

60S Series

Surface Mount Metal Plate Current Sense



FEATURES

- Superior thermal expansion cycling
- Inductance less than 10 nanohenries
- Flameproof
- Solderable pads: Tin (Sn) plate
- Lead flexible for thermal expansion
- Low termination stress (“J” terminals)
- Shape provides cooler operation
- Custom values available

APPLICATIONS

- Current sensing
- Low inductance
- AC applications
- Feedback

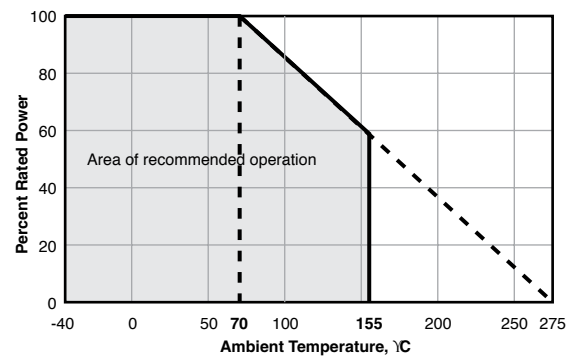
SERIES SPECIFICATIONS

| Type | Tolerance | TCR (ppm/C°) | Power Rating (watts) | Resistance Values (Ω) | Rated Ambient Temp. (°C) | Operating Temp. Range (°C) | Qty./Reel |
|--------|-----------|--------------|----------------------|-----------------------------|--------------------------|----------------------------|-----------|
| 602SJR | ±5% | ±100 | 0.25 | 0.003, 0.005 | +70°C | -40 - +155 | 2000 |
| 605SJR | ±5% | ±100 | 0.5 | 0.002, 0.0375, 0.005, 0.008 | +70°C | -40 - +155 | 2000 |
| 610SJR | ±5% | ±350 | 1 | 0.002, 0.003 | +85°C | -40 - +155 | 1500 |

CHARACTERISTICS

| Parameter | Requirement | Test Method (JIS C 5202) |
|---------------------------|----------------------------|---|
| Resistance | Within regulated tolerance | 25°C |
| T.C.R. | Within specified T.C.R. | Room temperature/100°C up |
| Resistance to Solder Heat | ±2.0% | 350°C ± 10°C, 3 seconds |
| Solderability | 95% coverage minimum | 235°C ± 5°C, 5 seconds |
| Moisture Resistance | ±3.0% | 40°C, 90 - 95% RH, 1000 hours, no load |
| Moisture Resistance | ±5.0% | Power rating x 1/10, 40°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Load Life | ±5.0% | Rating voltage, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |

Derating



60S Series

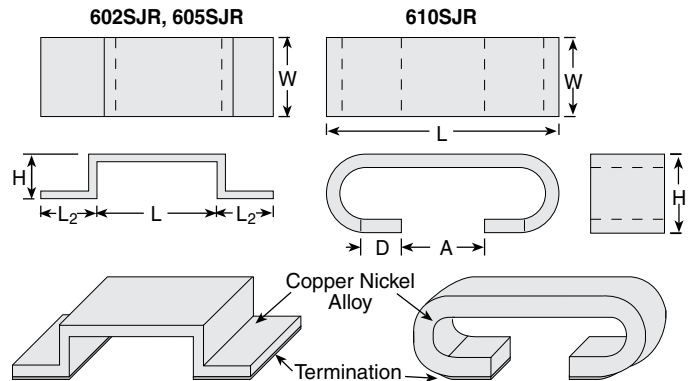
Surface Mount Metal Plate Current Sense

DIMENSIONS

inches (mm)

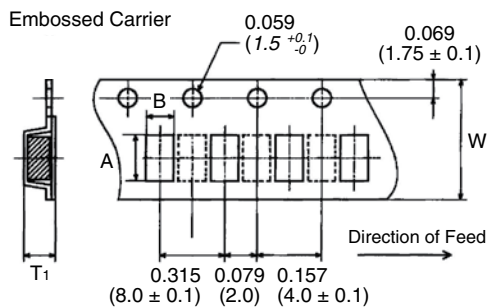
| | L | L2 | H | W |
|--------|-----------------------------|---------------------------|----------------------|-----------------------------|
| 602SJR | 0.39 ± .008 (10.0 ± 0.2) | 0.018 ± .008 (2 ± 0.2) | 0.024 (0.6 ± 0.1) | 0.118 ± .008 (3.0 ± 0.2) |
| 605SJR | 0.39 ± .008 (10.0 ± 0.2) | 0.018 ± .008 (2 ± 0.2) | 0.079 (2 max.) | 0.20 ± .008 (5.2 ± 0.2) |

| | L | H | D | A | W |
|--------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|------------------------------|
| 610SJR | 0.44 ± .016 (11.2 ± 0.4) | 0.137 ± .016 (3.5 ± 0.4) | 0.095 ± .010 (2.35 ± 0.25) | 0.189 ± .030 (4.8 ± .75) | 0.126 ± .016 (3.2 ± 0.40) |



