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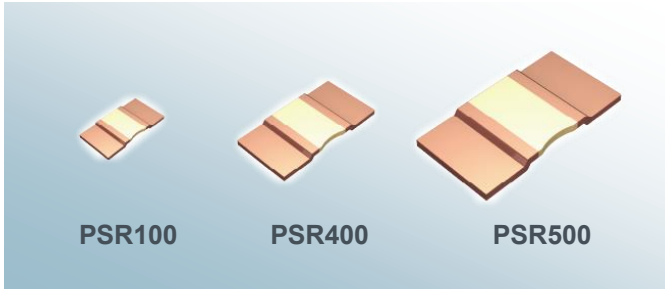
ROHM SEMICONDUCTOR

Extends the guaranteed rated power to 15W

High Power Ultra-Low-Ohmic Shunt Resistors

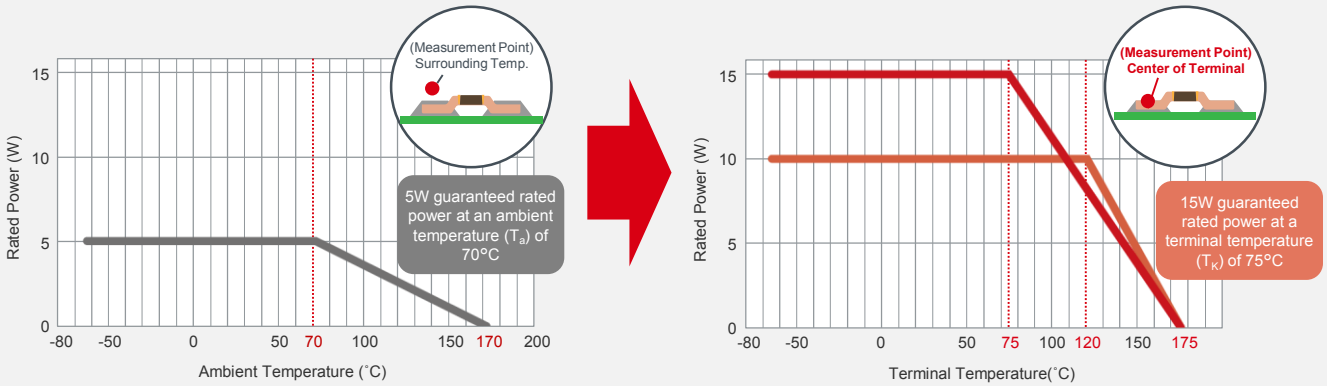
PSR series (0.1mΩ to 3mΩ)

- Extends the guaranteed rated power to 15W (0.1mΩ PSR500)
- Excellent temperature coefficient of resistance (TCR) even in the ultra-low resistance region
- High heat dissipation structure supports large currents



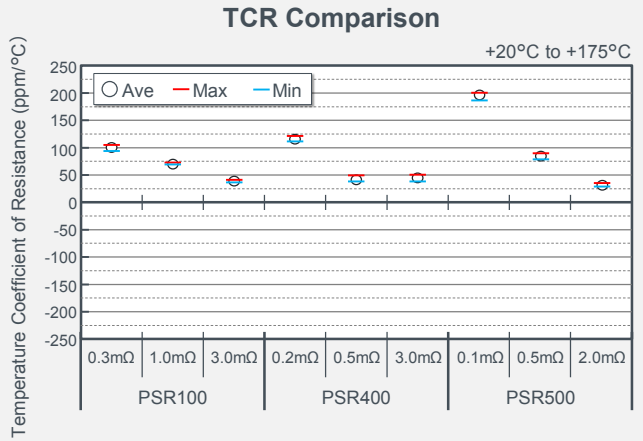
Increased Guaranteed Rated Power

Derating Curve Comparison: 0.1mΩ PSR500



Achieves a guaranteed high power of up to 15W by switching to terminal temperature derating

Superior Temperature Coefficient of Resistance (TCR)



Contributes to improved current detection accuracy

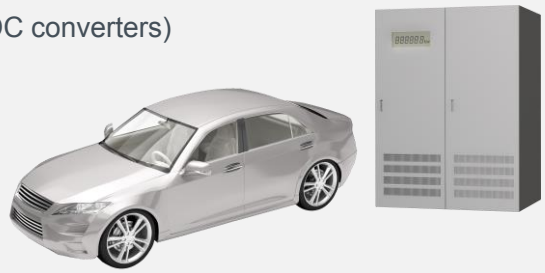
Lineup

Part No.	Size mm (inch)	Rated Power: Ambient Temperature Derating	Rated Power: [After Rating Increase] Terminal Temperature Derating	Resistance Tolerance	Temperature Coefficient of Resistance (ppm/°C)	Resistance (mΩ)	Rated Current (A)	Operating Temp. (°C)
Increased Rating **PSR100** Web	6432 (2512)	3W (70°C)	8W (75°C), 4W (140°C)	F (±1%)	0 to +150	0.3	163 (8W) /115 (4W)	-65 to +175
					0 to +100	0.5	126 (8W) /89 (4W)	
						1.0	89 (8W) /63 (4W)	
			6W (75°C), 4W (140°C)		0 to +50	2.0	54 (6W) /44 (4W)	
			4W (75˚C), 3W (140˚C)		0 to +50	3.0	36 (4W) /31 (3W)	
Increased Rating **PSR400** Web	10×5.2 (3921)	4W (70°C)	12W (75°C), 5W (130°C)	F (±1%)	125±50	0.2	244 (12W) /158 (5W)	
			10W (75˚C), 5W (130°C)		0 to +100	0.3	182 (10W) /129 (5W)	
						0.5	141 (10W) /100 (5W)	
			8W (75°C), 5W (130°C)		0 to +75	1.0	89 (8W) /70 (5W)	
			6W (75°C), 4W (115°C)		0 to +75	2.0	54 (6W) /44 (4W)	
			5W (70˚C), 3W (115˚C)		0 to +75	3.0	40 (5W) /31 (3W)	
Increased Rating **PSR500** Web	15×7.75 (5931)	5W (70°C)	15W (75°C), 10W (120°C)	F (±1%)	200±50	0.1	387 (15W) /316 (10W)	
					0 to +150	0.2	273 (15W) /223 (10W)	
			10W (75°C), 7W (120°C)		0 to +150	0.3	182 (10W) /152 (7W)	
						0.4	158 (10W) /132 (7W)	
						0.5	141 (10W) /118 (7W)	
			10W (75°C), 6W (120°C)		0 to +75	1.0	100 (10W) /77 (6W)	
			7W (70°C), 4W (115°C)		0 to +75	2.0	59 (7W) /44 (4W)	

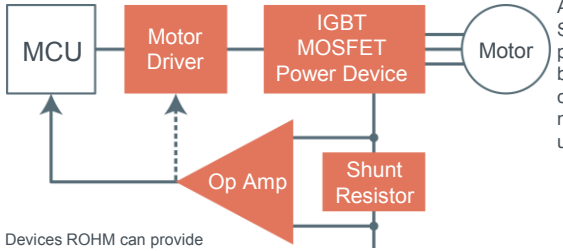
Application Examples

- Automotive (EPS, electric compressors, DC/DC converters)
- Industrial (power conditioners, power tools)
- Li-ion batteries

Supports universal use in high current detection applications



Circuit Detection Circuit Example



A circuit that controls the Speed of the motor and protects it from destruction by measuring the output current of IGBTs, MOSFETs, motor drivers, and the like using a shunt resistor

■ Devices ROHM can provide

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