



# Bourns® Power Resistors

Model	Photo	Type	Features / Applications	Power Ratings (W)	Size or Package	Tolerance (%)	Resistance Range (Ohms)	Temperature Coefficient (PPM /°C)
PWR163		SMD Thick Film High Power	Current Sense, Capacitance Discharge High Pulse Power, AEC-Q200 Compliant & Automotive Grade	25	DPAK	1, 5	0.02 to 130 k	100
PWR263		SMD Thick Film High Power	Current Sense, Capacitance Discharge High Pulse Power, AEC-Q200 Compliant & Automotive Grade	20, 35	D <sup>2</sup> PAK	1, 5	0.02 to 130 k	100
PWR220T		Through-Hole Thick Film High Power	Current Sense, Capacitance Discharge High Pulse Power, AEC-Q200 Compliant & Automotive Grade	20, 35	TO-220	1, 5	0.02 to 130 k	100
PWR221T		Through-Hole Thick Film High Power	Current Sense, Capacitance Discharge High Pulse Power, AEC-Q200 Compliant & Automotive Grade (30 Watt Version)	30, 50	TO-220	1, 5	0.02 to 130 k	100/300/600
PFS35		SMD Thick Film High Power	Current Sense, Capacitor Pre/Discharge High Pulse Power, Industrial Power Supplies, Inverters	35	D <sup>2</sup> PAK	1, 5	0.01 to 51 k	50/100/250
PF2203		Through-Hole Thick Film High Power	Current Sense, Capacitor Pre/Discharge High Pulse Power, Industrial Power Supplies, Inverters	35	TO-220	1, 5	0.02 to 51 k	50/100/250
PWR2010 PWR2615 PWR3014 PWR4318 PWR4525 PWR5322		SMD Wirewound	Surge Protection High Pulse Power	0.5, 1, 2, 3	2010 to 5322	1, 5	0.01 to 25 k	20/50/150
FW		Axial Leaded Wirewound	Fusible, UL 1412 Listed Coating Material UL 94V-0	1, 2, 3, 5, 7	12 x 5 to 26 x 9.5 (mm)	5	4.7 to 100	200
W		Axial Leaded Wirewound	Low Resistance Value and Non-inductive Version Available Coating Material UL 94V-0	1 to 10	9.5 x 4.5 to 52.5 x 8.5 (mm)	5	0.01 to 15 k	300
WS		Axial Leaded Wirewound	Surge Withstand IEC 61000-4-5 1.2/50 µs, Coating Material UL 94V-0	1 to 8	9.5 x 4.5 to 29.5 x 8.5 (mm)	5	0.01 to 15 k	200
BR		High Power Metal Clad Braking Resistors	Capacitor Pre/Discharge High Pulse Power, Industrial Power Supplies, Inverters	60 - 500	Standard 100 x 41 x 22 to 335 x 60 x 30 (mm)	1, 5, 10	0.1 to 1k	< 260 PPM/ °C
BRT		High Power Metal Clad Braking Resistors	Capacitor Pre/Discharge High Pulse Power, Industrial Power Supplies, Inverters	60 - 500	Thick 100 x 41 x 22 to 335 x 60 x 30 (mm)	1, 5, 10	0.1 to 1k	< 260 PPM/ °C
BRS		High Power Metal Clad Braking Resistors	Capacitor Pre/Discharge High Pulse Power, Industrial Power Supplies, Inverters	60 - 500	Slim 90 x 80 x 12 to 330 x 80 x 12 (mm)	1, 5, 10	0.1 to 1k	< 260 PPM/ °C
UWP		High Power Ceramic Wirewound Resistors	Capacitor Pre/Discharge High Pulse Power, Industrial Power Supplies, Inverters	20 - 100	60 x 18.5 x 21 to 113 x 22.7 x 22.7 (mm)	1, 5	0.5 to 1k	< 260 PPM/ °C

# Bourns® Current Sense Resistors

Model	Photo	Type	Features / Applications	Power Ratings (W)	Size or Package	Tolerance (%)	Resistance Range (Ohms)	Temperature Coefficient (PPM/°C)
CRL		Thick Film	Low Ohmic, Current Sense	0.1 to 1	0603 to 2512	1, 5	0.1 to 0.91	200
CRM (Q, A)		Thick Film	High Power, High Pulse Rating Current/Voltage Sense, Power Supply, Snubber, Q - Automotive Grade, AEC-Q200 Compliant, A - Automotive Grade, AEC-Q200 Compliant, Sulfur Resistant	0.125 to 2	0603 to 2512	1, 5	0.047 to 1M	100 to 250
CFN (A)		Metal Foil	Current Sense, AEC-Q200 Compliant & Automotive Grade	0.25 to 1	0402 to 1206	1, 5	0.005 to 0.04	100
CFG		Metal Foil	Wide Terminal, Current Sense	1	0612	1	0.005 to 0.01	100
CRK		Metal Strip	Wide Terminal, Current Sense	1	0612, 0815	1	0.001 to 0.01	50
CST		4-Terminal Metal Strip	High Power, Low Ohmic, Current Sense, Input Amplifiers, AEC-Q200 Compliant & Automotive Grade	1	0612	1	0.0005 to 0.005	100/200
CRF		Metal Strip	High Power, Low Ohmic Low TCR, Low EMF, Current Sense, Input Amplifiers, AEC-Q200 Compliant & Automotive Grade	0.5 to 2	0805 to 2512	1, 5	0.001 to 0.05 and 0 ohm jumper	50
CRE		Metal Strip	High Power, Low Ohmic Low TCR, Low EMF, Current Sense, Input Amplifiers, AEC-Q200 Compliant & Automotive Grade	2, 3	2512	1	0.001 to 0.009	50
CRA		Metal Strip	High Power, Low Ohmic Low TCR, Low EMF, Current Sense, Input Amplifiers, AEC-Q200 Compliant & Automotive Grade	3	2512	1, 5	0.01 to 0.1	50
CSI		EB Welded Metal Element	High Power, Low Ohmic, Low TCR, Low EMF, Current Sense, Battery Management, Power Supply, Industrial	2.5 to 15 W	2512 3920 5930 4026	1, 2, 5	0.2 to 3.5 milliohms and 0 ohm jumper	± 50
CSS		EB Welded Metal Element	High Power, Low Ohmic, Low TCR, Low EMF, Current Sense, Battery Management, Power Supply, AEC-Q200 Compliant & Automotive Grade	2.5 to 15 W	2512 3920 5930 4026	1, 5	0.2 to 5 milliohms and 0 ohm jumper	± 50
CSM2F		EB Welded Metal Element	High Power, Low Ohmic, Low TCR, Low EMF, Current Sense, Battery Management, Power Supply, AEC-Q200 Compliant & Automotive Grade, optionally with sensing pins	36 & 50	6918, 7036, 8515, 8536	5	25 to 200 μΩ	50