



## *BTP SERIES Bead Target Probes*



### Introduction – What is Bead Probe technology?

ECT is supporting the development of the Agilent Medalist Bead Probe Technology with OEM's, contract manufacturers, and test fixture partners.

Bead Probing is a methodology for placing test points directly on a PCB's copper traces, or top metal, thus forming a "Bead Probe". These Bead Probes are then contacted by "Bead Target Probes" during in-circuit testing for expanded test access.

For more information, visit Agilent website: <http://www.home.agilent.com>. There is a flash demo on the Agilent website for your review.

### BTP Series Probes from ECT

ECT has developed a series of probes specifically for Bead Probe applications featuring:

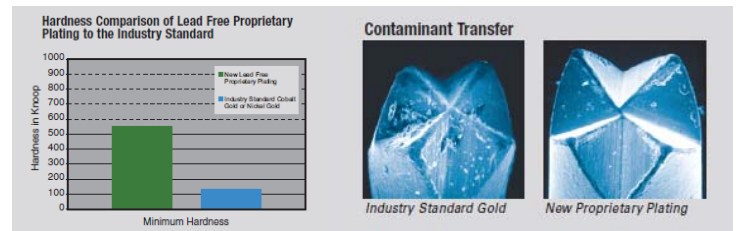
- **Pogo Plus® Design**

ECT's POGO Plus® design is an excellent choice for Bead Probe challenges. The bias ball technology maintains excellent internal contact between the plunger and barrel even at the low forces required for bead probe applications.



- **LFRE Plating**

ECT's LFRE plating offers a significant increase in hardness over a typical gold plating hardness of 130-200 Knoop, providing a much higher range of 550-650 Knoop. LFRE plating is also less porous which results in a more durable surface that is less susceptible to solder and material transfer from Bead Probes.

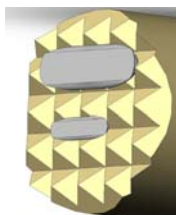


- **Flat and "Micro-Textured" Tips**

The hemi-ellipsoid shape of a Bead Probes presents a unique probing challenge in that standard serrated probes may fall into the valleys between serrations. ECT has developed a new textured tip face that is optimized for contact to the hemi-ellipsoid shape of Bead Probes as small as .004".

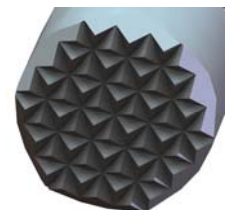
A standard serrated or even micro-serrated tip may self-align with the hemi-ellipsoid shape of a Bead Probe affecting contact integrity.

Illustration shows a .050" serrated tip contacting a .006" x .025" vs. a .003" x .015" Bead Probe.



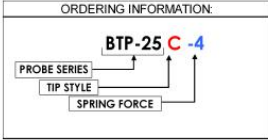
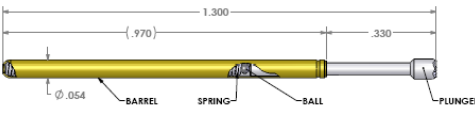








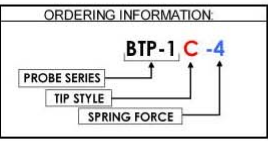
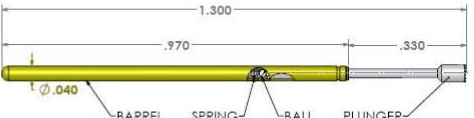








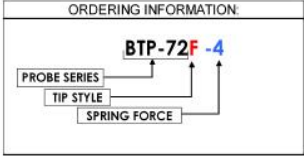
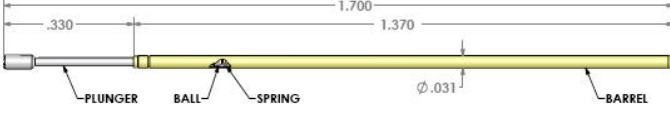




Bead Probes on a Serrated Tip

An innovative "Micro-Textured" tip incorporates closely spaced triangular pyramid shapes to form a textured surface. Perfect for contacting beads that are long yet have a small width when placed on a PCB trace.



"Micro-Textured" Tip

**ECT Bead Probe Product Matrix:**

Test Center	Spring Force	*Plunger	*Barrel	Spring	Ball	
.100" (2.54)	2-16oz @ rec travel	BeCu LFRE Plated	Phos Bronze Gold Plated	Music Wire	Stainless Steel	
			<b>BTP-25C</b>  	<b>BTP-25F</b>  	<b>BTP-25HF</b>  	<b>BTP-25HL</b>  
.075" (1.91)	2-11oz @ rec travel	BeCu LFRE Plated	Phos Bronze Gold Plated	Music Wire	Stainless Steel	
			<b>BTP-1C</b>  	<b>BTP-1F</b>  	<b>BTP-1HF</b>  	<b>BTP-1HL</b>  
.050" (1.27)	2-16oz @ rec travel	BeCu LFRE Plated	BeCu Gold Plated	Music Wire	Stainless Steel	
			<b>BTP-72F</b>  	<b>BTP-72HF</b>  		
<b>Mechanical Specifications</b>						
Full Travel:	.250 (6.35)					
Recommended Working Travel	.167 (4.24)					
Mechanical Life Exceeds:	1 X 10 <sup>6</sup> Cycles					
Operating Temperatures	-55° C to 105° C					

**APPLICATION NOTE:** ECT Micro-Textured Tips are designed for high-volume first-pass test yield improvement when contacting Bead Probes as small as .004". Flat tips are recommended for de-bug which may require highly repetitive fixture actuations and for low-volume production applications.

**WHERE TO ORDER:**

Contact Products  
 700 E. Harrison Ave.,  
 Pomona, CA 91767  
 Tel: (909) 625-9390  
 Fax: (909) 624-9746

Ostby Barton  
 487 Jefferson Blvd  
 Warwick, RI 02886  
 Tel: (401) 739-7310 X212  
 Fax: (401) 732-4937

<http://www.ectinfo.com/cpg>