Features

- Tuning Control: 8 bit parallel（TTL Level compatible）
- Wide dynamic ： Input P_{-1} =30dBm
- 2 ploe 0.1dB Chebyshev Response
- Tuned speed ≤10us(f_c>30MHz)
- Up to 250 steps(Fc<120MHz) in band.
- Typical 2~3 octave bandwidth coverage within 30~700MHz
- High bias voltage low bias current (100V/1.5mA)
- Package : Pins or SMA connector
- Small DIP package
- Operating Temperature range：-40℃~+85℃

Selection Guide：

LBM017A-85(40~110MHz), LBM037A-85(30~90MHz),
LBM038A-85(30~110MHz), LBM039A-85(90~200MHz),
LBM040A-85(200~400MHz),LBM041A-85(225~450MHz)
LBM041A512-85(225~512MHz),
LBM700A-85(400~700MHz)

Specification

Electrical

Parameters	
% 3dB Bandwidth	3～10%
Fractional BW flatness[1)]	≤1%
I.L at center frequency[2)]	2~6dB
I.L variance[3)]	≤2dB
Shape Factor (BW_{30}/BW_3)	≤7:1
Impedance	50Ω
VSWR	2.0:1max
Input P_{-1} [4)]	+30dBm(TYP)
DC power:	+5V/90mA V_{bb}:+15~100V/1.5mA

LBM017A-85

Note: 1) This is the difference of % 3dB bandwidth within the frequency band, see Page 56 for typical curves

2) Insertion loss at center frequency is typical one, the wider passband the lower IL. Following method is used to calculate insertion loss：IL ×BW_{3dB}%=20~25, For example % BW is 5% then IL is 4~5dB

3) See typical curves on page 56

4) Decided by the bias voltage, refer to the “Input P_{-1} --- Bias voltage” typical curve on page 55

Environmental

	Standard	Special
Vibration(5～2000Hz)	10G	20G
Shock(11 mSec)	30G	50G
Relative HUmidity	0~90%	95%

	Standard	Special
Operating Temp	-40~+60℃	-40~+85℃
Storage Temp	-40~+100℃	-55~+125℃

Dimension and Pinout

LBM017A-85~LBM700A-85 have a same outline and pinout as LBM034A~LBM700A

LBM017A-85~LBM700A-85 V_{bb}=15~100V。

Note: A_0~A_7 are 8 control bit lines. Tune words from 00000000 to 11111010 results in the tuned frequency from lowest to highest

Tuneword = $\left(\frac{f_{desired}-f_{low}}{f_{high}-f_{low}}\right)$ ×250 (Note: It will be 200 for LBM039A-85~LBM700A-85)

Example：The tuneword of LBM037A-85 at f_c=50MHz is：

Tuneword = $\left(\frac{50-30}{90-30}\right)$ ×250=83D=53H

Notes

The accuracy of tune words is assured only with V_{bb}=85V which is the case of manufacture. A low V_{bb} can cause errors of tune words so that you must declare to the factory of the exact V_{bb} used to adjust the errors before delivery.

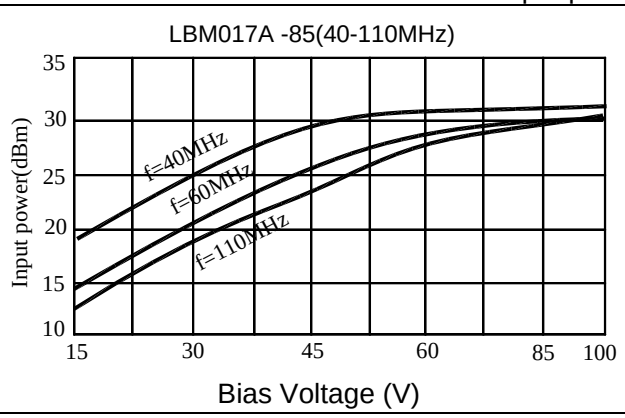
1） The Input P_{-1} decided by the bias voltage, refer to the “Input P_{-1}—Bias voltage” typical curve on this page

