

Calmark offers the Series 245 "Card-Lok" retainer for cold plate-heat exchanger applications. A maximum efficiency heat sinking Board Module Assembly retainer offered to retrofit the Series 225 but uses a 6-32 screw to provide greater clamping force and load capacity.

### FEATURES

- Maximum Reliability – Screw-actuated wedge action locks Board Module Assembly in place
- Maximum Thermal Transfer – Wedge action design provides maximum contact between thermal paths on Board Module Assembly and the heat sinking surface
- Maximum Resistance to Shock & Vibration – Wedge action design locks Board Module Assembly in place to provide maximum resistance to shock and vibration
- Zero Insertion & Extraction Forces – Screw actuation provides zero insertion and extraction force on Board Module Assembly
- Design Flexibility – Special lengths, finishes or other design variations available on request

### WEDGES

#### Material:

Aluminum Alloy 6061-T6,  
ASTM-B221

#### Finish:

See Part No. Code

### SCREW

#### Material:

Stainless Steel  
QQ-S-763 or ASTM-A582

#### Finish:

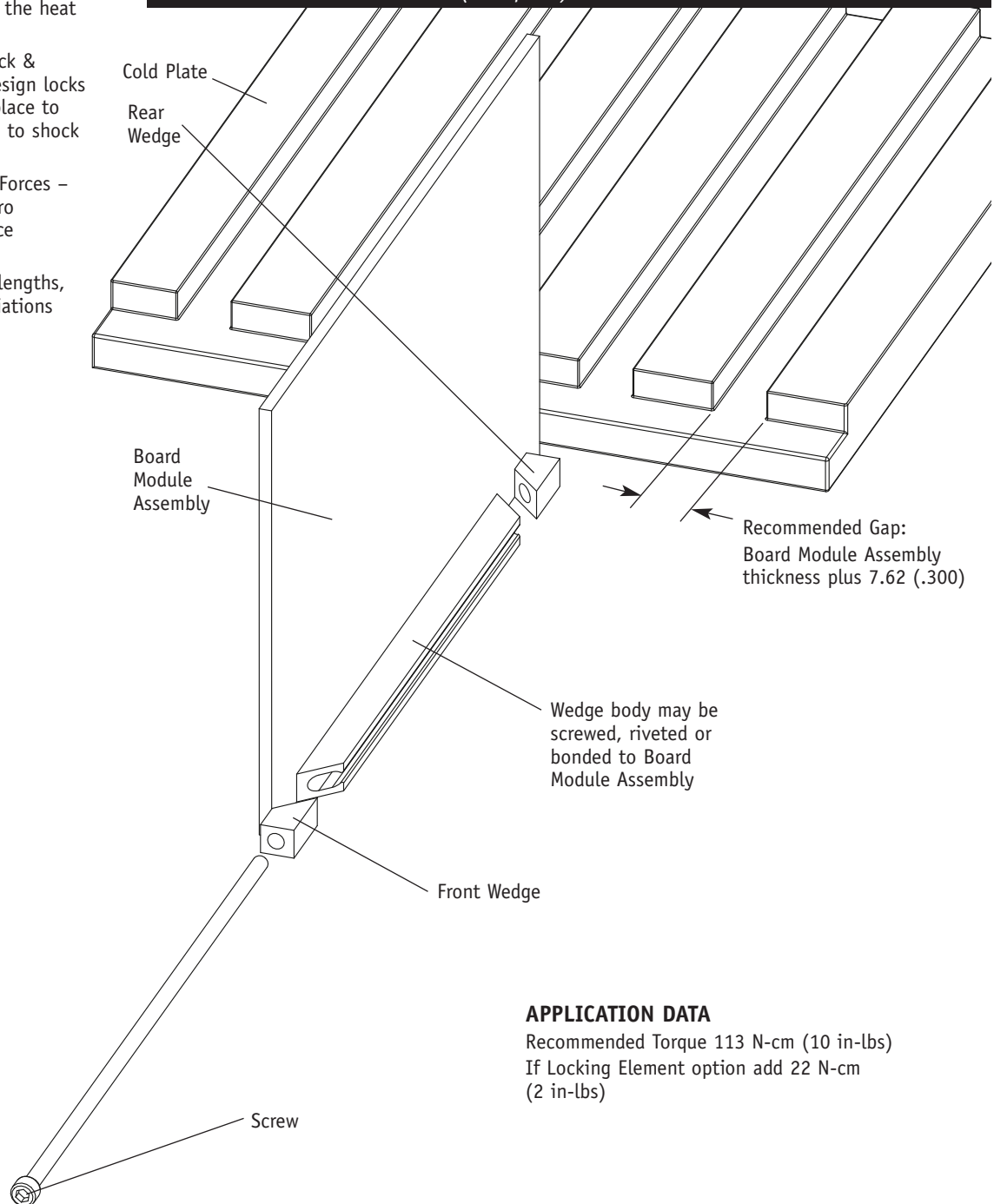
Passivate per MIL-S-5002

### WEIGHT

1.77 g/cm (.159 oz/in)



Series 245 - "Card-Lok" Retainer (cold plate)



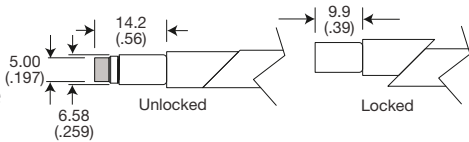
### APPLICATION DATA

Recommended Torque 113 N-cm (10 in-lbs)  
If Locking Element option add 22 N-cm  
(2 in-lbs)

## OPTION PREFIX

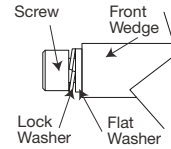
### Detail "V"

Provides visual lock indication. Changes hex drive to 2.38 (.094).



### Detail "W"

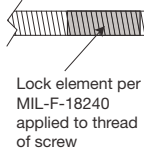
Provides added resistance to loosening from shock and vibration. This option adds 10.2 (.40) to the screw length when combined with the "R" suffix option.



## OPTION SUFFIX

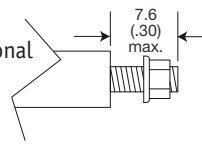
### Detail "L"

Provides prevailing torque for resistance to loosening from shock and vibration.



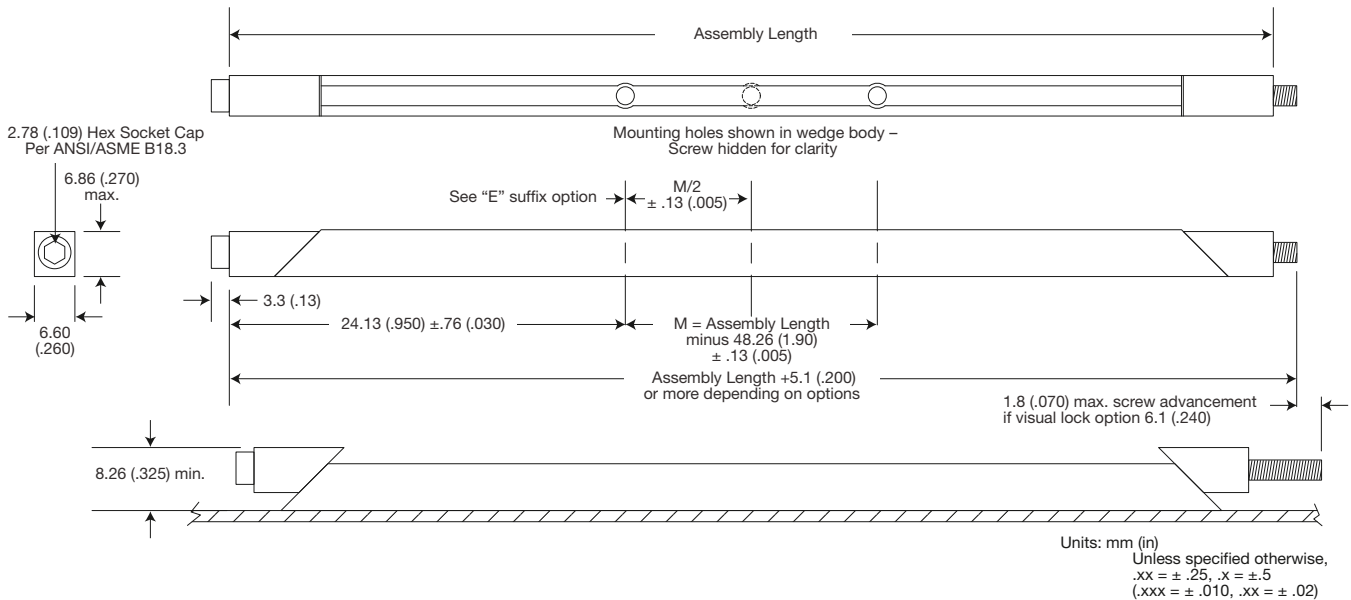
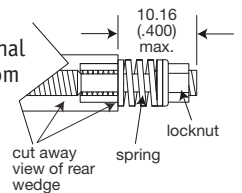
### Detail "R"

