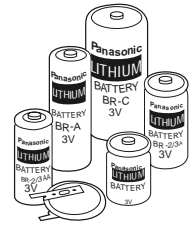


Panasonic Lithium Batteries

The main features of lithium batteries are as follows:

- **High Voltage:** Nominal voltage is 3V, which is nearly double that of other batteries which use the aqueous electrolyte system, such as manganese dry batteries, and silver-oxide batteries.
- **High Energy Density:** Overwhelmingly high energy density, as compared with conventional batteries and other lithium batteries. The energy density is 5 to 10 times higher than that of manganese dry batteries.
- **Long Service and Shelf Life:** Since Panasonic lithium batteries are composed of chemically and thermally stable material, self-discharge is extremely small. Deterioration when stored at room temperatures is ca. 0.5% annually – worry about deterioration is unnecessary.
- **Stable Flat Discharge Voltage:** Since conductive carbon is continuously formed during discharge, internal impedance does not increase until the end of discharge, thus stabilizing discharge voltage.
- **Excellent Temperature Characteristics:** Organic solvent ensures a low electrolyte freezing point so that the batteries can be used in a wide temperature range, -40°C to 85°C is standard (-40°C to 125°C for the High Temperature Coin Type; -40°C to 70°C for Camera Type; -30° to 60°C for CR2004/P9A).

- **BR Types versus CR Types:** BR, or (CF) n/Li, batteries provide a more stable voltage particularly during the last half of discharge, while CR, or MnO₂/Li, batteries provide a higher voltage during the first half. CR batteries also can provide a higher current capability than BR batteries. In storage, BR batteries perform better at high temperatures. These characteristics must be taken into consideration when selecting a battery for a particular application.
- **UL Approval:** Panasonic Lithium batteries are UL recognized. UL File No. MH12210.
- **DOT Exemption:** Panasonic lithium cells and multiple cell batteries are authorized for transportation, in commerce, by U.S. shipping exemption DOT-E7052.
- **Disposal Information:** Panasonic lithium cells are not an EPA listed hazardous waste, but may be considered a "characteristic" hazardous waste. Lithium metal, the anode component of the cells, is considered by the U.S. EPA to be hazardous when disposed because it is reactive with water. However, a cell which contains a small quantity of lithium metal is not necessarily a hazardous waste. Disposal regulations and policies are different in each State and are subject to frequent changes. Contact your local jurisdiction for specific advice on disposal.



Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.

