#### **PRODUCTS**

### INDUSTRIAL SOLUTIONS

#### **LITHIUM - Coin Type**

Coin type lithium batteries are high energy, high reliability batteries for a variety of applications. The full 3 volts in these high energy density batteries is about twice that of conventional dry batteries.

Panasonic coin type lithium batteries are available in two types: poly-carbonmonofluoride lithium batteries (BR series) for uses that require extended reliability and safety, and manganese dioxide lithium batteries (CR series) for uses that require high voltage and strong load pulse characteristics.

The CR Lithium primary coin cells contain
Perchlorate over the limit specified by the state
legislature of California and are therefore subject to
requirements in the California Code of Regulations,
title 22, division 4.5: Chapter 33 – Best Management
Practices for Perchlorate Materials.



#### Features:

- High voltage of 3 volts twice that of conventional dry batteries
- Extremely small self-discharge for long service and shelf life
- A wide operational temperature range
- Compact and lightweight; extremely high energy density per unit weight
- Very safe (poly-carbonmonofluoride lithium)
- Extremely strong load pulse characteristics (manganese dioxide lithium)
- Operating temperature range:

BR Coin Cells: -30°C ~ +80°C CR Coin Cells: -30°C ~ +60°C

#### **Applications:**

#### **Applications:**

- Calculators
- Cameras
- Compact, low power consuming cordless applications
- Electronic translators

Technical Data - Table 1 - (CF)n/LI: Poly-Carbon Monofluoride (BR)

- Electronic watches (digital and analog)
- Memory back-up in all types of devices (with tab terminals)

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Model	Electrical Characteristics (20°C)		Standard Load	Dimensions		Tab Configurations		
No.	No. Nominal Voltage (V)	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter (mm)	Height (mm)	Weight (g)		Tab Configurations
BR1220	3	35	0.03	12.5	2.00	0.7		
BR1225	3	48	0.03	12.5	2.50	0.8		
BR1632	3	120	0.03	16.0	3.20	1.5		
BR2032	3	190	0.03	20.0	3.20	2.5		
BR2325	3	165	0.03	23.0	2.50	3.2		
BR2330	3	255	0.03	23.0	3.00	3.2		
BR3032	3	500	0.03	30.0	3.20	5.5		
* Nominal capacity shown is based on standard drain and cut off voltage down to 2.0V at 20°C.								

Technic	Technical Data - Table 2 - Mn0₂/LI:Manganese Dioxide (CR)								
Model	Electrical Characteristics (20°C)		Standard Load	Dimensions		Tab Confirmation	Tab Configurations		
No.	Nominal Voltage (V)	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter (mm)	Height (mm)	Weight (g)		Tab Configurations	
<u>CR1025</u>	3	30	0.10	10.0	2.50	0.7			
<u>CR1216</u>	3	25	0.10	12.5	1.60	0.7			

