

Multi-layer LTCC Filter Series

Features

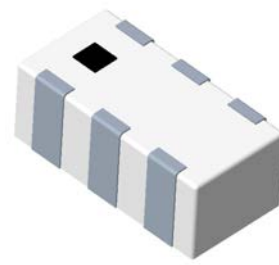
- High integration
- Small size
- High reliability

Application

- Smart phone
- Bluetooth headset
- WLAN
- 5G

Production information

Type	Part Number	Passband Frequency (MHz)	Dimension	Benchmarking	Type	Part Number	Bandpass Frequency (MHz)	Dimension	Benchmarking
Low-pass filter	ELP-300-E4-W7.8	DC-350	2012	LFCG-320+	Low-pass filter	ELP-3700-E4-W7.8	DC-3710	2012	LFCG-3800+
Low-pass filter	ELP-400-E4-W7.8	DC-420	2012	LFCG-400+	Low-pass filter	ELP-4000-E4-W7.8	DC-4010	2012	LFCG-3800+
Low-pass filter	ELP-600-E4-W7.8	DC-650	2012	LFCG-630+	Low-pass filter	ELP-100-D4-W7.8	DC-100	3216	LFCN-105
Low-pass filter	ELP-700-E4-W7.8	DC-710	2012	LFCG-900+	Low-pass filter	ELP-630-D4-W7.8	DC-680	3216	LFCN-630
Low-pass filter	ELP-800-E4-W7.8	DC-800	2012	LFCG-900+	Low-pass filter	ELP-630P-D4-W7.8	DC-680	3216	LFCN-630
Low-pass filter	ELP-900-E4-W7.8	DC-900	2012	LFCG-900+	Low-pass filter	ELP-700-D4-W7.8	DC-700	3216	LFCN-800
Low-pass filter	ELP-1000-E4-W7.8	DC-1050	2012	LFCG-1000+	Low-pass filter	ELP-700P-D4-W7.8	DC-750	3216	LFCN-800
Low-pass filter	ELP-1100-E4-W7.8	DC-1100	2012	LFCG-1000+	Low-pass filter	ELP-800-D4-W7.8	DC-800	3216	LFCN-800
Low-pass filter	ELP-1200-E4-W7.8	DC-1200	2012	LFCG-1200+	Low-pass filter	ELP-800P-D4-W7.8	DC-850	3216	LFCN-900
Low-pass filter	ELP-1300-E4-W7.8	DC-1300	2012	LFCG-1325+	Low-pass filter	ELP-900-D4-W7.8	DC-930	3216	LFCN-900+
Low-pass filter	ELP-1400-E4-W7.8	DC-1410	2012	LFCG-1400+	Low-pass filter	ELP-900P-D4-W7.8	DC-930	3216	LFCN-900+
Low-pass filter	ELP-1500-E4-W7.8	DC-1510	2012	LFCG-1525+	Low-pass filter	ELP-1000-D4-W7.8	DC-1000	3216	LFCN-1000
Low-pass filter	ELP-1600-E4-W7.8	DC-1610	2012	LFCG-1575+	Low-pass filter	ELP-1000P-D4-W7.8	DC-1000	3216	LFCN-1000
Low-pass filter	ELP-1700-E4-W7.8	DC-1710	2012	LFCG-1700+	Low-pass filter	ELP-1100-D4-W7.8	DC-1100	3216	LFCN-1000
Low-pass filter	ELP-1800-E4-W7.8	DC-1810	2012	LFCG-1800+	Low-pass filter	ELP-1200-D4-W7.8	DC-1200	3216	LFCN-1200
Low-pass filter	ELP-1900-E4-W7.8	DC-1910	2012	LFCG-2000+	Low-pass filter	ELP-1300-D4-W7.8	DC-1300	3216	LFCN-1325
Low-pass filter	ELP-2000-E4-W7.8	DC-2000	2012	LFCG-2000+	Low-pass filter	ELP-1400-D4-W7.8	DC-1350	3216	LFCN-1325
Low-pass filter	ELP-2100-E4-W7.8	DC-2100	2012	LFCG-2000+	Low-pass filter	ELP-1600-D4-W7.8	DC-1600	3216	LFCN-1575
Low-pass filter	ELP-2200-E4-W7.8	DC-2210	2012	LFCG-2250+	Low-pass filter	ELP-1700-D4-W7.8	DC-1750	3216	LFCN-1700+
Low-pass filter	ELP-2300-E4-W7.8	DC-2300	2012	LFCG-2250+	Low-pass filter	ELP-1800-D4-W7.8	DC-1900	3216	LFCN-2000
Low-pass filter	ELP-2400-E4-W7.8	DC-2410	2012	LFCG-2500+	Low-pass filter	ELP-2000-D4-W7.8	DC-2100	3216	LFCN-2000
Low-pass filter	ELP-2500-E4-W7.8	DC-2510	2012	LFCG-2500+	Low-pass filter	ELP-2200-D4-W7.8	DC-2200	3216	LFCN-2250D+
Low-pass filter	ELP-2600-E4-W7.8	DC-2610	2012	LFCG-2600+	Low-pass filter	ELP-2400-D4-W7.8	DC-2400	3216	LFCN-2400D+
Low-pass filter	ELP-2800-E4-W7.8	DC-2810	2012	LFCG-2850+	Low-pass filter	ELP-2500-D4-W7.8	DC-2500	3216	LFCN-2500D+
Low-pass filter	ELP-2900-E4-W7.8	DC-2910	2012	LFCG-2850+	Low-pass filter	ELP-2600-D4-W7.8	DC-2650	3216	LFCN-2600D+
Low-pass filter	ELP-3100-E4-W7.8	DC-3110	2012	LFCG-3000+	Low-pass filter	ELP-2800-D4-W7.8	DC-2830	3216	LFCN-2850D+
Low-pass filter	ELP-3200-E4-W7.8	DC-3210	2012	LFCG-3400+	Low-pass filter	ELP-3000-D4-W7.8	DC-3100	3216	LFCN-3000D+
Low-pass filter	ELP-3300-E4-W7.8	DC-3310	2012	LFCG-3400+	Low-pass filter	ELP-3400-D4-W7.8	DC-3460	3216	LFCN-3400D+
Low-pass filter	ELP-3400-E4-W7.8	DC-3410	2012	LFCG-3400+	Low-pass filter	ELP-3600-D4-W7.8	DC-3600	3216	LFCN-3400D+
Low-pass filter	ELP-3500-E4-W7.8	DC-3670	2012	LFCG-3500+	Low-pass filter	ELP-4000-D4-W7.8	DC-4000	3216	LFTC-4000+
High-pass filter	EHP-1000-D4-W7.8	1080	3216	HFCN-1000+	Power splitter	EPD-2-11-D6-W7.8	800-1150	3216	SCN-2-10
High-pass filter	EHP-1100-D4-W7.8	1300	3216	HFCN-1100+	Power splitter	EPD-2-15-D6-W7.8	1100-1450	3216	SCN-2-15
High-pass filter	EHP-1300-D4-W7.8	1400	3216	HFCN-1300+	Power splitter	EPD-2-19-D6-W7.8	1450-1900	3216	SCN-2-19
High-pass filter	EHP-1500-D4-W7.8	1600	3216	HFCN-1500+	Power splitter	EPD-2-35-D6-W7.8	2800-3700	3216	SCN-2-35
High-pass filter	EHP-1600-D4-W7.8	1600	3216	HFCN-1600+	Power splitter	EPD-2-45-D6-W7.8	3700-4200	3216	SCN-2-45



