

## THRU-HOLE (THM) & SURFACE MOUNT (SMT) COIN CELL HOLDERS

### DESIGN ADVANTAGES...

- Reliable spring tension assures low contact resistance
- Retains battery securely to withstand shock and vibration
- All conductive polystyrene carrier tape meets ANSI/EIA - 481 standard

- Base material UL Rated 94V-0. Impervious to most industrial solvents
- Operating temperature range: -60°F to +293°F (-50°C to +145°C)

### IDEALLY SUITED FOR...

- Computer memory, power transfer and back-up systems
- Video and telecommunications power back-up
- Microprocessors and Microcomputer memory hold (desktop and laptop applications)

- Industrial and commercial security and alarm systems
- Communications power sources
- PC/104 applications

### 20mm CELLS



- Polarity clearly marked (+)
- Compatible with vacuum and mechanical pick & place assembly systems
- Low profile for high density packaging
- Rugged construction, light weight
- SMT solder tail with "Flow-Hole" design for increased joint strength
- Viewable solder tails assures reliable joint inspection
- Safe for all soldering & reflow operations

### MATERIAL:

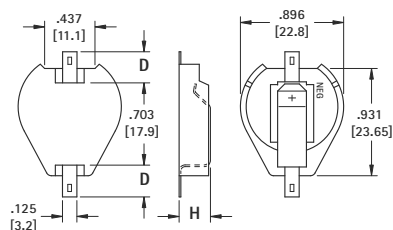
**Contacts:** .015 (.38) Steel

**Base:** High Temperature, Nylon 46, UL Rated 94V-0

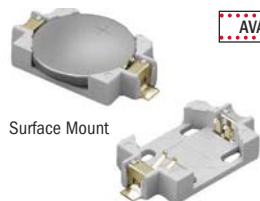
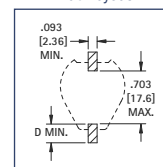
Tin-Nickel Plate		Gold Plate (Flash)		D	H	CELLS	BATTERY REFERENCE
CAT. NO.	ON TAPE & REEL	CAT. NO.	ON TAPE & REEL	PAD SIZE	HIEGHT		
1061	1061TR	1081	1081TR	.156 (4.0)	.290 (7.4)	(1) Cell (any 20mm)	CR2012, CL2016, BR2020, DL2032, CR2032
1063	1063TR	1093	1093TR	.278 (7.1)		(2) 2012, (2) 2016	
1062	1062TR	1082	1082TR	.156 (4.0)	.391 (9.9)	(2) 2020, (2) 2025, (2) 2032	
1064	1064TR	1094	1094TR	.278 (7.1)		(3) 2012, (3) 2016	

**Tape & Reel Spec's:** 44mm wide; 32mm pitch; 13 inch reel (200 pieces per reel)

### AVAILABLE ON TAPE AND REEL



### Pad Layout



- Compatible with vacuum and mechanical pick & place assembly systems

### MATERIAL:

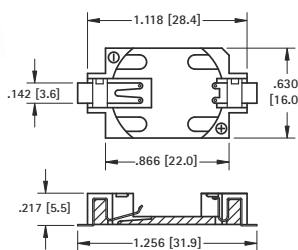
**Contacts:** .006 (.15) Phosphor Bronze, Gold Plate (Flash)

**Base:** Glass Filled LCP, UL Rated 94V-0

CAT. NO.	ON TAPE & REEL	BATTERY REFERENCE
1060	1060TR	CR2025, DL2032

**Tape & Reel Spec's:** 44mm wide; 24mm pitch; 13 inch reel (500 pieces per reel)

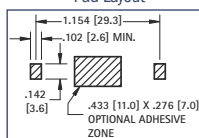
### AVAILABLE ON TAPE AND REEL



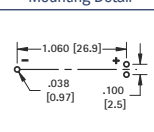
### 2025 / 2032 CELL

- Polarized Holders
- Low Profile for high density packaged PCB's
- Vertical entry

### Pad Layout



### Mounting Detail



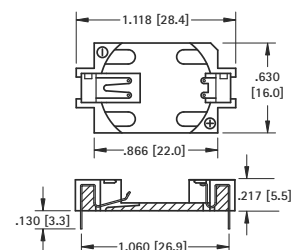
### MATERIAL:

