



QFN/QFP35

High-performance 0.35 mm+ engineering test socket for QFN, QFP, DFN and SO style packaged devices

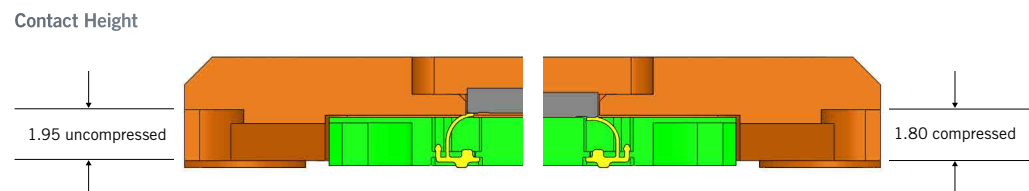


Ironwood Electronics QFN/QFP35 test sockets are designed for testing today's high performance QFN, QFP, DFN and SO packages. For development, characterization, at speed burn-in, and low volume production manual testing.

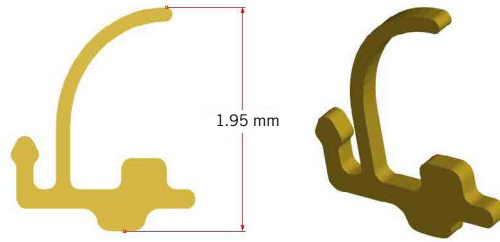
FEATURES AND BENEFITS

Signal performance	Miniature stamped contacts provide extremely short signal path
Oxide-cutting wipe action	The QFN35 contact wipes the package pad, cutting through solder oxides
Near-device decoupling	Small footprints, with large underside frame decoupling pockets designed to standard dimensioned packages, allow for near-device placement of passive components
Reduced ground inductance	Multiple compliant ground contacts reduce ground inductance and provide a thermal path through the PCB. A solid ground block can be incorporated for further product enhancements
Replaceable contact sets	Sockets with replaceable contact sets offer a significant cost savings vs. the purchase of a new socket

METHODOLOGY



CONTACTS



SOCKET SPECIFICATIONS

Featuring a 0.35mm+ pitch, the QFN35 test sockets have been designed to the JEDEC STD. MO-220 and are available for all standard family members from 3mm to 12mm. The QFP35 test sockets have been designed to the JEDEC standard Gull Wing packages. Custom designs are also available. The QFN/QFP35 test sockets feature a unique contact design that provides outstanding electronic signal fidelity to meet the requirements of today's demanding analog, linear, RF, Bluetooth and telecommunication applications. Additionally, each of these test sockets has been designed to minimize valuable PCB real estate, enabling very close decoupling component placement. Standard cover options include a hinged or clip-on with custom covers available by request.

ELECTRICAL SPECIFICATIONS

P2A configuration	0.4 mm pitch	0.5 mm pitch*
GSG Loop inductance	1.03 nH	1.23 nH
Self inductance	0.800 nH	0.936 nH
Mutual inductance	0.086 nH	0.085 nH
Capacitance (GSG - Signal pin to Return)	0.234 pF	0.213 pF
Mutual capacitance	0.016 pF	0.014 pF
S21 Insertion loss (GSG)	-1 dB @ 17.4 GHz	-1 dB @ 11.0 GHz
S11 Return loss (GSG)	-20 dB @ 3.5 GHz	-20 dB @ 3.0 GHz
S41 Crosstalk (GSSG)**	-20 dB @ 7.6 GHz	-20 dB @ 4.8 GHz
Impedance	66.3 Ω	76 Ω
Time delay	14.3 ps	15.2 ps
Current Carrying Capacity (GSG)	3 A	3 A
CRES	< 25 m Ω	< 25 m Ω

* Specification based on lab measurements.

