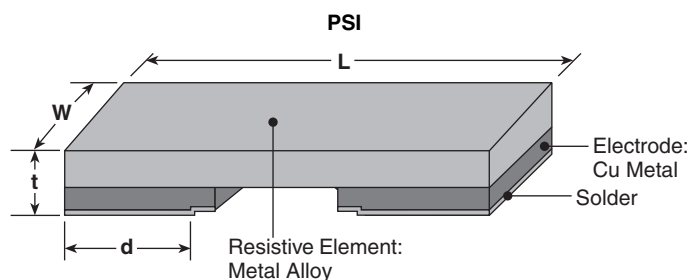
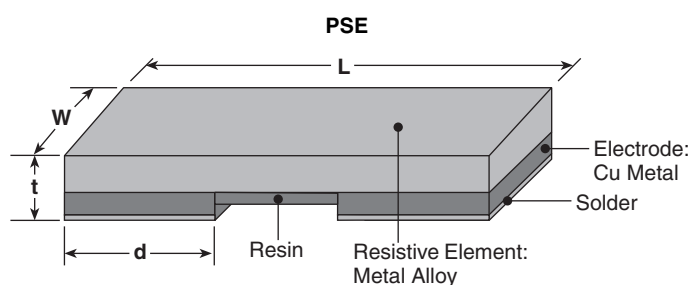


## features

- Smooth current flow, suitable for large current detecting
- Flat structure, applicable for strong mounting
- Automatic mounting machines are applicable
- Products with lead-free terminations meet EU RoHS and China RoHS requirements
- AEC-Q200 Qualified

## dimensions and construction



| Type<br>(Inch Size Code) | Resist.<br>( $\Omega$ ) | Dimensions inches (mm) |                  |                  |                                      |
|--------------------------|-------------------------|------------------------|------------------|------------------|--------------------------------------|
| PSI<br>(4020)            | 3.0m                    | .394 $\pm$ .010        | .205 $\pm$ .010  | .079 $\pm$ .010  | .028 $\pm$ .010                      |
|                          | 4.0m                    | (10.0 $\pm$ 0.25)      | (5.2 $\pm$ 0.25) | (2.0 $\pm$ 0.25) | (0.7 $\pm$ 0.25)                     |
| PSE<br>(2525)            | 0.5m                    | .252 $\pm$ .010        | .252 $\pm$ .010  | .087 $\pm$ .010  | .026 $\pm$ .010                      |
|                          | 1.0m                    |                        |                  |                  | (0.65 $\pm$ 0.25)                    |
|                          | 1.0m,<br>2.0m           | (6.4 $\pm$ 0.25)       | (6.4 $\pm$ 0.25) | (2.2 $\pm$ 0.25) | .019 $\pm$ .010<br>(0.50 $\pm$ 0.25) |

## ordering information

| New Part # | PS   | I                  | D                    | TEB                                                                                                   | 1L00                                                                                                                                                       | F                          |
|------------|------|--------------------|----------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
|            | Type | Power Rating       | Termination Material | Packaging                                                                                             | Nominal Resistance                                                                                                                                         | Tolerance                  |
|            |      | I: 3W<br>New E: 5W | D: SnAgCu            | TE: embossed plastic<br>(PSE: 2,000 pieces/reel)<br>TEB: embossed plastic<br>(PSI: 3,000 pieces/reel) | F: 4 digits<br>J: 3 digits<br>All values less than 0.1 $\Omega$ (100m $\Omega$ ) are expressed in m $\Omega$ with "L" as decimal<br>Ex: 1m $\Omega$ = 1L00 | F: $\pm$ 1%<br>J: $\pm$ 5% |