**Contacts:** .006 (.15) Phosphor Bronze, Tin Plate

**Base:** Glass Filled LCP, UL Rated 94V-0



### Thru Hole Mount



CAT. NO.	BATTERY REFERENCE
1059	CR2025, DL2032

## INSULATED RETAINERS



### AVAILABLE ON TAPE AND REEL

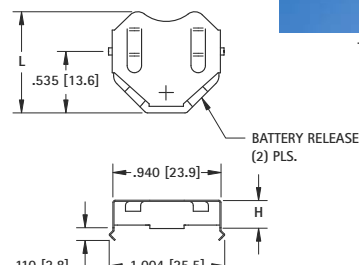
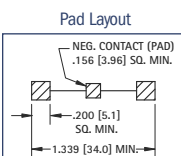
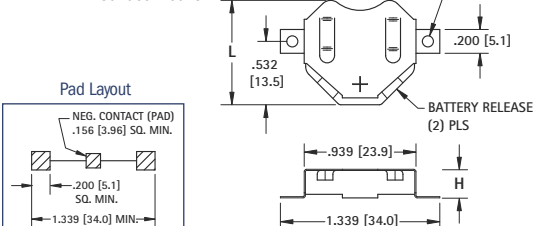
### 20mm CELLS

- Ideal for 6 volt or 3 volt applications
- Two coin cell batteries can be installed in series
- Plastic insulator prevents shorting of battery, within the holder, when installed improperly

- Low profile
- Battery release ports for easy battery replacement
- Refer to pages 6 & 7 for a complete offering of coin cell retainers

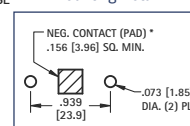
**MATERIAL: Contacts:** .010 (.25) Phosphor Bronze **Insulator:** High Temperature, Nylon 46, UL Rated 94V-0

### Surface Mount



### Thru Hole Mount

### Mounting Detail



Surface Mount			Thru Hole Mount		
Tin-Nickel Plate			Tin-Nickel Plate		
CAT. NO.	CAT. NO.	ON TAPE & REEL	CAT. NO.	CAT. NO.	ON TAPE & REEL
LOOSE*	BULK		LOOSE*	BULK	
3020-2	3020	3020TR	3070-2	3070	3070TR
3022-2	3022	3022TR	3072-2	3072	3072TR
3024-2	3024	3024TR	3074-2	3074	3074TR

\* Supplied Unassembled

**Tape & Reel Spec's:** 56mm wide; 28mm pitch; 13 inch reel: 3020TR, 3070TR 400 pieces per reel; 3022TR, 3072TR 250 pieces per reel; 3024TR, 3074TR 250 pieces per reel

BATTERY REFERENCE		L		H	
6 VOLT (2) CELLS	3 VOLT (1) CELL				
2012, 2016	2020, 2025	.890 (22.6)	.156 (4.0)	.890 (22.6)	.156 (4.0)
2020, 2025	2032	.877 (22.3)	.240 (6.1)	.877 (22.3)	.240 (6.1)
2032	Not Applicable	.877 (22.3)	.295 (7.5)	.877 (22.3)	.295 (7.5)

Thru Hole Mount	
CAT. NO.	CAT. NO.
LOOSE*	BULK
3021-2	3021
3023-2	3023
3025-2	3025

# THRU HOLE (THM) & SURFACE MOUNT (SMT) BUTTON CELL RETAINERS

Economical and reliable SMT and THM coin cell retainers specifically designed for miniature electronic applications with limited board space.

- Available in Thru Hole Mount (THM) or Surface Mount (SMT) configurations
- SMT solder tail with "flow-hole" design for increased joint strength
- THM legs maintain relative position during and after soldering
- Ideally suited for High Density packaging
- Reliable spring tension assures low contact resistance
- Retains battery securely to withstand shock and vibration
- Solder tail located outside of retainer body which facilitates visual inspection of the solder joints

**4.8 mm**

AVAILABLE ON TAPE AND REEL

**Surface Mount**

MATERIAL: .006 (.15) Phosphor Bronze, Gold Plate (Flash)

CAT. NO.	ON TAPE & REEL	BATTERY REFERENCE
2994	2994TR	ML414

Tape & Reel Spec's: 16mm wide; 8mm pitch; 13 inch reel (1500 pieces per reel)

**Thru Hole Mount**

MATERIAL: .006 (.15) Phosphor Bronze, Tin-Nickel Plate

CAT. NO.	BATTERY REFERENCE
2995	ML414

Mounting Detail

NEG. CONTACT (PAD) .060 [1.5] SQR. MIN.