** All GSSG Crosstalk values are based on simulation.

MECHANICAL SPECIFICATIONS

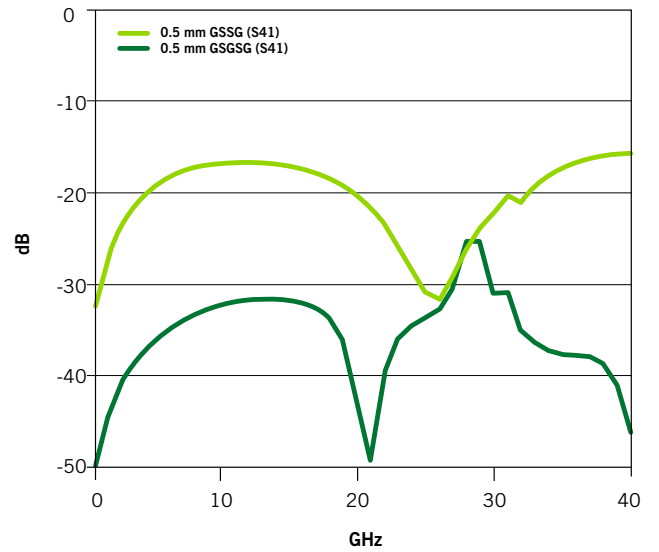
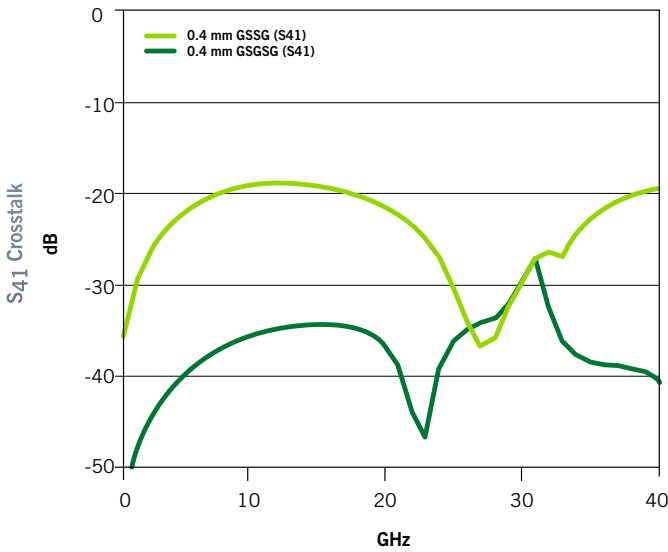
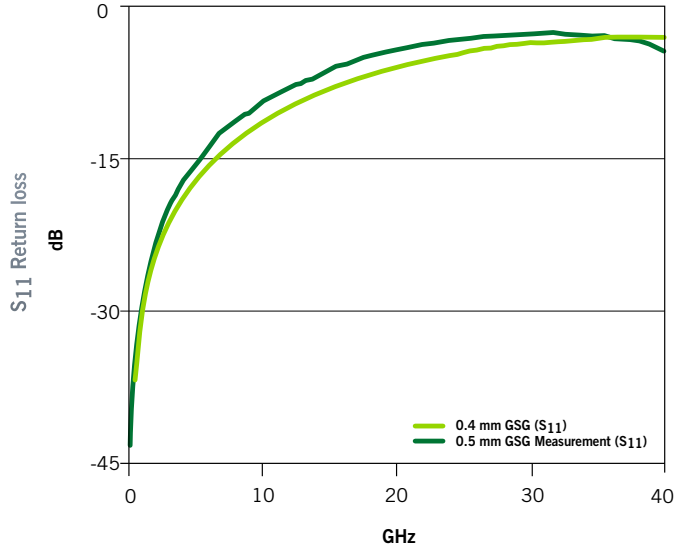
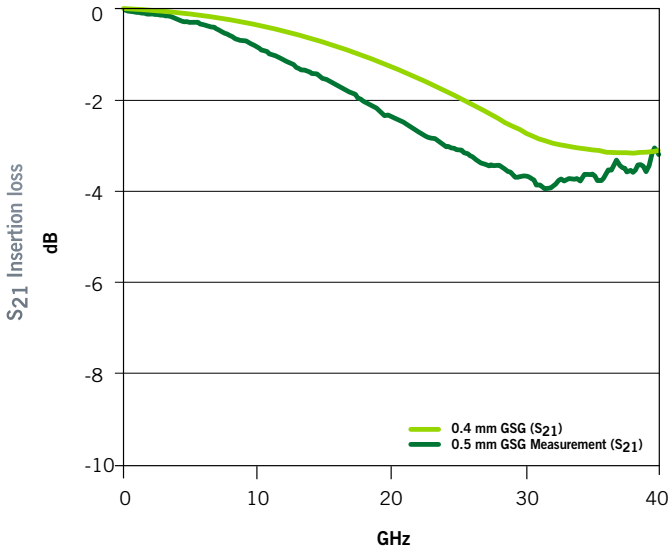
Contact life	10k insertions
Normal force	40 grams/contact
Vertical compression	0.15mm
Contact height	1.95 mm

MATERIAL SPECIFICATIONS

Contact base material	Copper (Cu) alloy
Contact plating	Gold (Au) over Nickel (Ni)
Housing	Polyimide (Cirlex®)
Frame	Torlon® 5030, Ultem2300 or equivalent
Environmental	-55° C to 155° C

Overall performance may vary based on applications requirements and maintenance schedules. Additional performance data may be available on request.

PERFORMANCE



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