



**CHILISIN ELECTRONICS CORP.**  
Total Solution Provider for EMI, Power and RF.

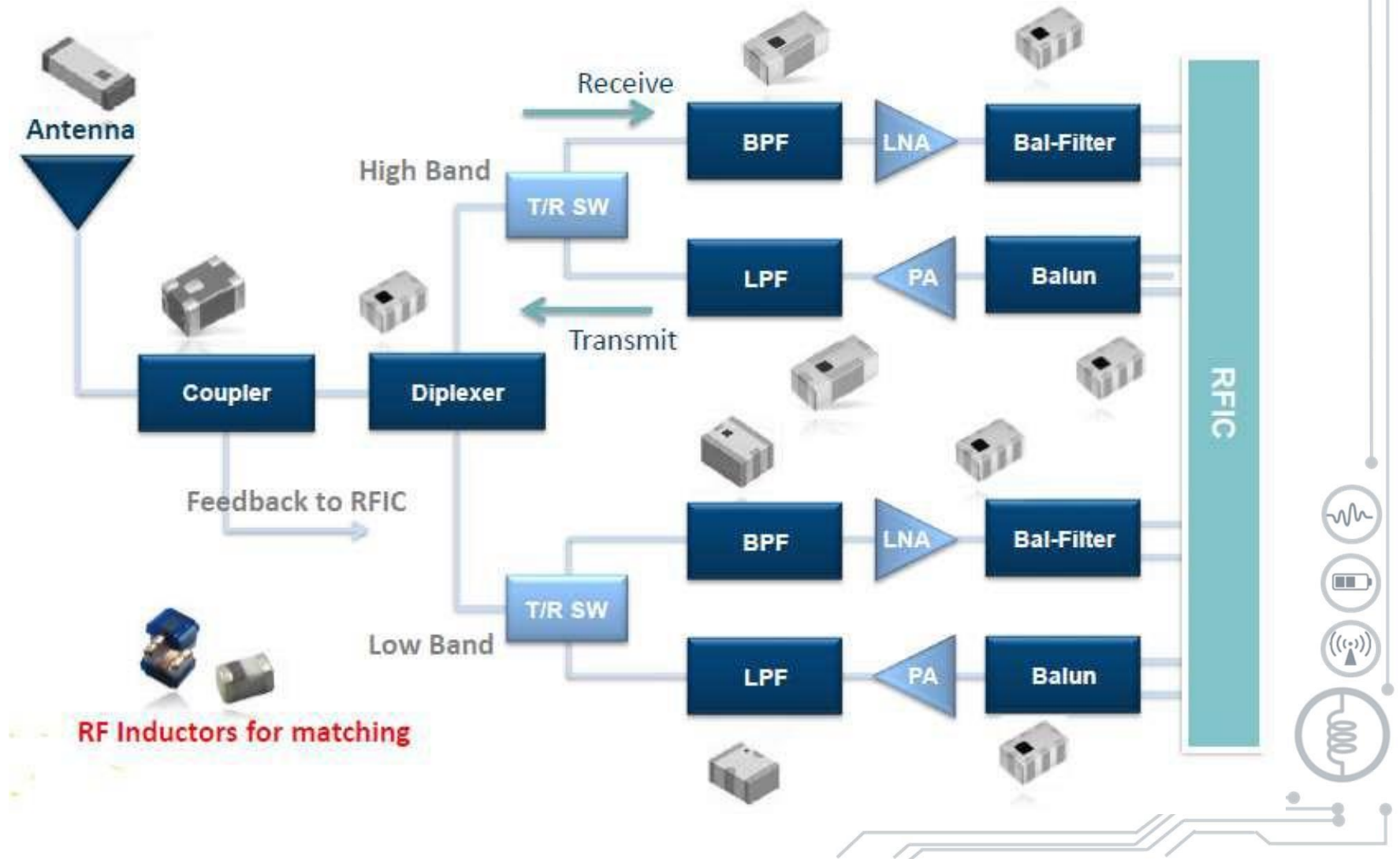


# Chilisin LTCC Solutions

Jun21



# LTCC Solutions at RF Front End



# LTCC Product Line-Up

	0.4~0.9 GHz	0.7~0.9 GHz	1.575 GHz	1.7~2.2 GHz	2.4~2.5 GHz	2.3~2.7 GHz	3.3~5.0 GHz	4.9~6.0 GHz	6.0~7.2 GHz
	LoRa Wi-SUN	LTE NB-IoT Sub-GHz	GPS	LTE NB-IoT	Wi-Fi BT	LTE Sub-6G	LTE Sub-6G	Wi-Fi	Wi-Fi 6
<b>LPF</b>	V	V *3		V *3	V	V	V	V	
<b>BPF</b>		V		V	V	V	V	V *4	
<b>HPF</b>				V	V			V	
<b>Balun</b>	V	V *3		V *3	V	V	V *1	V	
<b>Coupler</b>		V		V	V	V	V	V	
<b>Balance Filter</b>					V		V	V	
<b>Diplexer</b>	V	V	V	V	V	V	V *2	V *5	V *5
<b>Triplexer</b>	V	V	V	V	V	V	V *2	V	