**6.8 mm**

AVAILABLE ON TAPE AND REEL

**Surface Mount**

MATERIAL: .010 (.25) Phosphor Bronze

CAT. NO.	ON TAPE & REEL	FINISH	BATTERY REFERENCE
2998	2998TR	Tin-Nickel	MC621, V364, SC621, DR13H, V13AT
3098	3098TR	Matte Tin	

Tape & Reel Spec's: 24mm wide; 12mm pitch; 13 inch reel (1000 pieces per reel)

**Thru Hole Mount**

MATERIAL: .010 (.25) Phosphor Bronze, Tin-Nickel Plate

CAT. NO.	BATTERY REFERENCE
2999	MC621, V364, SC621

Mounting Detail

NEG. CONTACT (PAD) .156 [4.0] SQR. MIN.

**7.9 mm**

AVAILABLE ON TAPE AND REEL

**Surface Mount**

MATERIAL: .010 (.25) Phosphor Bronze, Gold Plate (Flash)

CAT. NO.	ON TAPE & REEL	BATTERY REFERENCE
2988	2988TR	Size 13, DA13, AZ13E

Tape & Reel Spec's: 24mm wide; 12mm pitch; 13 inch reel (800 pieces per reel)

**Thru Hole Mount**

MATERIAL: .010 (.25) Phosphor Bronze, Tin-Nickel Plate

CAT. NO.	BATTERY REFERENCE
2989	Size 13, DA13, AZ13E

Mounting Detail

NEG. CONTACT (PAD) .125 [3.2] SQR. MIN.

**9 - 10 mm**

AVAILABLE ON TAPE AND REEL

**Surface Mount**

MATERIAL: .006 (.15) Phosphor Bronze, Tin-Nickel Plate

CAT. NO.	ON TAPE & REEL	FINISH	BATTERY REFERENCE
3030	3030TR	Tin-Nickel	CR927, CR1025
3050	3050TR	Matte Tin	

Tape & Reel Spec's: 24mm wide; 12mm pitch; 13 inch reel (1500 pieces per reel)

**Thru Hole Mount**

MATERIAL: .006 (.15) Phosphor Bronze, Tin-Nickel Plate

CAT. NO.	BATTERY REFERENCE
3031	CR927, CR1025

Mounting Detail

NEG. CONTACT (PAD) .156 [4.0] SQR. MIN.

**11.6 mm**

AVAILABLE ON TAPE AND REEL

**Surface Mount**

MATERIAL: .010 (.25) Phosphor Bronze

CAT. NO.	ON TAPE & REEL	FINISH	BATTERY REFERENCE
2996	2996TR	Tin-Nickel	SR44, LR44, 357, MS76,
3096	3096TR	Matte Tin	PX76A, G-13, 303, V313

Tape & Reel Spec's: 32mm wide; 16mm pitch; 13 inch reel (600 pieces per reel)

**Thru Hole Mount**

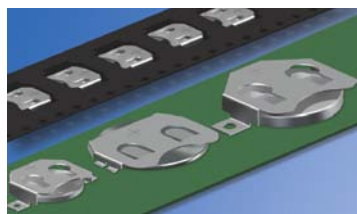
MATERIAL: .010 (.25) Phosphor Bronze, Tin-Nickel Plate

CAT. NO.	BATTERY REFERENCE
2997	SR44, LR44, 357, MS76, PX76A, G-13, 303, V313

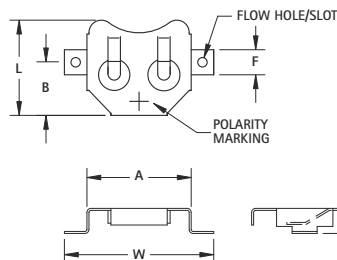
Mounting Detail

NEG. CONTACT (PAD) .156 [4.0] SQR. MIN.

# THRU HOLE (THM) & SURFACE MOUNT (SMT) COIN CELL RETAINERS



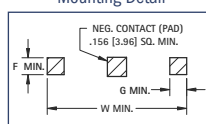
SURFACE MOUNT (SMT)



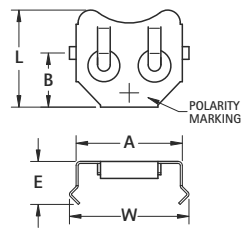
Battery retainers are suited for high density PCB packaging. Engineered with reliable spring tension, these contacts assure low resistance while firmly securing the battery within the retainer.