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Type	Part Number	Passband Frequency (MHz)	Dimension	Benchmarking	Type	Part Number	Passband Frequency (MHz)	Dimension	Benchmarking
High-pass filter	EHP-1760-D4-W7.8	1900	3216	HFCN-1760+	Power splitter	EPD-2-11-E6-D	800-1150	2012	SCN-2-11
High-pass filter	EHP-1810-D4-W7.8	1900	3216	HFCN-1810+	Power splitter	EPD-2-15-E6-D	1100-1450	2012	SCG-2-242+
High-pass filter	EHP-1910-D4-W7.8	2000	3216	HFCN-1910+	Power splitter	EPD-2-19-E6-D	1450-1900	2012	SCG-2-242+
High-pass filter	EHP-2000-D4-W7.8	2100	3216	HFCN-2000+	Power splitter	EPD-2-22-E6-D	1800-2200	2012	SCG-2-242+
High-pass filter	EHP-2100-D4-W7.8	2200	3216	HFCN-2100+	Power splitter	EPD-2-27-E6-D	2200-2700	2012	SCG-2-322+
High-pass filter	EHP-2275-D4-W7.8	2400	3216	HFCN-2275+	Power splitter	EPD-2-35-E6-D	2800-3700	2012	SCN-2-35+
High-pass filter	EHP-2700-D6-W7.8	2900	3216	HFCN-2700AD+	Power splitter	EPD-2-45-E6-D	3700-4200	2012	SCN-2-45
High-pass filter	EHP-3100-D6-W7.8	3400	3216	HFCN-3100D+	Power splitter	EPD-2-65-E6-D	5500-6500	2012	SCN-2-65
High-pass filter	EHP-3500-D6-W7.8	3900	3216	HFCN-3500D+	Balum	EBL-17-D6-W7.8	1200-1800	3216	TCN4-22+
High-pass filter	EHP-3800-D6-W7.8	4250	3216	HFCN-3800D+	Balum	EBL-20-D6-W7.8	1300-2000	3216	TCN1-23+
High-pass filter	EHP-4400-D6-W7.8	5000	3216	HFCN-4400D+	Balum	EBL-27-D6-W7.8	1700-2700	3216	TCN2-26+
High-pass filter	EHP-4600-D6-W7.8	5000	3216	HFCN-4600D+	Balum	EBL-34-D6-W7.8	2400-3400	3216	/
High-pass filter	EHP-5050-D6-W7.8	5500	3216	HFCN-5050D+	Balum	EBL-40-D6-W7.8	3300-4000	3216	TCN2-45+
High-pass filter	EHP-5500-D6-W7.8	6000	3216	HFCN-5500D+	Balum	EBL-16-E6-D	1800-2800	2012	TCN2-26+
Bridge	EHC-1400-D6-W7.8	1200-1600	3216	/	Balum	EBL-19-E6-D	2000-3100	2012	NCS3-272+
Bridge	EHC-1512-D6-W7.8	1100-1925	3216	/	Balum	EBL-25-E6-D	2500-3800	2012	/
Duplexer	EDP-2450-5400-F6-W7.8	2450±50&5400±500	1608	DP1608A2455BG	Balum	EBL-31-E6-D	3100-4900	2012	NCS2-33+
Duplexer	EDP-2450-6150-F6-W7.8	2450±50&6150±1000	1608	RFDIP1607ELM9T21	Balum	EBL-33-E6-D	3300-5000	2012	NCS4-442+
Coupler	EDC-800-1000-F6-K7.8	800-1000	1608	/	Balum	EBL-40-E6-D	4400-5500	2012	/
Coupler	EDC-1710-2520-F6-K7.8	1710-2520	1608	/	Band-pass filter	EBP-4900-5950-F4-W7.8	4900-5950	1608	RFBPF1608060K98Q1C