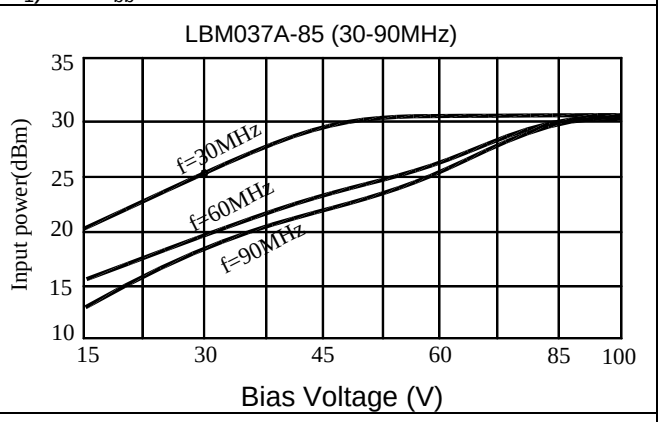
2） Replacement alternative for MICRO-POLE series of POLE/ZERO

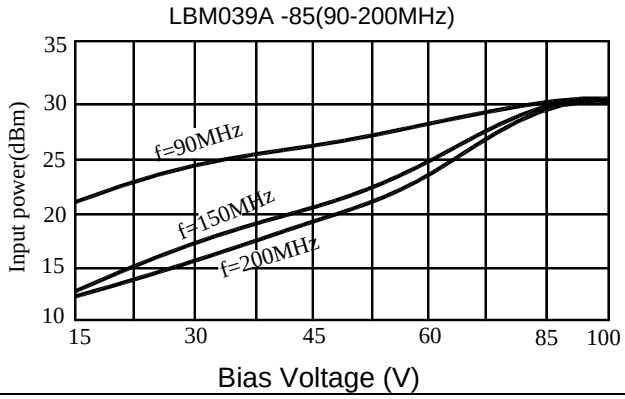
3） Zero DC resistance at both I/O port, additional DC blocking capacitance needed if necessary

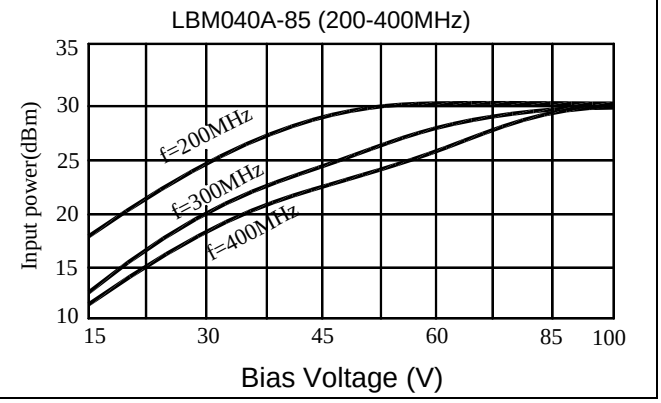
Typical Curves

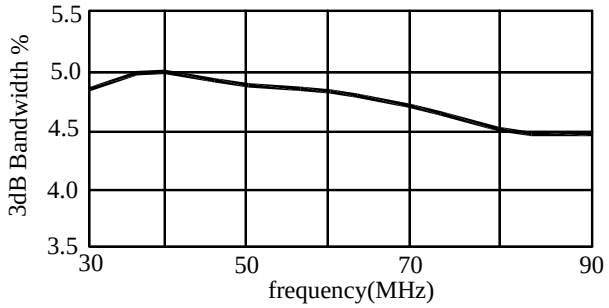
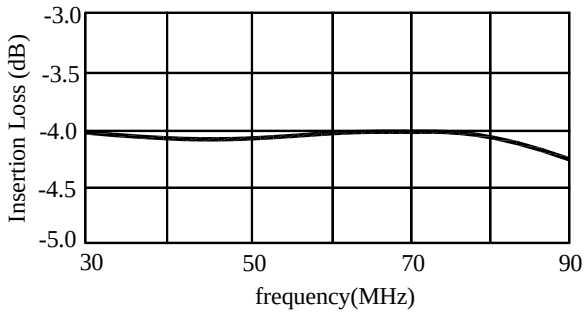
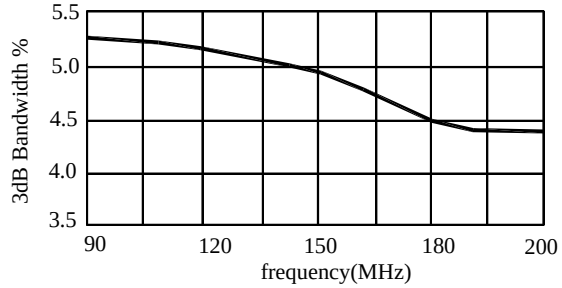
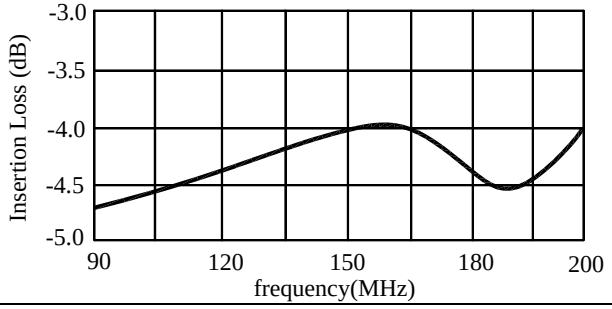
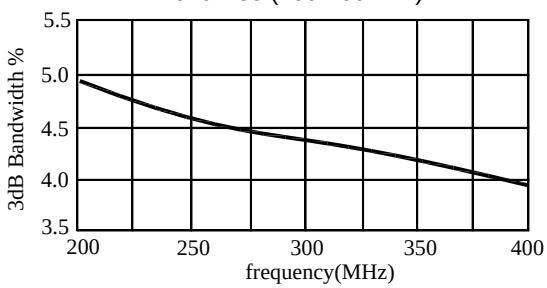
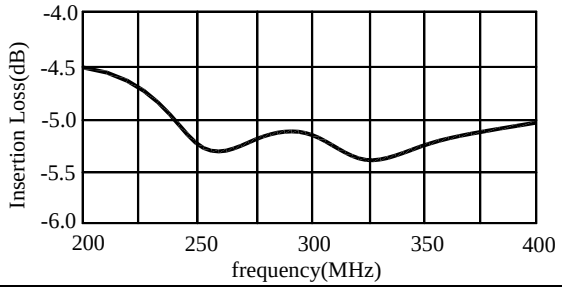
Input power (P_{-1}) via V_{bb}