- Compatible with all wave and reflow operations
- Solder tails located outside of retainer body which facilitates visual inspection of the solder joints
- Flow-hole solder tail designed for increased joint strength
- Compatible with most vacuum and mechanical pick & place assembly systems
- Matte Tin Plate for lower soldering temperatures ideal where other temperature sensitive components are being used
- Tin-Nickel plated retainers are ideal for lead free, high temperature soldering applications
- All conductive polystyrene carrier tape meets ANSI/EIA-481 standards

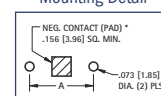
Mounting Detail



SURFACE MOUNT (SMT)



Mounting Detail

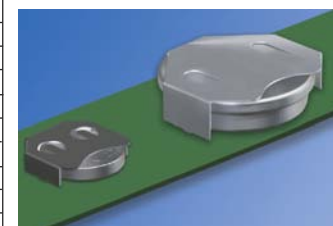


THRU HOLE MOUNT (THM)

MATERIAL: .010 (.25) Phosphor Bronze

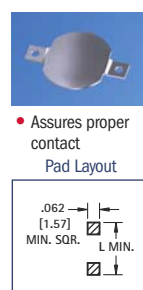
TIN-NICKEL PLATE		MATTE TIN PLATE		REFER TO SURFACE MOUNT (SMT) DRAWING											
CAT. NO.	ON TAPE & REEL	CAT. NO.	ON TAPE & REEL	A	B	F	G	H	L	W	CELL DIA.	BATTERY REFERENCE	TAPE & REEL SPEC'S		
3000	3000TR	3080	3080TR	.520 (13.2)	.265 (6.7)	.125 (3.2)	.125 (3.2)	.125 (3.2)	.475 (12.1)	.745 (18.9)	12mm	CR1216, BR1220, CL1225	32mm wide; 16mm pitch; 1000/reel		
3012	3012TR	3092	3092TR	.664 (16.9)	.344 (8.7)	.125 (3.2)	.125 (3.2)	.156 (4.0)	.594 (15.1)	.914 (23.2)	16mm	BR1612, CR1616, CR1620, DL1632	44mm wide; 24mm pitch; 600/reel		
3028	3028TR	3038	3038TR	.831 (21.1)	.298 (7.6)	.200 (5.1)	.050 (1.3)	.067 (1.7)	.618 (15.7)	.911 (23.1)	20mm	BR2012, CR2012, DL2012	44mm wide; 24mm pitch; 1000/reel		
3026	3026TR	3078	3078TR	.831 (21.1)	.416 (10.6)	.200 (5.1)	.200 (5.1)	.085 (2.2)	.782 (19.9)	1.210 (30.7)	20mm	BR2016, CR2016, DL2016	44mm wide; 32mm pitch; 750/reel		
3034	3034TR	3044	3044TR	.835 (21.2)	.291 (7.4)	.200 (5.1)	.050 (1.3)	.160 (4.1)	.635 (16.1)	0.915 (23.1)	20mm	DL2020, CR2025, CR2032	44mm wide; 24mm pitch; 500/reel		
3002	3002TR	3082	3082TR	.831 (21.1)	.416 (10.6)	.200 (5.1)	.200 (5.1)	.156 (4.0)	.782 (19.9)	1.210 (30.7)	20mm	DL2020, CR2025, CR2032	44mm wide; 24mm pitch; 500/reel		
3004	3004TR	3084	3084TR	.939 (23.9)	.475 (12.1)	.200 (5.1)	.200 (5.1)	.156 (4.0)	.832 (21.1)	1.339 (34.0)	23mm	BR2320, CL2325, CR2330, DL2335	56mm wide; 32mm pitch; 400/reel		
3010	3010TR	3090	3090TR	.939 (23.9)	.475 (12.1)	.200 (5.1)	.200 (5.1)	.240 (6.1)	.819 (20.8)	1.339 (34.0)	23mm	CR2354, DL2354	56mm wide; 32mm pitch; 200/reel		
3032	3032TR	3042	3042TR	1.000 (25.4)	.313 (8.0)	.200 (5.1)	.050 (1.3)	.067 (1.7)	.681 (17.3)	1.080 (27.4)	24mm	BR2412, CR2412	44mm wide; 24mm pitch; 1000/reel		
3006	3006TR	3086	3086TR	1.000 (25.4)	.506 (12.9)	.200 (5.1)	.200 (5.1)	.156 (4.0)	.918 (23.3)	1.400 (35.6)	24mm	CR2430, DL2430	56mm wide; 32mm pitch; 400/reel		
3008	3008TR	3088	3088TR	1.000 (25.4)	.506 (12.9)	.200 (5.1)	.200 (5.1)	.230 (5.8)	.890 (22.6)	1.400 (35.6)	24mm	CR2450, DL2450	56mm wide; 32mm pitch; 200/reel		