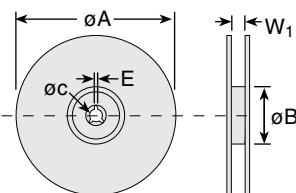
PACKAGING SPECIFICATIONS

inches (mm)



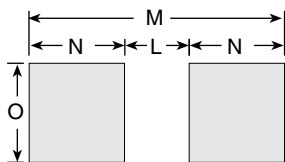
Tape

| Type | A | B | W | T1 |
|--------|-----------------------|----------------------|-----------------------|----------------------|
| 602SJR | 0.057 (1.45 ± 0.2) | 0.134 (3.4 ± 0.2) | 0.079 (2.0) | 0.098 (2.5 ± 0.2) |
| 605SJR | 0.057 (1.45 ± 0.2) | 0.224 (5.7 ± 0.2) | 0.079 (2.0) | 0.091 (2.3 ± 0.2) |
| 610SJR | 0.461 (11.7 ± 0.1) | 0.169 (4.3 ± 0.1) | 0.945 (24.0 ± 0.2) | — |



Reel

| Type | A | B | C | E | W1 | qty./reel |
|--------|----------------------|---------------------|-----------------------|----------------------|---------------------|-----------|
| 602SJR | 10.0 | 3.15 | 0.511 | 0.079 | 1.0 | 2000 |
| 605SJR | (255 +0.0 -3.0) | (80 +1.0 -0) | (13.0 ± 0.2) | (2.0 ± 0.5) | (25.5 ± 2.0) | |
| 610SJR | 12.99 (330 ± 2.0) | 3.94 (100 ± 2.0) | 0.511 (13.0 ± 0.2) | 0.079 (2.0 ± 0.5) | 1.0 (25.5 ± 2.0) | 1500 |



Land pattern

| Type | M | N | O | L |
|--------|--------------|--------------|--------------|--------------|
| 602SJR | 0.622 (16.0) | 0.118 (3.0) | 0.150 (3.8) | 0.394 (10.0) |
| 605SJR | 0.622 (16.0) | 0.118 (3.0) | 0.236 (6.0) | 0.394 (10.0) |
| 610SJR | 0.369 (9.36) | 0.121 (3.07) | 0.142 (3.60) | 0.127 (3.22) |

Land pattern dimensions are for reference only

ORDERING INFORMATION

Standard Part Numbers for 60S Series

| | Wattage: | 0.25 watt | 0.5 watt | 1 watt |
|----------|----------|----------------|----------------|----------------|
| Ohms | Series: | 602SJR | 605SJR | 610SJR |
| 0.00200Ω | | 602SJR00200E-T | 605SJR00200E-T | 610SJR00200E-T |
| 0.00300Ω | | 602SJR00300E-T | 605SJR00300E-T | 610SJR00300E-T |
| 0.00375Ω | | 602SJR00375E-T | 605SJR00375E-T | 610SJR00375E-T |
| 0.00500Ω | | 602SJR00500E-T | 605SJR00500E-T | 610SJR00500E-T |
| 0.00800Ω | | 602SJR00800E-T | 605SJR00800E-T | 610SJR00800E-T |

RoHS Compliant

602SJR00300E-T

| | | | |
|--|------------------|---|---------------------------------|
| Type & Power Rating | Tolerance | Ohms | Packaging |
| 602S = 0.25 watt 605S = 0.5 watt 610S = 1 watt | J = 5% | R00200 = 0.00200Ω R00300 = 0.00300Ω R00375 = 0.00375Ω | T = tape and reel (optional) |

Mouser Electronics

Authorized Distributor

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Ohmite:

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[605SJR00200-T](#) [605SJR00800-T](#) [605SJR00375-T](#) [605SJR00200](#) [610SJR00200-T](#) [605SJR00500](#) [610SJR00300](#)
[602SJR00500-T](#) [610SJR00200](#) [605SJR00375E](#) [605SJR00800E](#) [605SJR00200E](#) [610SJR00300E](#) [602SJR00500E](#)
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