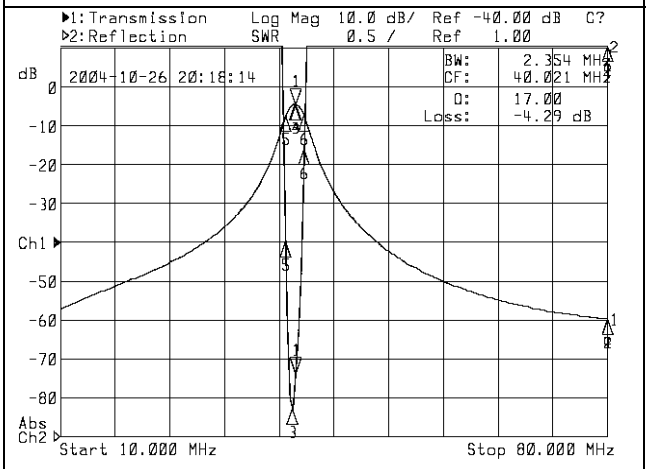






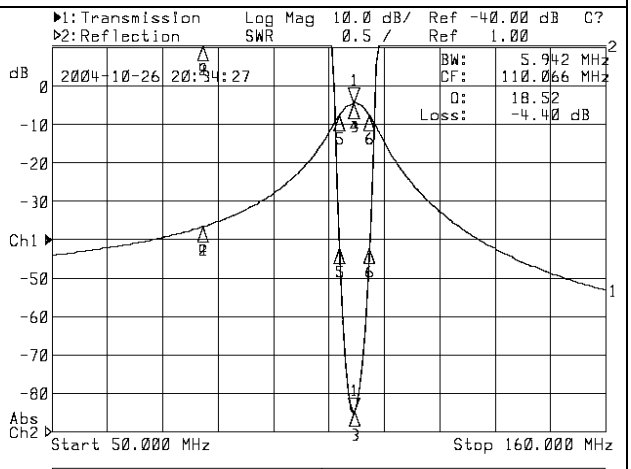
3dB % bandwidth	Insertion loss vs. Frequency
LBM037A-85 (30-90MHz) 	LBM037A-85 (30-90MHz) 
LBM039A-85 (90-200MHz) 	LBM039A-85 (90-200MHz) 
LBM040A-85 (200-400MHz) 	LBM040A-85 (200-400MHz) 

