

ZIF Prime Circuit Card Retainer

The ZIF Prime is the latest in state-of-the-art rugged retainers released by CTS Electronic Components. It offers the most common finish and actuation styles and maintains the superior thermal and mechanical features of the ZIF III. New additional features include lower locking/unlocking torque requirements and enhanced visual indication of locked/unlocked status.

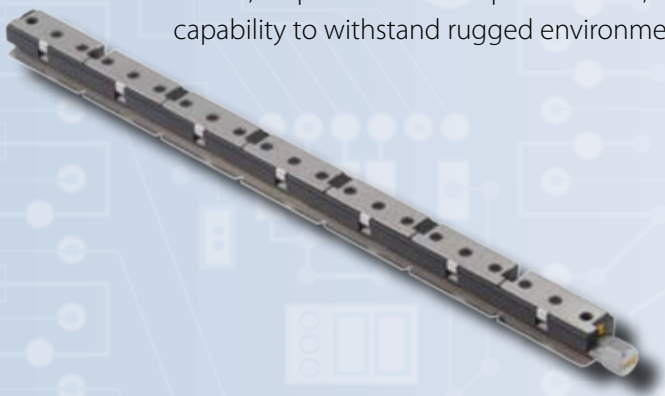
The ZIF Prime is a totally self-contained precision assembly that provides a highly effective thermal and mechanical interface between the circuit board and coldwall. The ZIF Prime retainer is mounted to a heat frame or directly to the PC board and provides exceptional thermal performance while allowing the rapid exchange of electronic circuitry to minimize equipment downtime.

Primary characteristics of the ZIF family of retainers include quick and easy installation with a ¼ turn lock and unlock, uniform contact area to enable uniform board pressure and heat transfer, superior thermal performance, and capability to withstand rugged environments.



Key Features:

- Standard parts consist of:
 - › Aluminum housing with black anodize finish
 - › Stainless steel rod with 3/16 in. external hex head, passivated
 - › Beryllium copper spring, electroless nickel plated
 - › 2-56 screw mounting
- Thermal impedance of 0.9 °C-in/W (equivalent to ZIF III)
- Direct drop-in for ZIF III parts in terms of performance and mounting pattern
- Same ¼ turn locking procedure as Standard ZIF and ZIF III products
- Enhanced visual indication method for determining locked/unlocked part status
- Recommended slot width of .300 in. (7.62mm) + PC board thickness; tolerance ± 0.005 in. (0.13mm)
- Capable of operating in rugged environments as per MIL-STD-810



Available Dimensions:

Length Minimum / Maximum	2.5 in (63.5mm) / 7.5 in (190.5mm)
Width	0.32 in (8.13mm)
Height	0.25 in (6.35mm)

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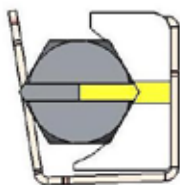
Most CTS Thermal Management Products are RoHS Compliant.
Please inquire about specific product compliance details.



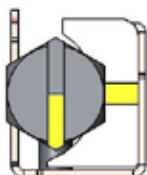
Mechanical and Thermal Characteristics:

	3.75 in. (95.25mm)	5.25 in. (133.35mm)	6.75 in. (171.45mm)
Clamping Force lb (N)	112 (500)	157 (700)	202 (900)
Retention Force lb. (N)	60 (265)	83 (370)	107 (480)
Thermal Resistance °C/W	0.32	0.23	0.18

This table indicates the mechanical and thermal characteristics of the ZIF Prime based on different retainer lengths. The values shown are for a pair at nominal dimensions and can be used as a baseline for design purposes. ZIF Prime retainers should be tested in final customer configurations as mechanical interfaces can impact retainer performance.

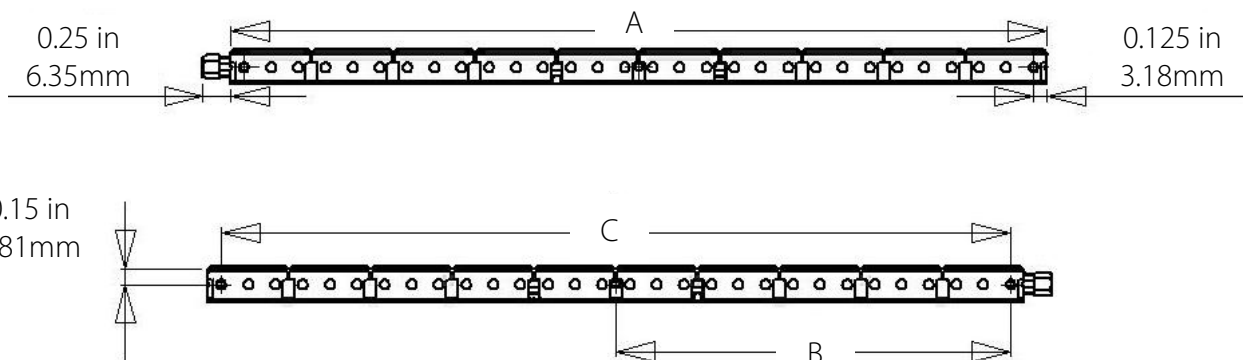


LOCKED



UNLOCKED

Part Number	"A" DIM	"B" DIM	"C" DIM
ZAP-22-R or ZAP-22-L	2.25 in (57.15mm)	-	2.00 in (50.80mm)
ZAP-30-R or ZAP-30-L	3.00 in (76.20mm)	-	2.75 in (69.85mm)
ZAP-37-R or ZAP-37-L	3.75 in (95.25mm)	-	3.50 in (88.90mm)
ZAP-45-R or ZAP-45-L	4.50 in (114.30mm)	-	4.25 in (107.95mm)
ZAP-52-R or ZAP-52-L	5.25 in (133.35mm)	-	5.00 in (127.00mm)
ZAP-60-R or ZAP-60-L	6.00 in (152.40mm)	2.875 in (73.03mm)	5.75 in (146.05mm)
ZAP-67-R or ZAP-67-L	6.75 in (171.45mm)	3.250 in (82.55mm)	6.50 in (165.10mm)
ZAP-75-R or ZAP-75-L	7.50 in (190.50mm)	3.625 in (92.08mm)	7.25 in (184.15mm)



The ZIF Prime consists of three precision manufactured parts – the housing, spring, and rod. The following military and federal specifications are followed in the manufacture of all ZIF rugged retainers and their components.

Federal

- QQ-A-200/9, Aluminum Alloy 6063, Bar, Rod, Shapes, Tube and Wire, Extruded
- QQ-S-763, Steel Bars, Wire, Shapes, Forgings, Corrosion Resistant
- QQ-C-533, Copper Beryllium Alloy Strip
- QQ-P-35, Passivation of Stainless Steel

The Military

- MIL-A-8625, Anodic Coatings for Aluminum and Aluminum Alloys
- MIL-C-26074, Coatings, Electroless Nickel
- MIL-STD-810, Test Method Standard for Environmental Engineering Considerations and Laboratory Tests
- MIL-P-24441/9, Paint, Epoxy-Polyamide, Primer, Yellow, Formula 158, Type I
- MIL-C-5541, Chemical Conversion Coatings on Aluminum and Aluminum Alloys
- MIL-I-45208, Inspection System Requirements