Reduces the possibility of unintentional disassembly of the screw from rear wedge. This option adds 7.6 (.30) to the screw length unless when combined with the "W" suffix option, then it adds 10.2 (.40).



### Detail "K"

Prevents the unintentional disassembly of screw from rear wedge. This option adds 5.08 (.200) to the screw length.



### Part Number Code

#### Series 245 Card-Lok Three Piece

#### Prefix options

Metric Screw Head M2.5            M  
 Standard Screw Head 7/64            [blank]  
 Lock and Flat Washer            W  
 None            [blank]  
 Visual Indicator (changes hex drive to 3/32)            V  
 No Visual Indicator            [blank]  
 Black Anodize            A  
 or choose from Finish Table            see table

#### Suffix options

Stainless Steel Lock Nut if "R" option is selected            CR  
 Standard Plated Steel            "-"  
 Assembly length in inches. Standard lengths range from 54.6 (2.15) to 329.9 (12.99)            length.xx  
 Preferred lengths are 71.1 (2.80), 96.5 (3.80) and 121.9 (4.80)  
 Other lengths available upon request  
 Additional Center Mounting Hole            E  
 None            [blank]  
 Mounting Options - holes for rivet mounting            H  
 or choose from Mounting Option Table            see table  
 Lock Element            L  
 None            [blank]  
 Lock Nut            R  
 Captive Screw            K  
 None            [blank]

### Part Number Code Example:

245-3.80H

Series 245 three piece Card-Lok, 96.52 (3.80) long, gold chemical film finish with holes for rivet mounting.

### FINISH TABLE

Code Letter	Finish
[blank]	Chemical Film per Mil-C-5541 Class 1A, Gold
"R"	Chemical Film per Mil-DTL-5541 Class 3, Type II, Clear
"A"	Black Anodize per Mil-A-8625 Type II, Class 2
"HA"	Hard Black Anodize per Mil-A-8625 Type III, Class 2
"EN"	Electroless Nickel per Mil-C-26074 Class 4, Grade B, Bright

### MOUNTING METHOD TABLE

Code Letter	Method
[blank]	No mounting holes
"H"	Rivet Mounting Ø1.70 (.067) hole with 3.96 (.156) counterbore x 5.08 (.200) deep and 100° x 3.56 (.140) countersink.
"T0"	0-80 tapped hole
"T2"	2-56 tapped hole
"TM2"	M2 x 0.40 tapped hole
"TM2.5"	M2.5 x 0.45 tapped hole