P/N：**LBM017A-85**



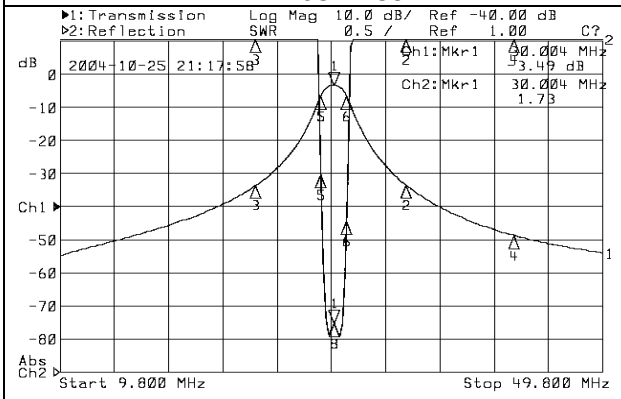
1: Mkr Δ(MHz)	dB	2: Mkr (MHz)	
1> 0.00	0.00	1> 40.10	1.81
2: 39.90	-55.55	2: 80.00	72.73
3: -0.08	-0.01	3: 39.71	1.37
4: 39.90	-55.55	4: 80.00	72.73
5: -1.26	-3.04	5: 38.84	3.51
6: 1.10	-3.04	6: 41.20	4.70

P/N：**LBM017A-85**



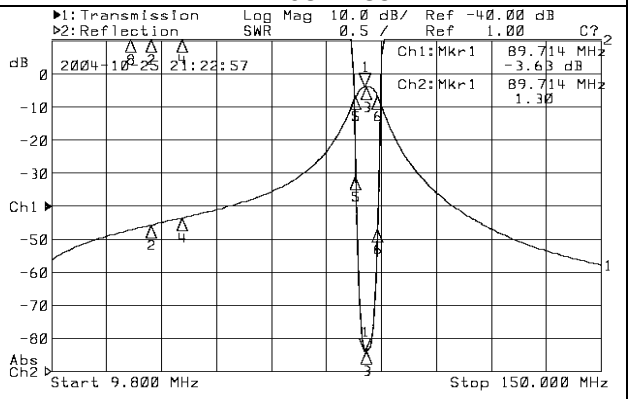
1: Mkr Δ(MHz)	dB	2: Mkr (MHz)	
1> 0.00	0.00	1> 109.95	1.24
2: -29.95	-32.14	2: 80.00	73.91
3: 0.12	-0.01	3: 110.09	1.27
4: -29.95	-32.14	4: 80.00	73.91
5: -2.85	-3.00	5: 107.10	3.40
6: 3.09	-3.00	6: 113.04	3.39

LBM037A-85



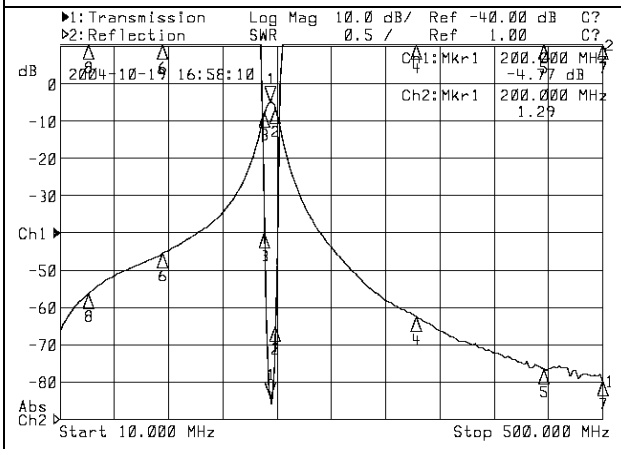
1: Mkr (MHz)	dB	2: Mkr (MHz)	
1> 30.00	-3.49	1> 30.00	1.73
2: 35.31	-33.48	2: 35.31	101.55
3: 24.25	-33.42	3: 24.25	122.67
4: 43.25	-48.63	4: 43.25	143.66
5: 29.03	-6.44	5: 29.03	3.98
6: 30.91	-6.49	6: 30.91	3.28
		8: 30.00	1.73

LBM037A-85



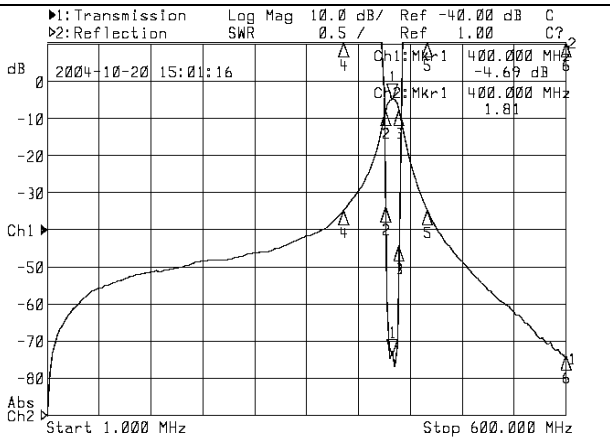
1: Mkr (MHz)	dB	2: Mkr (MHz)	
1> 89.71	-3.63	1> 89.71	1.30
2: 35.31	-45.61	2: 35.31	244.54
3: 90.16	-3.63	3: 90.16	1.32
4: 43.25	-43.45	4: 43.25	172.01
5: 87.41	-6.65	5: 87.41	3.96
6: 92.90	-6.61	6: 92.90	3.15
		8: 30.00	207.46

