

# BROADBAND: RF & WIRELESS



Pulse offers a comprehensive line of RF magnetic components for use in wireless and RF applications, including mobile communications, cable television, hybrid fiber/coax (HFC) equipment, cable modems, set-top boxes, and home networking. The components are also used in RF medical and industrial equipment.

Platforms include wirewound chip inductors, transformers/baluns, low-pass filters, diplex filters, directional couplers and RF splitter/combiners. These surface mount and through hole components have minimal insertion loss and excellent return loss to ease the development and manufacturing of today's RF network equipment.

## RF, HFC & CATV APPLICATIONS

### Low Pass Filters

Part Number	In/Out Impedance	Passband (MHz)	Insertion Loss (dB MAX)	Return Loss (dB MIN)	Data Sheet
B5004	75 Ω	5-42	1.0	18.0	B907
B5005	75 Ω	5-65	1.0	17.5	B907
C5001	150Ω	1-50	1.2	15.0	C209
C5003	150 Ω	1-80	1.2	15.0	C209
C5005	75 Ω	1-59.5	1.0	15.0	C209
CX5013	75 Ω	1-65	1.5	15.0	C209
C5002	50 Ω	1-49	1.0	16.0	C208

### Diplex Filters

Part Number	Frequency <sup>1</sup> (MHz)	Insertion Loss (dB)	Return Loss (dB)	Data Sheet
CX6006L	5-65 / 85-870	<1.2	16 or better	C213
CX6006	5-65 / 85-870	<1.2	18 or better	C213
CX6008	5-65 / 85-864	1.0 TYP	14 / 9 <sup>1</sup>	C216
C6026 <sup>3</sup>	5-44 / 58-860	<1.5	12 or better	C236
CX6026	5-44 / 58-860	<1.5	12 or better	C236
C6039	5-860 / 975-1525	<2.0	10 or better	C250
CX6007	5-42 / 88-864	<1.0	14 or better	C211
C6035 <sup>3</sup>	5-42 / 88-860	<1.5	12 or better	C236
CX6002	5-42 / 54-864	<1.5	14 / 9 <sup>1</sup>	C230
CX6020 <sup>2</sup>	5-42 / 54-864	<1.5	14 / 9 <sup>1</sup>	C230
C6001	5-42 / 52-870	<1.0	20 or better	C204
C6001L <sup>4</sup>	5-42 / 52-870	<1.0	20 or better	C204
SF9023	5-42 / 52-750	<1.5	18 or better	C202
C6036NL <sup>3,5</sup>	10-55 / 90-770	<1.5	12 or better	C236
C6086NL <sup>3,5</sup>	5-65 / 108-860	<1.5	12 or better	C236

1. Low Pass Port / High Pass Port

2. Leadless

3. Coaxial F-connector integrated

4. L = Low cost 5. NL = Lead-free

### Directional Couplers

Part Number	Frequency (MHz)	Z (Ω)	Coupling Nom. (dB ±0.5)	Mainline Loss (dB TYP)	Data Sheet
A5807	5-900	75	10.0	1.1	A102
A5808	5-900	75	7.5	1.6	A102
A5809	5-900	75	12.0	0.9	A102
A5816	5-900	75	16.0	0.8	A102
A5908	5-900	75	7.5	1.6	A102
A5910	5-900	75	10.0	1.1	A102
A5912	5-900	75	12.0	0.9	A102
A5916	5-900	75	16.0	0.8	A102
C3027	5-900	75	16.0	0.6	C207
C3108	5-900	75	7.5	1.6	C243
CX3039	5-1000	75	20.0	0.5	C221
CX3042	5-1000	75	6	1.76	C243
CX3099	10-1000	50	16.0	0.8	C234

### RF Splitter/Combiners: 2-Way, 0°

Part Number	Frequency (MHz)	Isolation (dB TYP)	Return Loss (TYP)	Insertion Loss (dB TYP)	Data Sheet
C4020 <sup>1</sup>	96-864	25	9	1.7	C222
CX4004	5-65	40	30	0.22	C212
CX4004L <sup>2</sup>	5-65	40	30	0.22	C212
CX4005	5-250	24	27	0.45	C226
C4006	5-1000	27	24	0.48	C223
CX4011	5-1000	25	26	0.65	C218
C4036	5-1000	25	31	0.48	C241
CX4012L <sup>2</sup>	5-1000	20	16	0.65	C220
CX4024	5-1000	30	30	0.8	C220
CX4012	40-1000	27	22	0.65	C220

1. Differential splitter/combiner

2. L = Low cost

## FIBRE CHANNEL (SAN)

### Dual Serial Data Interface Transformers

Part Number	Turns Ratio	Package Style <sup>1</sup>	Package L/W/H (in.) *	Data Sheet
A6801	1CT:1CT	16-pin SOIC	.500 / .295 / .220	A100
A6802	1:1	16-pin SOIC	.500 / .295 / .220	A100
PE-65507	1:1	16-pin SOIC	.500 / .270 / .220	A101
PE-65508	1:1	16-pin SOIC	.500 / .270 / .220	A101