PCB Terminal Type

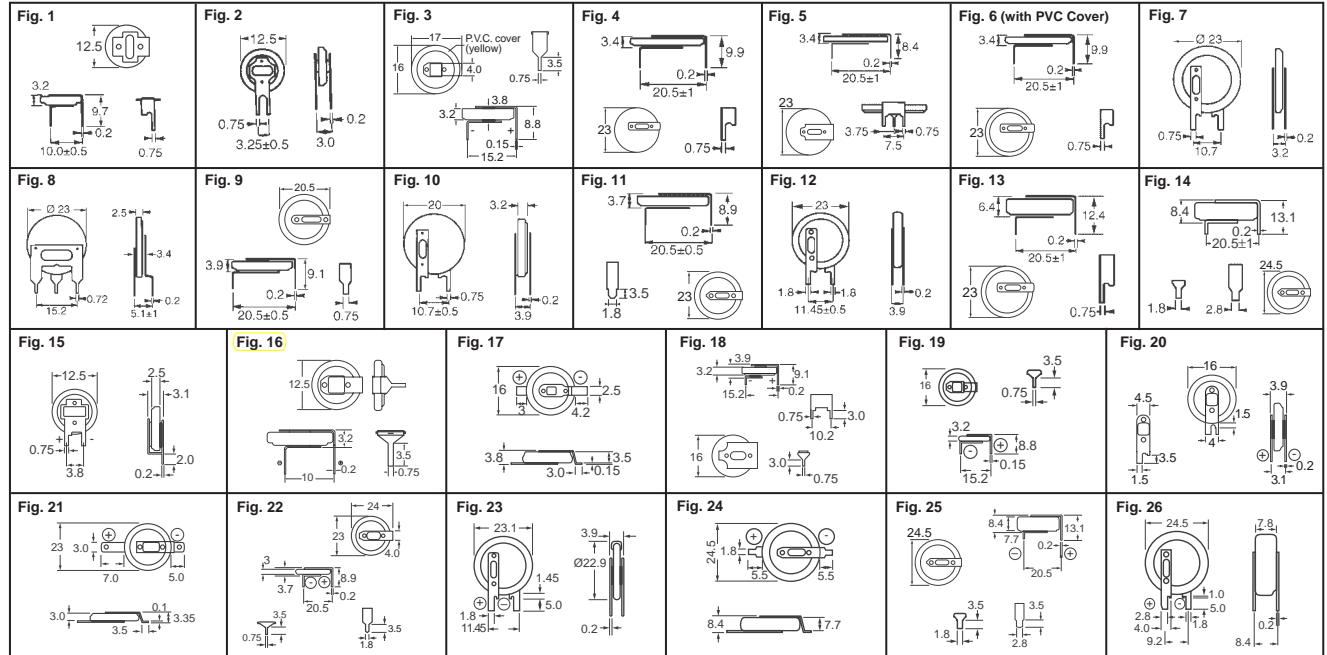


Fig.	Type	(V)	Cap. (mAh)	Dim. (mm) Dia. x Height	Wt.* (g)	Drain Pulse (mA)	Std. (mA)	Digi-Key Part No.	1	10	Pricing Pkg.	Carton	Panasonic Part No.
<i>PCB Terminal - Coin Type</i>													
1	Coin	3	48	See Figure Above	0.8	8	0.03	P191-ND	1.68	15.08	160.80/120	1069.32/1,200	BR1225-1HC
2		3	48		0.8	8	0.03	P192-ND	1.68	15.08	268.00/200	603.00/600	BR1225-1VC
3		3	120		1.6	8	0.03	P299-ND	1.88	16.88	225.00/150	2394.00/2,400	BR1632-1HF
4		3	165		3.2	10	0.03	P142-ND	1.68	15.08	80.40/60	603.00/600	BR2325-1HB
5		3	165		3.2	10	0.03	P193-ND	1.68	15.08	80.40/60	603.00/600	BR2325-1HG
6		3	165		3.2	10	0.03	P202-ND	1.68	15.08	80.40/60	603.00/600	BR2325-1HC
7		3	165		3.2	10	0.03	P194-ND	1.68	15.08	80.40/60	603.00/600	BR2325-1VC
8		3	165		3.2	10	0.03	P195-ND	1.68	15.08	80.40/60	603.00/600	BR2325-1VG
9		3	190		2.5	10	0.03	P196-ND	1.68	15.08	80.40/60	603.00/600	BR2032-1HE
10		3	190		2.5	10	0.03	P197-ND	1.68	15.08	160.80/120	603.00/600	BR2032-1VB
11		3	255		3.2	10	0.03	P198-ND	2.00	18.00	160.00/100	1064.00/1,000	BR2330-1HE
12		3	255		3.2	10	0.03	P199-ND	2.00	18.00	160.00/100	1064.00/1,000	BR2330-1VC
13		6	165		6.4	10	0.03	P143-ND	3.45	31.05	110.40/40	828.00/400	BR2325-2HC
14		3	1000		10.5	10	0.2	P126-ND	4.18	37.58	334.00/100	2221.10/1,000	CR2477-1HF
<i>PCB Terminal - High Temperature Coin Type (-40°C to 125°C)</i>													
15	Coin	3	48	See Figure Above	0.8	—	0.03	P290-ND	1.93	17.33	770.00/500	3927.00/4,000	BR1225A/FA
16		3	48		1.0	—	0.03	P061-ND	1.93	17.33	184.80/120	1228.92/1,200	BR1225A/HB
17		3	120		1.5	—	0.03	P022-ND	1.88	16.88	360.00/240	4590.00/4,800	BR1632A/FA
18		3	120		1.5	—	0.03	P291-ND	1.88	16.88	225.00/150	2394.00/2,400	BR1632A/GA
19		3	120		1.5	—	0.03	P023-ND	1.88	16.88	600.00/400	2394.00/2,400	BR1632A/HA
20		3	120		1.5	—	0.03	P024-ND	1.88	16.88	600.00/400	3825.00/4,000	BR1632A/VA
21		3	255		3.2	—	0.03	P025-ND	2.13	19.13	340.00/200	2261.00/2,000	BR2330A/FA
22		3	255		3.2	—	0.03	P026-ND	2.13	19.13	340.00/200	2261.00/2,000	BR2330A/HD
23		3	255		3.2	—	0.03	P027-ND	2.13	19.13	340.00/200	2261.00/2,000	BR2330A/VA
24		3	1000		8.0	—	0.03	P028-ND	3.48	31.28	278.00/100	1848.70/1,000	BR2477A/FB
25		3	1000		8.0	—	0.03	P029-ND	3.48	31.28	278.00/100	1848.70/1,000	BR2477A/HB
26		3	1000		8.0	—	0.03	P030-ND	3.48	31.28	278.00/100	1848.70/1,000	BR2477A/VA
<i>Pin Type</i>													
—	Pin	3	25	4.2 x 25.9	0.55	4	0.5	P140-ND	3.10	27.90	744.00/300	4743.00/3,000	BR425
—	Pin	3	50	4.2 x 35.9	0.85	6	1.0	P139-ND	3.13	28.13	750.00/300	4781.25/3,000	BR435

* See "How To Order" for note on shipping charges on prepaid orders.

(Continued)

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