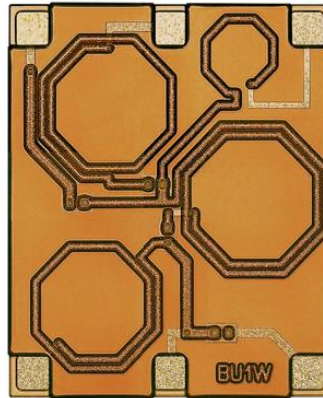


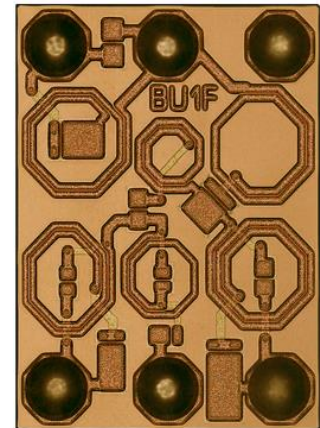
(23) UWB Band Pass Filter (SCI-306W/F)

FEATURES

- Passive integration on silicon substrate
- Low insertion loss in pass band
- Small size: 1.4 mm x 1.2 mm (wirebond)
1.6 mm x 1.2 mm (flip chip)
- Eutectic Sn/Pb or lead-free solder bump
- Low profile, 0.40 mm height
- Directly attachable on PCB or flipped on PCB
- Operating temperature: -40 to +85 °C
- Storage temperature: -40 to +85 °C



SCI-306W (Wirebond)



SCI-306F (Flip Chip)

DESCRIPTION

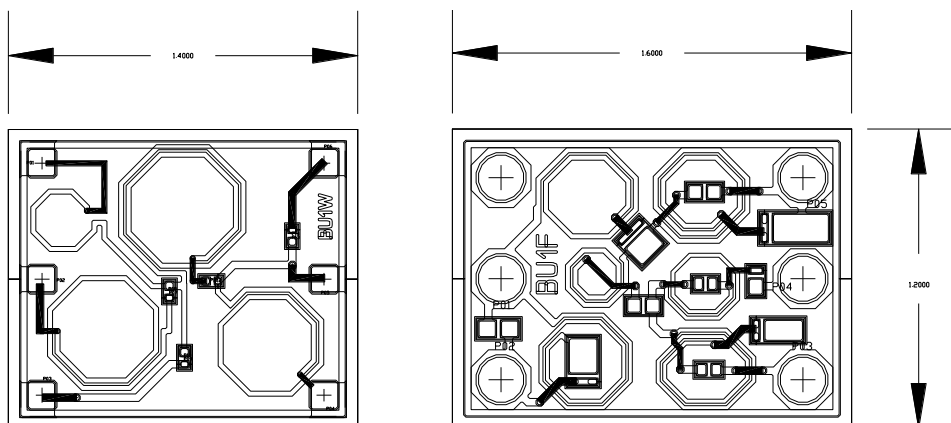
STATS ChipPAC's SCI-306W/F is a band pass filter (BPF) for UWB band applications. The BPF has low pass-band insertion loss and small size. It is composed of 8.0 um Cu-plated inductors and Metal-Insulator-Metal capacitors which are fabricated on a silicon substrate using our IPD (Integrated Passive Device) process. The pad or bump size and pitch of the BPF are selected so that the device can be mounted directly on a PCB or laminate substrate using conventional wirebonding or surface mount techniques. The low profile and small form-factor of the device make it especially suitable for SiP applications.