- \* 1 Complete Balun solutions for Sub-6G application
- \* 2 Complete diplexer & triplexer solutions for LTE / Sub-6G application
- \* 3 Complete LPF & Balun solutions for NB-IoT application
- \* 4 Best harmonic rejection for WiFi BPF
- \* 5 Complete LPF & Balun solutions for NB-IoT application





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# Chilisin LTCC Success Examples



Design House	Chilievn P/N	Status
Qualcomm	BTLD001608DNXKSA10	On going
Cypress	BTLD001608KLXKNA20	On going
Cypress	BTLB001109KXVLBA10	On going
MTK	BTLD001608KLXJQA50	QVL
MTK	BTLD0016082G4S1AR0	QVL
MTK	BTLD001608KLXKMA60	On going
MTK	BTLB001608LXVKBA10	QVL
Vertexcom	BTLL0020120G9S1B20	QVL
Vertexcom	BLTU0020120G6S3A10	On going

Design House	Chilievn P/N	Status
Realtek	BTLB001608LXVKBA10	On going
Realtek	BTBF002012KXVJAA10	On going
Realtek	BTBF001608KXVJAA10	On going
Hisilicon	BTLU0010050G7H6D10	QVL
Hisilicon	BTLU0010052G0S1A10	QVL
Hisilicon	BTLL0016080G8H6A10	QVL
Hisilicon	BTLL0010051G7H6A10	QVL
RDA	BTLL0016080G8H6A30	QVL
RDA	BTLL0016082G0S3A10	QVL



# Main LTCC Solutions

## Solutions for WLAN

Type	Size	Description	Chilisin PN
BPF	1109	2.4 GHz BPF, replacement for SAW footprint	BTLB0011092G4H6A20
	1608	5 GHz BPF w/ LTE bands rejection	BTLB001608LXVKA20
	1608	Ultra low loss 5 GHz BPF	BTLB001608LXVHBA20
Coupler	0605	Small Size 2.4 / 5 GHz coupler	BTLC00060525GS1A10
Diplexer	1005	Small Size 2.4 / 5 GHz diplexer (LPF+ BPF)	BTLD001005KLXJPA10
	1608	Low loss 2.4 / 5 GHz diplexer (6 pin, LPF+ BPF)	BTLD001608KLXJNA10
	1608	Low loss 2.4 / 5 GHz diplexer (8 pin, LPF+ BPF)	BTLD001608KLXKQA20
	1608	Low loss 2.4 / 5 GHz diplexer (8 pin, LPF+ BPF)	BTLD001608KLXKNA20
	1608	High isolation 2.4 / 5 GHz diplexer (LPF+ BPF)	BTLD001608KLXJNA10
	1608	Low loss 2.4 / 5 GHz diplexer (BPF+ BPF)	BTLD001608KLXJNA30
	1608	2.4 / 5 – 7 GHz diplexer for Wi-Fi 6 (BPF+ BPF)	BTLD001608KLXKNA60

## Solutions for 5G

Function	Platform	Crossing P/N	Chilisin P/N
3300~4200 MHz low profile BPF for PA module			BTLB001608NXVHBA10
4400~5000 MHz low profile BPF for PA module			BTLB001608OXVHBA10
3300~3600 MHz BPF for CPE			BTLB002012NXVHBA10
3400~3800 MHz BPF for CPE			BTLB002012NXVHBB10
3300~3700 MHz BPF for CPE			BTLB002520NXVHBA10
3300-3900MHz 50:50 Balun	AD937X		BTLU0016083G6S1A20
3100-5000MHz 50:100 Balun	AD937X		BTLU0016084G0S1A10
3200-3925MHz 50:200 Balun	AD937X		BTLU0020123G6S1A30
617-960 / 1452-2690MHz Diplexer	X50 / X55	DPX252690DT-5072A1	BTLD002520DHXKMA10
698-2690 / 3300-5925MHz Diplexer	X50 / X55	DPX252690DT-5031G1	BTLD002520DHXKMB10
698-2690 / 3300-5925MHz Diplexer	X50 / X55	DPX255925DT-5045F3	BTLD002520JOKSA10
1710-2690 / 3300-3800 / 4400 5000MHz Triplexer	X50 / X55	TPX255000MT-7066A1	BTLT002520JNOKBA10
500-960 / 1427-2690 / 3300-5925MHz Triplexer	X50 / X55	LFD2H829MMZ4E595	BTLT002520DHNKTA10
699~2690MHz LPF	X50 / X55	DEA162690LT-5064A1	BTLL001608JXVSA30
698~960MHz LPF	X50 / X55	DEA160960LT-5059A1	BTLL001608DXVHBB10

