ECT CONTACT PRODUCTS
EVERETT CHARLES TECHNOLOGIES
A Cohu Company

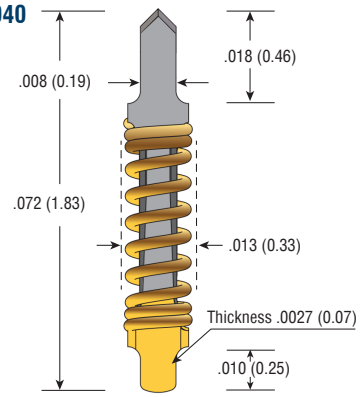
ZIP®

SEMICONDUCTOR POGO® PRODUCTS

ECT ZIP® series probes feature a number of innovative designs that provide for superior contact capable of fitting your application needs.

Utilizing ECT's patented flat technology, ZIP semiconductor spring probes present a new level of accuracy, scalability, and performance. While conventional round technology restricts longer travel and can have its reliability undermined by its small contact area, ZIP possesses a large internal contact area, resulting in low contact resistance, superior bandwidth, and excellent high current behavior.

Z0-040



Mechanical

Pitch:	.016 (0.40)
Recommended Travel:	.018 (0.46)
Full Travel:	.020 (0.50)
Test Height:	.059 (1.51)
Mechanical Life*:	200,000 cycles
Operating Temperature:	-55°C to +155°C

Spring Force in oz. (grams)

	Order Code	Test Height
Standard		0.66 (19)
High	- 1	0.96 (27)

Electrical (Static Conditions)

Current Rating DC:	2.5 amps
Average DC Probe Resistance**:	<90 mOhms
Self Inductance (Ls):	0.50 nH
Capacitance (Cc):	0.030 pF
Bandwidth @ -1dB:	>30.0 GHz

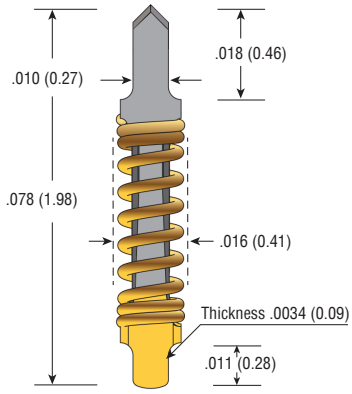
Materials and Finishes

Plunger DUT:	HyperCore™
Plunger HIB:	BeCu, Gold plated over hard Nickel
Spring:	Stainless Steel, Gold plated

Tip Style - DUT

Tip Style - HIB

Z0-050



Mechanical

Pitch:	.020 (0.50)
Recommended Travel:	.019 (0.48)
Full Travel:	.022 (0.56)
Test Height:	.059 (1.51)
Mechanical Life*:	500,000 cycles
Operating Temperature:	-55°C to +155°C

Spring Force in oz. (grams)

	Order Code	Test Height
Standard		0.65 (18)
High	- 1	1.11 (31)

Electrical (Static Conditions)

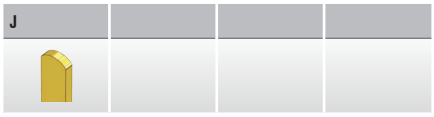
Current Rating DC:	2.88 amps
Average DC Probe Resistance** :	<90 mOhms
Self Inductance (Ls):	0.60 nH
Capacitance (Cc):	0.03 pF
Bandwidth @ -1dB:	>40.0 GHz

Materials and Finishes

Plunger DUT:	HyperCore™
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

Tip Style - DUT

Tip Style - HIB



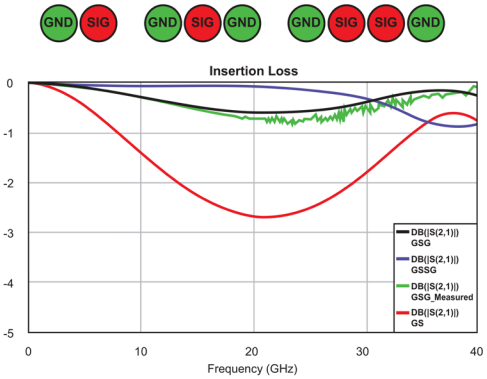
ZIP Benefits Summary

- Revolutionary barrel-less architecture
- Large compliance window to accommodate stack height tolerances for improved yields
- No internal surfaces, improves plating quality for consistent electrical performance
- Low inductance for power delivery and mixed signal performance
- Hypercore™ - Ultra-hard, durable base metal for long probe life
- High yields and long life for lowest cost of ownership

Z0 Series
Ultra HIGH Bandwidth

The Z0 Ultra High Bandwidth Series takes advantage of the ZIP® scalable architecture to arrive at an ultra-compact design with 0.50 nH and 0.60 nH inductance tailor made for high frequency testing. The probes have a bandwidth rating of up to 40 GHz at -1dB.