## applications and ratings

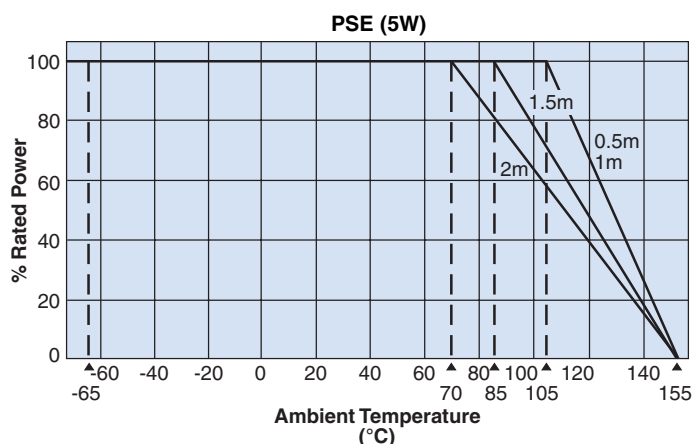
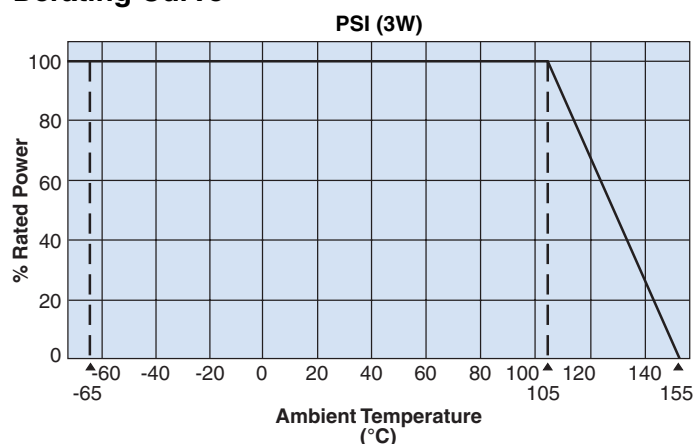
| Part Designation | Power Rating | T.C.R. (ppm/°C) Max. | Resistance Range                                               |                                                              | Terminal Temperature Under a Rated Load                                                                        | Operating Temperature Range |
|------------------|--------------|----------------------|----------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------|
|                  |              |                      | F: $\pm 1\%$                                                   | J: $\pm 5\%$                                                 |                                                                                                                |                             |
| PSI              | 3W*          | $\pm 50$             | 3m $\Omega$ , 4m $\Omega$                                      | —                                                            | +105°C and less                                                                                                | -65°C to +155°C             |
| PSE              | 5W*          | $\pm 150$            | 0.5m $\Omega$ , 1.0m $\Omega$<br>1.5m $\Omega$ , 2.0m $\Omega$ | 0.5m $\Omega$ , 1m $\Omega$ ,<br>1.5m $\Omega$ , 2m $\Omega$ | 0.5m $\Omega$ , 1m $\Omega$ : +105°C and less<br>1.5m $\Omega$ : 85°C and less<br>2m $\Omega$ : +70°C and less |                             |

\* A power rating shall be guaranteed with a method shown in the item. Please inquire before you order and/or use.

\*\* Under development

## environmental applications

### Derating Curve



For resistors operated at rated terminal temperature a power rating shall be derated in accordance with the above derating curve.

## Performance Characteristics

| Parameter                                     | Requirement $\Delta R \pm\%$           |                                         | Test Method                                                                                                                                                    |
|-----------------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | Limit                                  | Typical                                 |                                                                                                                                                                |
| Overload (Short time)                         | $\pm 0.2\%$ : PSI<br>$\pm 0.5\%$ : PSE | $\pm 0.1\%$ : PSI<br>$\pm 0.2\%$ : PSE  | 15W for 5 seconds                                                                                                                                              |
| Resistance to Solder Heat                     | $\pm 0.5\%$                            | $\pm 0.1\%$                             | 260°C $\pm 5^\circ\text{C}$ , 15 seconds $\pm 1$ second                                                                                                        |
| Rapid Change of Temperature                   | $\pm 0.5\%$                            | $\pm 0.2\%$                             | -55°C (30 minutes), +125°C (30 minutes), 1,000 cycles                                                                                                          |
| Moisture Resistance                           | $\pm 0.5\%$                            | $\pm 0.2\%$                             | 85°C $\pm 2^\circ\text{C}$ , 85% RH, 1000 hours, 10% Bias                                                                                                      |
| Endurance at and Less of Terminal Temperature | $\pm 1.0\%$                            | $\pm 0.2\%$ : PSI<br>$\pm 0.6\%$ : PSE  | Terminal temperature: 105°C (PSI, PSE (3W), PSE (5W) 0.5m, 1.0m)<br>+85°C (PSE (5W) 1.5m)<br>+70°C (PSE (5W) 2.0m),<br>1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Low Temperature Operation                     | $\pm 0.5\%$                            | $\pm 0.02\%$ : PSI<br>$\pm 0.1\%$ : PSE | -65°C, 96 hours                                                                                                                                                |
| High Temperature Exposure                     | $\pm 1\%$                              | $\pm 0.4\%$ : PSI<br>$\pm 0.6\%$ : PSE  | +155°C, 1,000 hours                                                                                                                                            |