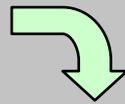


Multilayer Components

FDK supplies 'Multi-layer Chip Inductor (AML Series)' and 'RF Component (AMB / AMS / ALP / ABP Series)' for high frequency circuit and high frequency module based on the original material technology, simulation technology and high frequency circuit technology. The ideal chip for compact designs such as 3rd or 4th generation cellular phone, RF module of mobile devices is supplied.

Basic Technologies

1. Material
2. Fine patterning/ laminating
3. CAE by super computer
4. High frequency circuit



Main Products

Inductor(1005,0603)
Multilayer BPF



RF-components

Balun(2015,1608)
Coupler(2012,1608)
LPF(1005), BPF(2012)



Lineup of Chip Inductor (AML series)

Type	Size	Q range (1GHz)	L range (nH)			
	(mm)		1	10	100	1000
AML1005H	1.0 × 0.5	19 – 35	1-100			
AML1005S		>25	120-220			
AML1005Q		<40	1-18			
AML0603Q	0.6 × 0.3	17 – 21	1-22(-56)			

Wide Inductance and High Q of 1005 and 0603 type

Lineup of RF-Components

	Type	Size	Frequency (GHz)				
		(mm)	1	2	3	4	5
Balun	AMB2012	2.0 × 1.25	1-5				
	AMB1608	1.6 × 0.8	Under development				
Coupler	AMS2012	2.0 × 1.25	1-5				
	AMS1608	1.6 × 0.8	Under development				
Low Pass Filter	ALP1005	1.0 × 0.5	1-5				
Band Pass Filter	ABP2520	2.5 × 2.0	Under development				

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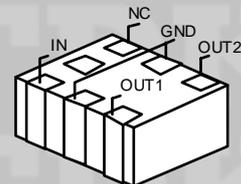
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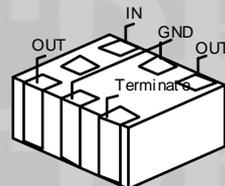
Multi-layer Chip Bulun

Item	Characteristics(typ.)
Dimensions	2.0x1.25x0.95mm
Center Frequency (fo)	2450.0MHz
Frequency Range	$f_o \pm 50\text{MHz}$
Insertion Loss	0.5dB (at $f_o \pm 50\text{MHz}$)
Unbalance Impedance	50ohm (nominal)
Balance Impedance	100ohm (nominal)



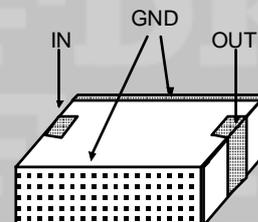
Multi-layer Chip Coupler

Item	Characteristics(typ.)
Dimensions	2.0x1.25x0.95mm
Center Frequency(fo)	2450.0MHz
Frequency Range	$f_o \pm 50\text{MHz}$
Insertion Loss	0.3dB max (at $f_o \pm 50\text{MHz}$)
Coupling	14dB
Directivity	20dB



Multi-layer Chip Low-pass Filter

Item	Characteristics(typ.)
Dimensions	2.5x2.0x $t < 1.0\text{mm}$
Center Frequency (fo)	2450.0MHz (nominal)
Bandwidth (BW)	$f_o \pm 50\text{MHz}$
Characteristic Impedance	50ohm (nominal)
Insertion Loss in BW	0.8dB



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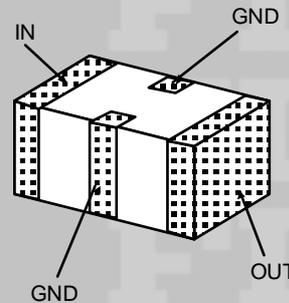
Multilayer Chip Low Pass Filter

The World's Smallest and Highest Quality LPF

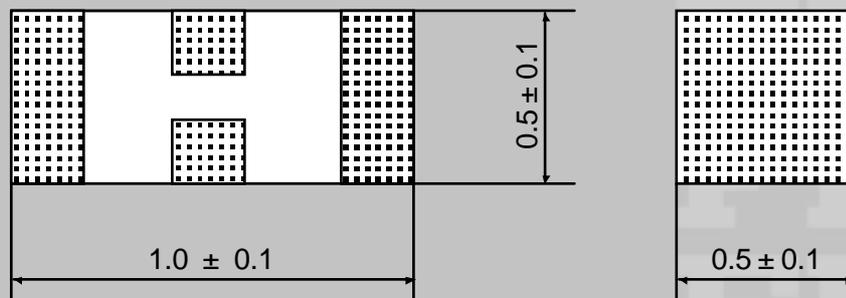
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Preliminary

Item	Specification(Example)
Dimensions	1.0x0.5x0.5mm
Center Frequency (fo)	2450.0MHz
Frequency Range	f _o ± 50MHz
Insertion Loss	0.5dB max
ATT. 2F	20 dB
ATT. 3F	15 dB



1. Shape & Dimension



2. Characteristics

	FO [MHz]	BW [MHz]	IL [dB Typ]	VSWR [Typ]	ATT(dB)	
					[2 × Fo]	[3 × Fo]
GSM	897.5	F _o ± 17.5	0.4	1.5	20	15
DCS	1745.0	F _o ± 35.0	0.5	1.5	20	15
W-CDMA	1950.0	F _o ± 30.0	0.4	1.5	20	15
Bluetooth	2450.0	F _o ± 50.0	0.4	1.5	20	15

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