Z0 Insertion Loss Comparison



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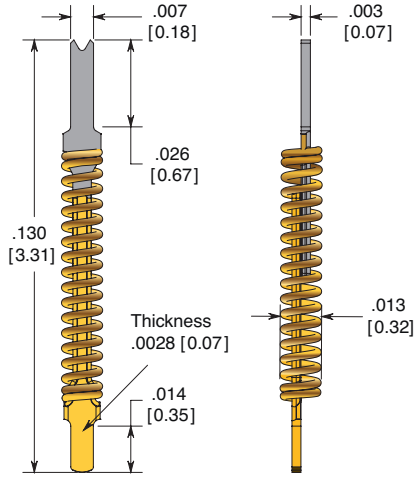


Mechanical

Pitch:	.016 (0.40)
Recommended Travel:	.025 (0.64)
Full Travel:	.028 (0.71)
Test Height:	.105 (2.67)
Mechanical Life*:	
HyperCore DUT plunger:	500,000 cycles
BeCu DUT plunger:	50,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.20 (34)

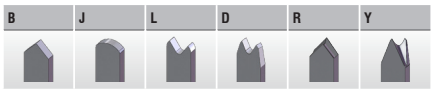
Electrical (Static Conditions)

Current Rating DC:	2.0 amps
Average DC Probe Resistance** :	<85 mOhms
Self Inductance (Ls):	1.07 nH
Capacitance (Cc):	0.21 pF
Bandwidth @ -1dB:	30.0 GHz

Materials and Finishes

Plunger DUT:	HyperCore™, BeCu Gold plated
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

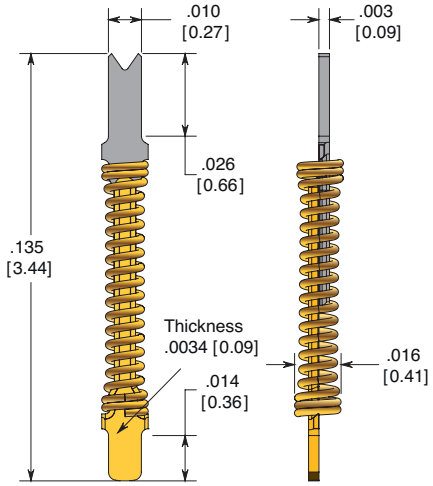
Tip Style - DUT HyperCore



Tip Style - DUT BeCu

Tip Style - HIB

Z-050



Mechanical

Pitch:	.020 (0.50)
Recommended Travel:	.025 (0.64)
Full Travel:	.030 (0.76)
Test Height:	.110 (2.79)
Mechanical Life*:	
HyperCore DUT plunger:	500,000 cycles
BeCu DUT plunger:	50,000 cycles
Operating Temperature:	-55°C to +155°C
Spring Force in oz. (grams):	1.40 (40)

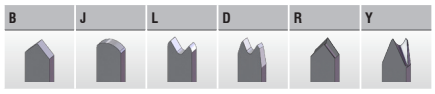
Electrical (Static Conditions)

Current Rating DC:	2.8 amps
Average DC Probe Resistance** :	<65 mOhms
Self Inductance (Ls):	1.01 nH
Capacitance (Cc):	0.20 pF
Bandwidth @ -1dB:	25.0 GHz

Materials and Finishes

Plunger DUT:	HyperCore™, BeCu Gold plated
Plunger HIB:	BeCu with proprietary plating
Spring:	Stainless Steel, Gold plated

Tip Style - DUT HyperCore



Tip Style - DUT BeCu

Tip Style - HIB

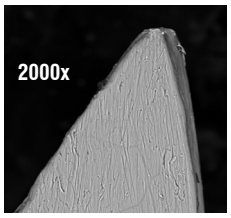
Z Series
HIGH Bandwidth

The ZIP® Z High Bandwidth Series yields the highest and most stable bandwidth for its package size. The high performance provided by these contacts makes the Z series a perfect choice for the most demanding test applications. High Bandwidth probes are available in .4mm and .5mm pitches. The Z series is offered in two DUT-side plunger material choices: HyperCore for high volume production applications and BeCu for burn-in or low volume applications.

HYPERcore™ [base material]

HyperCore™ is a non-plated homogenous material specifically designed for use in semiconductor test. This proprietary material possesses properties that prevent oxidation, ensuring premium performance throughout high volume production cycles. With its 600 knoop hardness, it is inert to common wear related to contacting tough device surfaces and cleaning processes. HyperCore™ is also very conductive; electrical specifications are virtually unchanged when compared to gold-plated BeCu. HyperCore™ plungers are exclusively available on ECT's high performance ZIP family of contacts.

500k Cycles Against Steel



HyperCore™
- No deformation
- No cleaning wear
- No solder adhesion

BeCu
- Enlarged flat spots
- Solder adhesion (even after cleaning)
- Gold & Nickel plating worn