ELECTRICAL SPECIFICATIONS

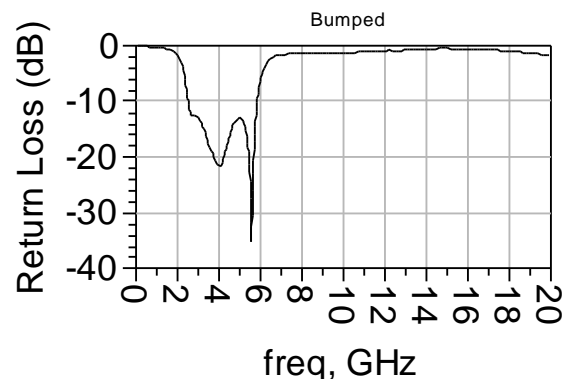
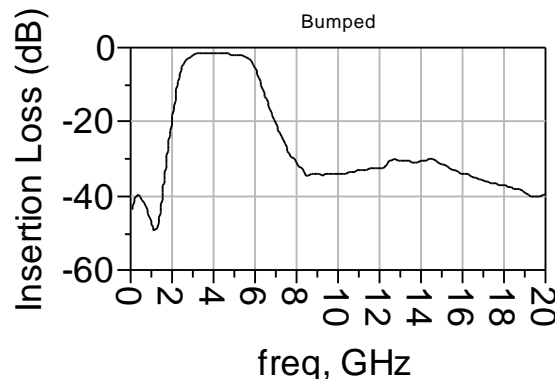
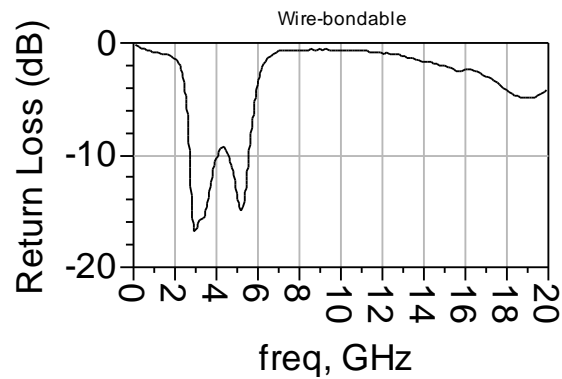
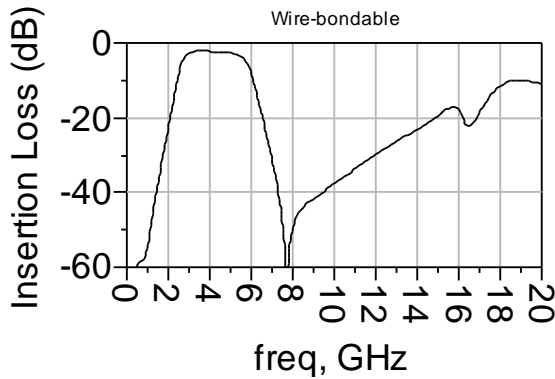
(Test board loss 0.2 dB included)

Specification	Unit	Minimum	Wirebonding Typical (Bumped Typical)	Maximum
Pass Band	MHz	3000		5000
Insertion Loss	dB		2.5 (2.0)	
Return Loss	dB		10 (12)	
Attenuation, 900 MHz	dB		55 (45)	
Attenuation, 1900 MHz	dB		25 (23)	
Attenuation, 8000 - 20000 MHz	dB	10 (30)		50
Size	mm	1.4 x 1.2 (WB)		1.6 x 1.2 (FC)

DIMENSIONS

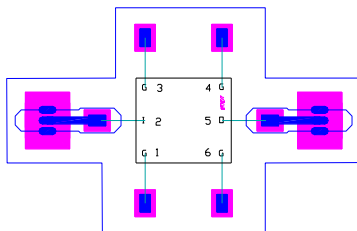


TYPICAL CHARACTERISTICS

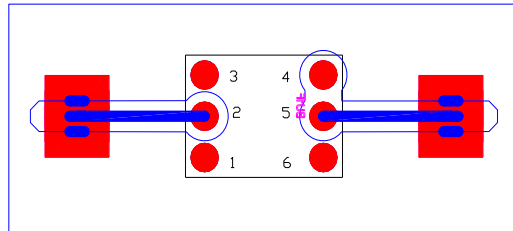


TEST BOARD DRAWING

SCI-306W (Wirebond)



SCI-306F (Flip Chip)



Pad	SCI-306W Signal	SCI-306F Signal
1	GND	GND
2	Input	Input
3	GND	GND
4	GND	NC
5	Output	Output
6	GND	GND

NOTES

All dimension measurement units are in millimeters (mm). Electrical performance and typical values are measured at room temperature. For best results, ground plane directly beneath the device should be in the top metal layer.

Refer to "Appendix A" for:

- Pad sizes and typical wirebond length used in the wirebonded IPD products.
- Recommended solder thermal profile, landing pattern recommendation and bump specifications used in the flip chip IPD products.