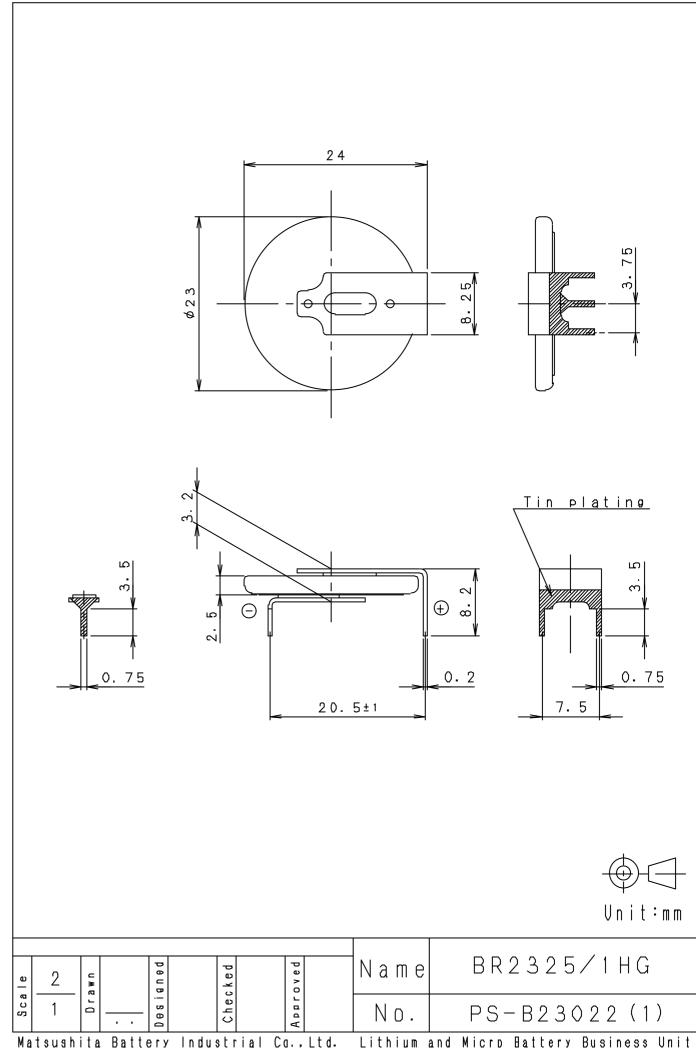
<u>CR1220</u>	3	35	0.10	12.5	2.00	1.2		
<u>CR1612</u>	3	40	0.10	16.0	1.20	0.8		7
<u>CR1616</u>	3	55	0.10	16.0	1.60	1.2		7
<u>CR1620</u>	3	75	0.10	16.0	2.00	1.3		
<u>CR1632</u>	3	140	0.10	16.0	3.20	1.8		7
CR2016	3	90	0.10	20.0	1.60	1.6		7
CR2025	3	165	0.20	20.0	2.50	2.3		
CR2032	3	225	0.20	20.0	3.20	2.9		
CR2330	3	265	0.20	23.0	3.00	3.8		7
<u>CR2354</u>	3	560	0.20	23.0	5.40	5.8		7
<u>CR2412</u>	3	100	0.20	24.5	1.20	2.0		
CR2450	3	620	0.20	24.5	5.00	6.3		
<u>CR2477</u>	3	1000	0.20	24.5	7.70	10.5		7
CR3032	3	500	0.20	30.0	3.20	6.8		7
Note: Cells	are avail	lable in assor	ed on standard drain ted tab configuration e for additional info	ns.	ii voltage	down to 2	.0V at 20°C.	
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2 pin, vertical mount, through hole, (with insulation wrap)

3 pin, vertical mount, through hole, (with insulation wrap)