## Solutions for LTE

Type	Size	Description	Chilisin PN
Diplexer	1608	Diversity LB / MB~HB Diplexer	BTLD001608DFXJUA10
	1608	B3+B7/ B39+B41 Diplexer	BTLD001608FXJSA10
	2012	LB / MB Diplexer (MB : BPF type)	BTLD002012DFXHSA10
	2012	LB / MB~HB Diplexer (MB~HB : HPF type)	BTLD002012DLXJVA10
	1608	GPS / Wi-Fi Diplexer	BTLD001608MKXSPA10
LPF	1005	B13 Low Pass Filter for GPS Harmonic Rejection	BTLL001005AXVHBA10
	1005	B34 / B39 Low Pass Filter for TX Harmonic	BTLL001005EXVHBA10
	1608	LB~B13 Low Pass Filter for GPS Harmonic Rejection	BTLL001608AXVHAA10
	1608	B34 / B39 Low Pass Filter for TX Harmonic	BTLL001608HXVHBA10
	1608	LB~HB Loss Pass Filter for Wi-Fi 5GHz Rejection	BTLL001608JXVSA10
BPF	1608	SAW-less TDD MB Band Pass Filter	BTLB001608HXVHBA20
	1608	TDD MB Band Pass Filter for TX	BTLB001608HXVHBA10
	1608	5GHz Band-pass Filter	BTLB001608LXVHBA10
Triplexer	2012	GPS / Wi-Fi 2G / Wi-Fi 5G Triplexer	BTLT002012MKLJAA20
	2012	GPS / Wi-Fi 2G / Wi-Fi 5G Triplexer	BTLT002012MKLJAA10

## Solutions for NB-IoT

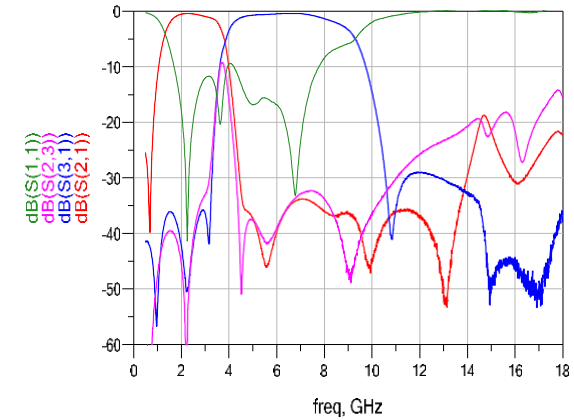
Platform	Size	Description	Chilisin PN
Hisilicon Boudica120	1005	LB Balun	BTLU0010050G7H6D10
	1608	LB LPF	BTLL0016080G8H6A10
Hisilicon Boudica150	1005	LB Balun	BTLU0010050G7H6D10
	1005	MB Balun	BTLU0010052G0S1A10
	1608	LB LPF	BTLL0016080G8H6A10
RDA RDA8909	1005	MB LPF	BTLL0010051G7H6A10
	1608	LB LPF	BTLL0016080G8H6A30
MTK MT2625	1608	MB LPF	BTLL0016082G0S3A10
	1608	LB LPF	BTLL0016082G1H6A10
	1005	MB LPF	BTLL0010050G9H6A30



# WiFi 6E Solutions

Type	Size	Chilisin P/N	Freq. (MHz)	Loss	Cowork w/
BPF	1608	BTLB001608LXVKBA30	5150-7125	0.55 typ.	WNC
BPF	1608	BTLB001608LXVKBB30	5150-7125	0.99 typ.	Qualcomm
Diplexer	1608	BTLD001608KLXKND60	2400-2500 5150-7125	0.74 typ. 0.78 typ.	intel
Diplexer	1608	BTLD001608KLXKQD60	2400-2500 5150-7125	0.74 typ. 0.78 typ.	intel
Diplexer	1608	BTLD001608KLXKPA90	2400-2500 5170-7125	0.4 typ. 0.81 typ.	WNC
Diplexer	1608	BTLD001608KLXKMA90	2400-2500 5170-7125	0.4 typ. 0.81 typ.	WNC

- **BTLD001608KLXKND60**

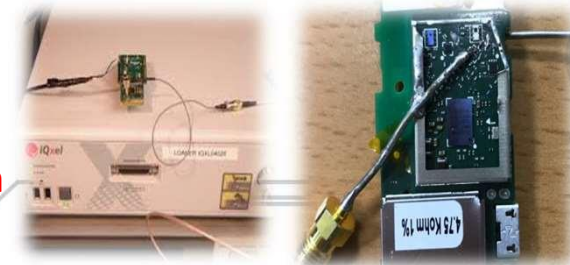


- Upgrade to IQxel-MW 7G
- Supported to 7.3GHz



**Customer support**

- Customer PCBA performance evaluation
- Fine tune system performance





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