TIN-NICKEL PLATE		REFER TO THRU HOLE MOUNT (THM) DRAWING									
CAT. NO.	BULK	A	B	E	H	L	W	CELL DIA.	BATTERY REFERENCE		
3001		.520 (13.2)	.265 (6.7)	.210 (5.3)	.118 (3.0)	.475 (12.1)	.585 (14.9)	12mm	BR1216, CR1216, BR1220, CL1220, CR1220, BR1225		
3013		.664 (16.9)	.344 (8.7)	.265 (6.7)	.156 (4.0)	.594 (15.1)	.723 (18.4)	16mm	BR1616, CR1612, CR1616, CR1620, CR1632		
3029		.831 (21.1)	.298 (7.6)	.176 (4.5)	.067 (1.7)	.618 (15.7)	.890 (22.6)	20mm	BR2012, CR2012, DL2012		
3027		.831 (21.1)	.416 (10.6)	.194 (4.9)	.085 (2.2)	.782 (19.9)	.890 (22.6)		BR2016, CR2016, DL2016		
3003		.831 (21.1)	.416 (10.6)	.265 (6.7)	.156 (4.0)	.782 (19.9)	.890 (22.6)	23mm	BR2016, DL2020, CR2320, CR2025, CR2032		
3005		.939 (23.9)	.475 (12.1)	.265 (6.7)	.156 (4.0)	.832 (21.1)	1.004 (25.5)		BR2320, CL2330, CR2320, BR2325, CR2325, DL2325		
3011		.939 (23.9)	.475 (12.1)	.351 (8.9)	.240 (6.1)	.819 (20.8)	1.004 (25.5)	24mm	CR2354, DL2354		
3033		1.000 (25.4)	.313 (8.0)	.176 (4.5)	.067 (1.7)	.681 (17.3)	1.055 (26.8)		BR2412, CR2412		
3007		1.000 (25.4)	.506 (12.9)	.265 (6.7)	.156 (4.0)	.918 (23.3)	1.055 (26.8)		CR2430, DL2430		
3009		1.000 (25.4)	.506 (12.9)	.350 (8.9)	.230 (5.8)	.890 (22.5)	1.059 (26.9)		CR2450, DL2450		
3039		1.000 (25.4)	.506 (12.9)	.450 (11.4)	.336 (8.5)	.890 (22.5)	1.059 (26.9)		CR2477, DL2477		

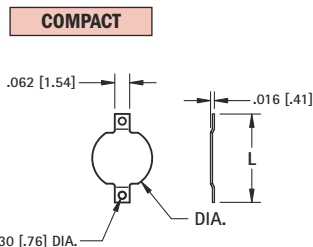
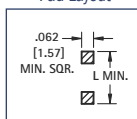


THRU HOLE MOUNT (THM)

## NEGATIVE BATTERY CONTACTS\*



- Assures proper contact

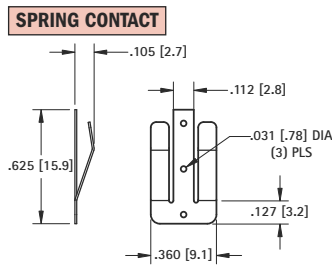
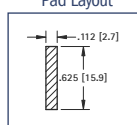


DWG. 1 MATERIAL: .008 (.20) Brass

AVAILABLE ON TAPE AND REEL



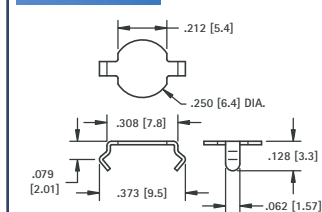
- Assures proper contact



DWG. 2 MATERIAL: .010 (.25) Phosphor Bronze



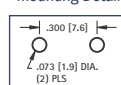
- Snap-In
- Assures proper contact



MATERIAL: .008 (.20) Phosphor Bronze, Tin-Nickel Plate

CAT. NO. 2990

Mounting Detail



\*Note: Cannot be used with Cat. No. 3028, 3029, 3032, 3033.

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**KEYSTONE**  
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# 12mm to 24mm COIN CELL RETAINERS