BR2330/1VC

BR2330/1GVF



# Poly-carbonmonofluoride (BR Series) and Manganese Dioxide (CR Series)

### **COIN CELL TAB CONFIGURATIONS**

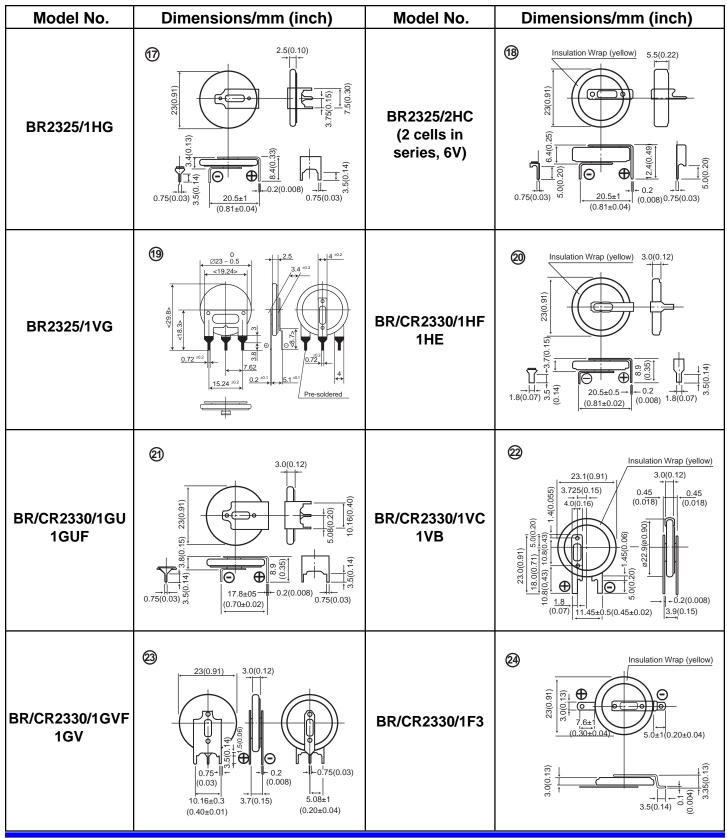
Model	Tab	Configuration					
Number	With Insulation Wrap	Without Insulation Wrap	Diagram No.				
BR TYPE							
BR1220	/1HF	/1HE	1				
BR1220	/1VC	/1VB	2				
BR1225	/1HC	/1HB	3				
BR1225	/1VC		4				
BR1632	/1HF		5				
BR2032	/1HM		6				
BR2032		/1HG	7				
BR2032	/1HS	/1HSE	8				
BR2032	/1GUF	/1GU	9				
BR2032	/1HF	/1HE	10				
BR2032		/1VB	11				
BR2032	/1GVF	/1GV	12				
BR2032	/1F4		13				
BR2032	/1F2		14				
BR2325	/1HC	/1HB	15				
BR2325	/1VC		16				
BR2325		/1HG	17				
BR2325	/2HC		18				
BR2325		/1VG	19				
BR2330	/1HF	/1HE	20				
BR2330	/1GUF	/1GU	21				
BR2330	/1VC	/1VB	22				
BR2330	/1GVF	/1GV	23				
BR2330	/1F3		24				
BR2330	/1F4C		25				
BR3032	/1VC		26				
BR3032	/1F2		27				

**Note:** Refer to page 60 for BR "A" (High Temp) Tab configurations. Please contact Panasonic for requests on custom Tab configurations. Minimum order requirements may apply.

Model	Tab	Configuration				
Number	With Insulation Wrap	Without Insulation Wrap	Diagram No.			
CR TYPE						
CR1220	/1HF	/1HE	1			
CR1220	/1VC	/1VB	2			
CR1616		/1F2	28			
CR1632	/1HF		29			
CR2016	/1F2		6			
CR2025	/1F2		30			
CR2032		/1HU3	31			
CR2032	/1VS1		32			
CR2032		/1HG	8			
CR2032	/1HS	/1HSE	9			
CR2032	/1GUF	/1GU	10			
CR2032	/1HF	/1HE	11			
CR2032		/1VB	12			
CR2032	/1GVF	/1GV	13			
CR2032	/1F4		14			
CR2032	/1F2		15			
CR2330	/1HF	/1HE	20			
CR2330	/1GUF	/1GU	21			
CR2330	/1VC	/1VB	22			
CR2330	/1GVF	/1GV	23			
CR2330	/1F3		24			
CR2330	/1F4C		25			
CR2354	/1HF	/1HE	33			
CR2354	/1GUF	/1GU	34			
CR2354	/1VC	/1VB	35			
CR2477	/1VC	/1VB	36			
CR2477	/1HF	/1HE	37			
CR2450	/H1A		38			
CR2450	/G1A		39			
CR3032	/1VC		26			
CR3032	/1F2		27			

## **BR & CR Series Coin Cell Tab Configurations**

### **DIMENSIONS / MM (INCH) cont.**



**Panasonic** 

LITHIUM HANDBOOK

**AUGUST 2005**