1. SOIC = 50 mil pitch lead spacing

## IEEE 1394

### Common Mode Choke

Part Number	No. of Lines	Inductance OCL (μH MIN)	Package L/W/H (in.) *	Data Sheet
A1801	2	3	.290 / .240 / .150	A104

## BROADBAND: RF &amp; WIRELESS



## RF, HFC &amp; CATV APPLICATIONS (continued)

## Wideband RF Transformers

Part Number	Impedance Ratio	Bandwidth (MHz TYP)			Package Style	Data Sheet	Part Number	Impedance Ratio	Bandwidth (MHz TYP)			Package Style	Data Sheet
		3 dB	2 dB	1 dB					3 dB	2 dB	1 dB		
CX2068	1:12.25	0.1-150	0.5-100	1.5-50	THT	C206	CX2062	1:1CT	0.08-200	—	—	6-pin THT	C206
C2139NL <sup>3</sup>	1:1	—	—	5-1000	SMT <sup>2</sup>	C244	CX2147	1:1CT	—	—	1-160	SMT	C242
CX2148	1:1	—	—	5-500	SMT	C224	CX2157	1:1CT	0.4-800	0.5-700	1-600	SMT <sup>2</sup>	C232
CX2148A	1:1	—	—	5-500	SMT	C224	CX2045L <sup>1</sup>	1:2	—	—	3-300	SMT <sup>2</sup>	C203
CX2149	1:1	—	Up to 1500	10-1200	SMT <sup>2</sup>	C217	CX2047L <sup>1</sup>	1:4	—	.5-300	1.5-100	SMT <sup>2</sup>	C203
CX2155	1:1	—	—	5-500	SMT	C238	C2022	1:4CT	0.100-500	0.150-390	.300-220	6-pin SMT	C200
CX2156	1:1	—	—	2.3-2700	SMT	C215	C2073	1:4CT	—	1-500	1-200	SMT <sup>2</sup>	C224
CX2024	1:1	—	Up to 1500	10-1200	SMT <sup>2</sup>	C217	C2073A	1:4CT	—	1-500	1-200	SMT <sup>2</sup>	C224
CX2038L <sup>1</sup>	1:1	—	Up to 1500	4.5-1000	SMT <sup>2</sup>	C203	CX2032	1:4CT	—	—	5-165	Low Profile	C210
CX2039L <sup>1</sup>	1:1	—	Up to 1500	4.5-1000	SMT <sup>2</sup>	C203	CX2047	1:4CT	—	0.50-300	1.5-100	SMT <sup>2</sup>	C203
CX2040L <sup>1</sup>	1:1	1.5-500	2.5-400	5-350	SMT <sup>2</sup>	C203	CX2054	1:4CT	0.20-350	—	—	6-pin SMT	C206
CX2041	1:1	0.05-450	0.75-300	0.1-200	SMT <sup>2</sup>	C203	CX2064	1:4CT	0.20-350	—	—	6-pin THT	C206
CX2050	1:1	0.15-400	—	—	6-pin SMT	C206	CX2065	1:4CT	0.02-250	—	—	6-pin THT	C206
CX2060	1:1	0.15-400	—	—	6-pin THT	C206	CX2074	1:4CT	—	—	5-170	SMT	C242
CX2072	1:1	—	Up to 1500	10-1000	5-pin SMT	C227	CX2158	1:4CT	2-775	3-600	6-250	SMT <sup>2</sup>	C232
CX2078	1:1	—	—	5-500	5-pin SMT	C215	CX2049L <sup>1</sup>	1:8	2-500	—	—	SMT <sup>2</sup>	C203
CX2076	1:1	—	Up to 2150	—	SMT <sup>2</sup>	C233	CX2059	1:9	0.15-200	—	—	6-pin SMT	C206
CX2043L <sup>1</sup>	1:1.5	—	—	1-1000	SMT <sup>2</sup>	C203	C2020	1CT:1CT	0.150-210	.200-150	.350-90	6-pin SMT	C200
CX2044L <sup>1</sup>	1:1.5	—	1-500	5-100	SMT <sup>2</sup>	C203	C2042	1CT:1CT	0.30-300	0.40-200	0.5-90	6-pin SMT	C210
CX2081	1:1.5 CT	5.0-125	—	—	5-pin SMT	C215	CX2029	36:1CT	0.05-21	—	—	SMT <sup>2</sup>	C203
CX2039	1:1 (50 Ω)	—	Up to 1500	4.5-1000	SMT <sup>2</sup>	C203	CX2141	4CT:1CT	0.3 - 300	0.4 - 200	0.5 - 90	SMT <sup>2</sup>	C232
CX2038	1:1 (75 Ω)	—	Up to 1500	4.5-1000	SMT <sup>2</sup>	C203	CX2142	1:1	—	—	50-870	SMT <sup>2</sup>	C232
CX2052	1:1CT	0.08-200	—	—	6-pin SMT	C206	C2160	2.65:1	Up to 130	Up to 100	0.40-70	SMT <sup>2</sup>	C232

1. L = Low cost      2. Leadless      3. NL = Lead-free

THT - Through Hole Package      SMT - Surface Mount Package