

# Product Flyer

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Product Group

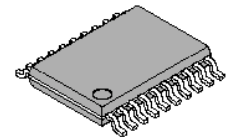
## MB15F7xUL

Aug. 2002  
Version 1.1

## Dual PLL Frequency Synthesisers

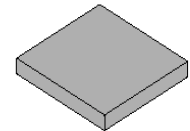
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The Fujitsu MB15F7xUL series dual PLLs are serial input frequency synthesisers operating up to 6 GHz. They have built-in dual-modulus prescalers enabling pulse swallow operation. The latest advanced BiCMOS technology is used resulting in a super low supply current. A new charge pump design provides fast tuning along with low spurious noise and phase noise characteristics. A new BCC-20 package decreases the mounting area by more than 30% over the previous BCC-16 package.



20-pin, Plastic TSSOP  
FPT-20P-M06

The MB15F7xUL series is ideally suited for digital mobile communications, including GSM, DCS1800, PCS1900 as well as WLAN and ISM applications.



20-pad, Plastic BCC,  
LCC-20P-M05

### Features

- Wide range of operating frequency:
  - up to 6 GHz
- Very low current consumption: one of the lowest among competitors
  - typically 4,5mA for 2,6 GHz / 0,6 GHz at 2,7V
  - 20% lower than SL series
  - power saving current: 0,1uA (typical)
- Very low spurious and phase noise characteristics
- Advanced small packing available:
  - 20-pin BCC packages 3,4mmx3,60mm
- Low operating voltage : 2,4V to 3,6V
- Software selectable charge pump current ( $\pm 1,5$  or  $\pm 6,0$ mA)
- Reference counter:
  - 14-bit programmable divider: 3 to 16383
- 18-bit programmable divider
  - Binary 7-bit swallow counter: 0 to 127
  - Binary 11-bit programmable counter: 3 to 2047
- MB15F76UL
  - Binary 5-bit swallow counter: 0 to 31
  - Binary 13-bit swallow counter: 3 to 8191
- Evaluation Kits available
  - MB1500EB16 (TSSOP)
  - MB1500EB16B (BCC)

**Key Specifications:**

Parameter	Symbol	MB15F72UL	MB15F73UL	MB15F74UL	MB15F76UL	MB15F78UL
Operating Frequency IF (MHz)	$f_{inIF}$	50-350	50-600	100-2000	100-1500	100-1200
Operating Frequency RF (MHz)	$f_{inRF}$	100-1300	200-2250	2000-4000	2000-6000	400-2600
Power Supply Current IF (mA)	$ICC_{IF}$	1,0	1,2	2,5	2,0	1,7
Power Supply Current RF (mA)	$ICC_{RF}$	1,5	2,0	6,5	7,0	2,8
Power-saving Current	IPS	0,1 uA typ				
Power Supply Voltage	VCC	2,4 V – 3,6 V		2,7V – 3,6 V		2,4 V – 3,6 V
Prescaler Divide Ratios RF	P	RF=64/65 or 128/129,		RF=64/65 or 128/129	RF=16/17, 32/33 & 1/4	RF=32/33, 64/65
Prescaler Divide Ratios IF	P	IF=8/9 or 16/17		IF=32/33 or 64/65	IF=4/5 or 8/9 & 1/4	IF=16/17, 32/33
Operating Temperature	Ta	-40°C to +85°C				

**Application example (MB15F76UL, MB15F74UL)**