P/N：**LBM040A-85**



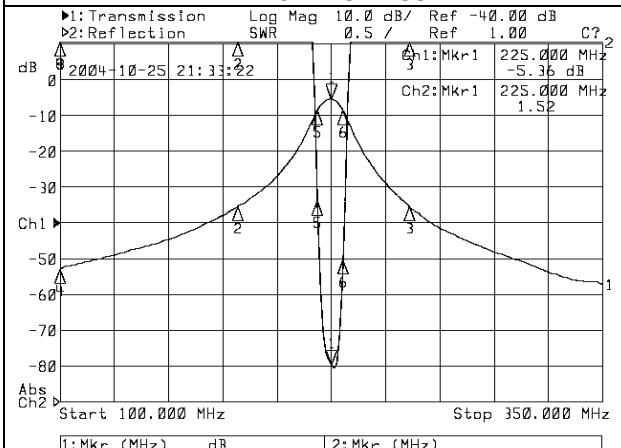
1:Mkr (MHz)	dB	2:Mkr (MHz)	
1> 200.00	-4.76	1> 200.00	1.29
2: 204.51	-6.65	2: 204.51	2.24
3: 194.91	-7.56	3: 194.91	3.50
4: 332.03	-62.49	4: 332.03	1000000.00
5: 446.95	-76.50	5: 446.95	1000000.00
6: 102.80	-45.42	6: 102.80	876155.75
7: 500.00	-79.77	7: 500.00	1000000.00
8: 36.08	-56.13	8: 36.08	1000000.00

P/N：**LBM040A-85**



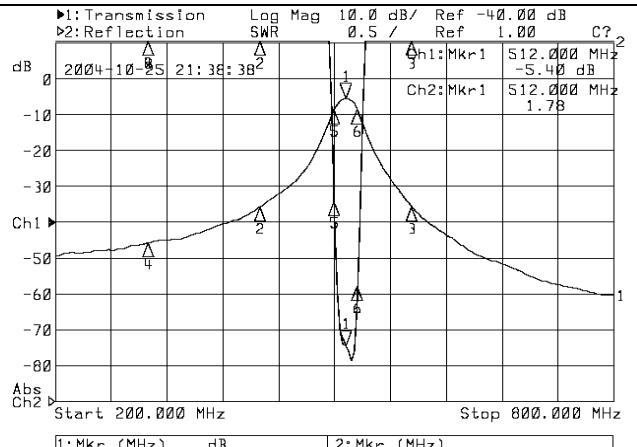
1:Mkr (MHz)	dB	2:Mkr (MHz)	
1> 400.00	-4.69	1> 400.00	1.81
2: 391.98	-7.74	2: 391.98	3.81
3: 407.35	-7.75	3: 407.35	3.28
4: 343.33	-34.74	4: 343.33	56.31
5: 439.96	-34.72	5: 439.96	44.84
6: 600.00	-73.82	6: 600.00	68.56

LBM041A512-85



1:Mkr (MHz)	dB	2:Mkr (MHz)	
1> 225.00	-5.39	1> 225.00	1.52
2: 181.97	-35.36	2: 181.97	73.11
3: 260.94	-35.32	3: 260.94	54.75
4: 100.00	-52.81	4: 100.00	49.29
5: 218.61	-8.37	5: 218.61	3.81
6: 230.33	-8.40	6: 230.33	2.99
		8: 100.00	49.29

LBM041A512-85



1:Mkr (MHz)	dB	2:Mkr (MHz)	
1> 512.00	-5.40	1> 512.00	1.78
2: 420.24	-35.49	2: 420.24	30.19
3: 582.64	-35.50	3: 582.64	25.55
4: 300.00	-45.64	4: 300.00	55.49
5: 499.56	-8.42	5: 499.56	3.79
6: 524.72	-8.45	6: 524.72	2.61
		8: 300.00	55.49

LifeElectronics
Живое партнерство

ООО «ЛайфЭлектроникс» **“LifeElectronics” LLC**

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru

www.lifeelectronics.ru