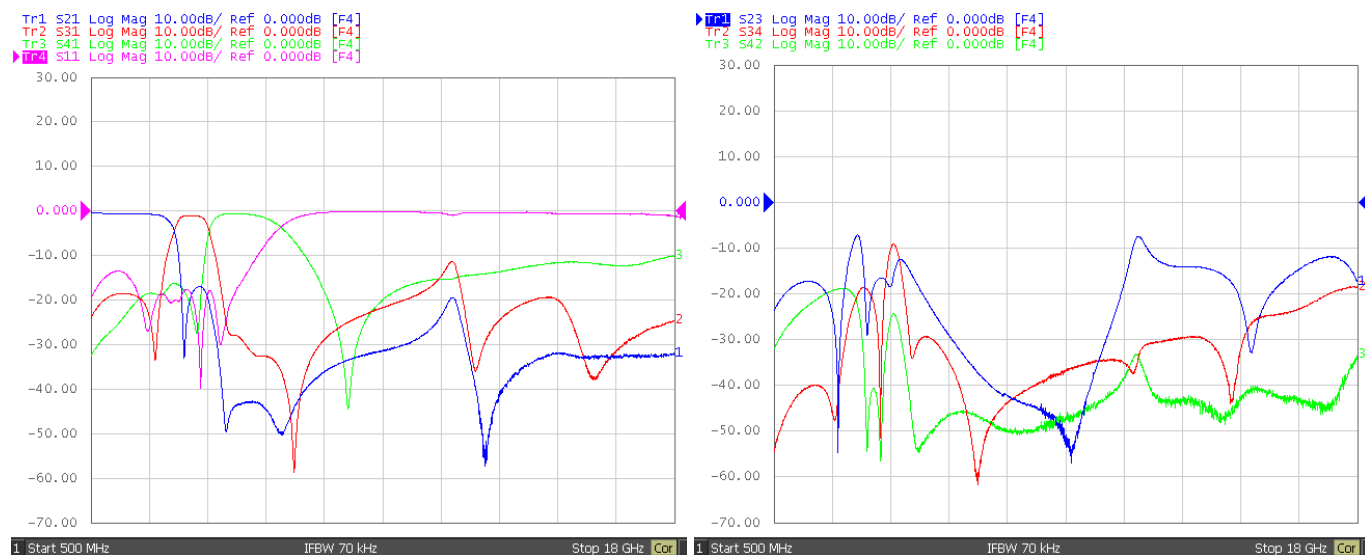
Low Temperature Cofired Ceramic - BTLT Series

Test Instruments : Agilent E5071 Network Analyzer

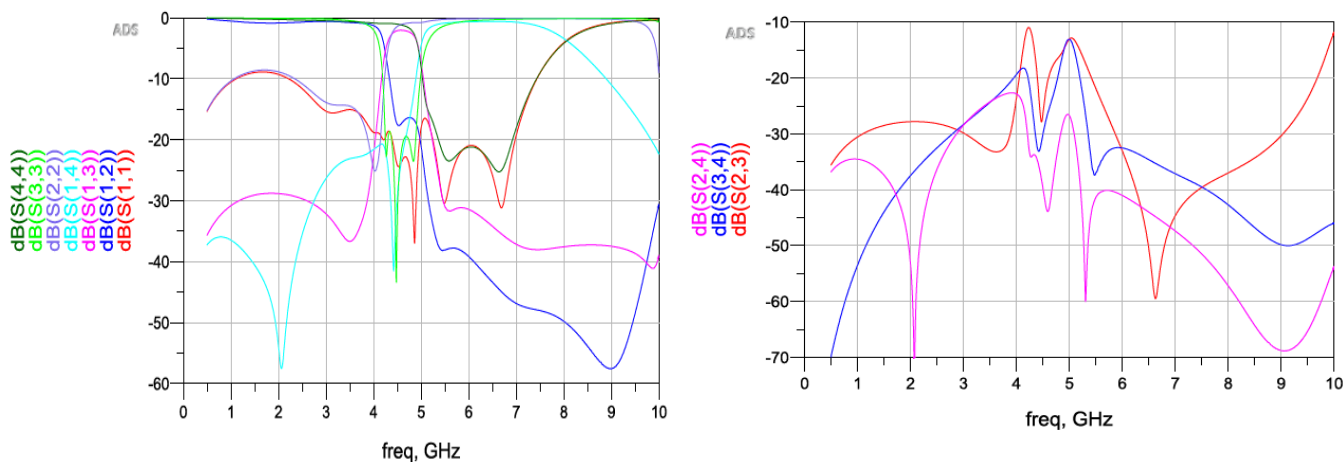
BTLT002520DHNKTA10



BTLT002520JNOKBA10



BTLT002520NOLKBA10

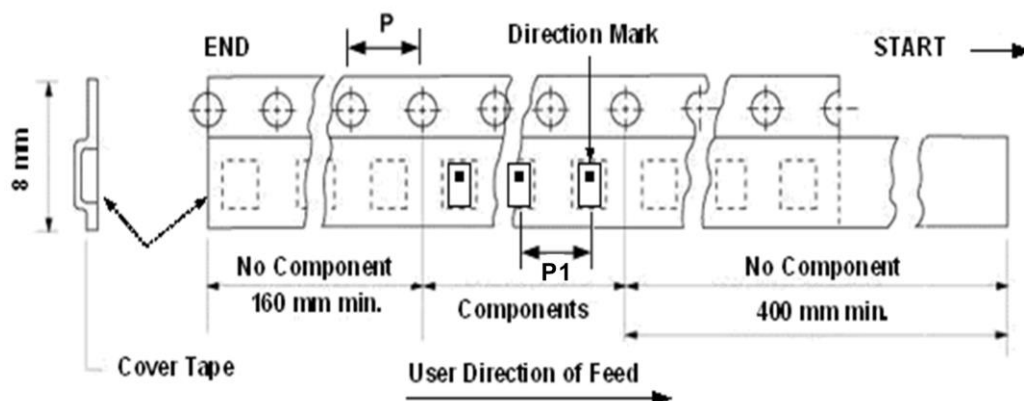


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin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

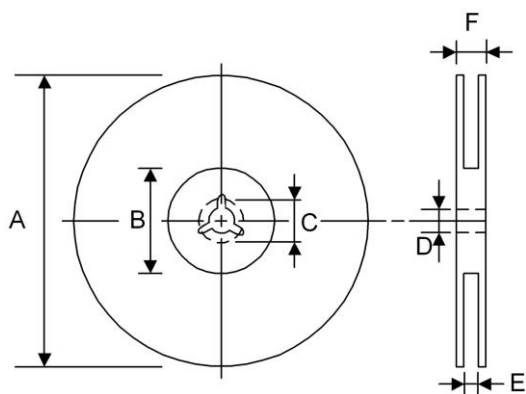
Low Temperature Cofired Ceramic - BTLT Series

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	
BTLT002012	4	4	178	60	-	13	9	12	4000
BTLT002520	4	4	178	60	-	13	9	12	3000