EPCOS Product Brief 2013

Surface Acoustic Wave Components

For Femtocell Applications

Why a specific product range for femtocell applications?

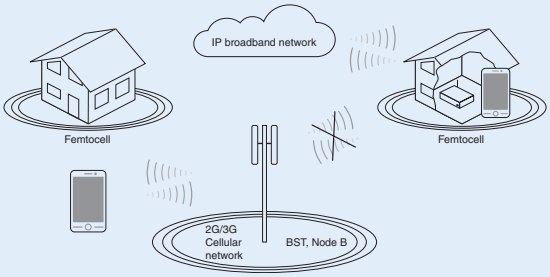
A femtocell is a very small and low power base station, used in either a home or business environment. It captures voice and data traffic from a mobile phone and re-routes it to an Internet-based broadband connection such as ADSL.

Femtocells are consumer devices requiring standardized and cost-effective components in a similar way to mobile phones. However, they operate in reverse with re-spect to mobile phones, with their reception and transmission links swapped around.

EPCOS consequently decided to develop a dedicated range of components whose performance was selected and optimized for femtocell applications.

Benefits

- Standard SAW and BAW technologies in FlipChip CSSP packages
- Identical pinning for all standard frequencies in each package size
- Femtocell duplexers with optimized performance and power durability level up to business requirements (28 dBm average input power, LTE downlink modulated signals)
- Unique production know-how and volume benefits from the world market leader in SAW components
- RoHs-compliant (2002/95/EC)
- Lead-free soldering compatible with J-STD20C



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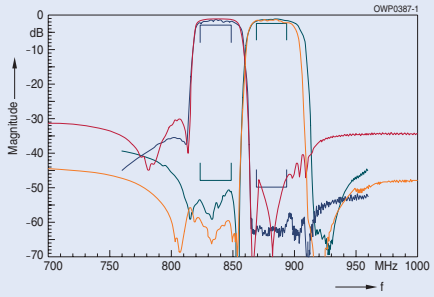
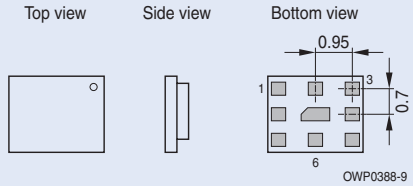
Duplexers

Example: B7925 band 5 duplexer



Outline drawings



Main pinout configuration

- Pin 1: T_x / downlink
- Pin 3: R_x / uplink
- Pin 6: antenna
- Or mirrored pinout: R_x = 1 / T_x = 3

Main representatives

Band	Size	Ordering code
I	2520	B39212B8092P810[1]
I	2520	AI91[2]
IV	2520	B39212B7936P810
V	2520	B39881B7925P810
VIII	2520	B39941B7675P810[3]
XIII	2520	B39781B7678A710[3]

General characteristics

- Package size: 2 × 2.5 × 0.68 mm
- SE/SE configuration, SE/Bal possible
- T_x isolation >50 dB min
- Power durability 28 dBm average input power, for 50 khours @ 55 °C – LTE downlink 5 MHz signals

Under development or coming soon

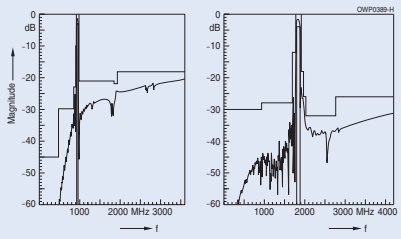
- Band II – 2520 main pinout
- Band V – 2520 mirrored pinout
- Band XIII – 2520 main & mirrored pinout
- Band XII – 2520 main & mirrored pinout
- Band VII – 2520 main & mirrored pinout
- Band XX – 2520 main & mirrored pinout

[1] Target mass production release Q4 2012
[2] Mirror pinout target samples Q4 2012
[3] 24 dBm power handling, for residential applications

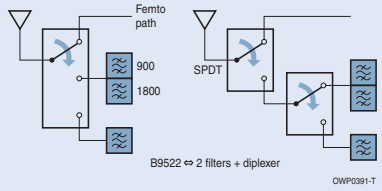
Filters

Example B9522 2in1 GSM 900/1800 sniffer with diplexed input

Transfer function

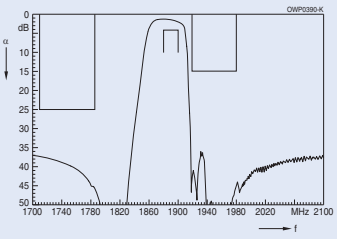


Key features



Example B9479 DECT R_x/T_x filter – power durable for CATiq

Transfer function



Key characteristics

- 25 dB min rejection @ 1920 MHz
- 18 dBm average input power, 20 khours @ 55 °C, DECT CATiq

Main representatives

Desc	Size	Ordering code
DECT Rx/Tx	1411	B39192B9479P810
2in1GSM sniffers Eur	1814	B39182B9522P810
2in1GSM snif. Eur Dpx	1814	B39182B9521P810
Band I / IV – downlink	1411	B39212B9451P810
Band I – uplink	1411	B39202B9414M410
Band II – downlink	1411	B39202B9477P810
Band II – uplink	1411	B39192B9428K610
Band IV – uplink	1411	B39172B9452K610
Band V – downlink	1411	B39881B9439M410
Band V – uplink	1411	B39841B9438M410
Band VIII – downlink	1411	B39941B9449M410
Band VIII – uplink	1411	B39901B9435M410
Band XIII – downlink	1411	AF51[1]
Band XIII – uplink	1411	AF47[1]
BC10 uplink	1411	B39831B8304P810
BC10 downlink	1411	B39881B8303P810

Under development or coming soon

- Band 25: uplink and downlink single filters
- Band VII: uplink and downlink single filters

[1] Target mass production release Q1 2013

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