Partial 5G filter performance parameter

Frequency Parameter	3.6GHz	4.9GHz	28GHz
Dimension	3.2mm×2.5mm×(≤3)mm	2.5mm×2.0mm×(≤3)mm	6.8mm×4.5mm×1.2mm
Center frequency	3.68GHz	4.91GHz	28GHz
Bandwidth	800MHz	800MHz	3GHz
Insertion Loss	3.5dB	3.5dB	7.0dB
Passband ripple	1.2dB	1.2dB	2.0dB
Return loss	-10dB	-10dB	-10dB
PSRR	>37dB@1.3GHz~2.68GHz >37dB@4.68GHz~6.0GHz >30dB@6.0GHz~10.0GHz	>45dB@2.54GHz~3.34GHz >38dB@6.48GHz~7.28GHz >30dB@7.28GHz~10.0GHz	>35dB@20.0GHz~25.5GHz >35dB@31.0GHz~34.0GHz >20dB@30.5GHz~60.0GHz
Mounting	SMT	SMT	SMT
Dielectric constant	7.5	7.5	5.9
Dielectric loss	0.005	0.005	0.003
CTE	5.8ppm/°C	5.8ppm/°C	7ppm/°C
Thermal conductivity	3.3W/mk	3.3W/mk	2W/mk