

# SMU Series

## SMD, single-turn, sealed cermet trimmers



- Available in J-hook and gull-wing terminal configurations
- Meets EIA, EIAJ, IPC, VECI standard SMD trimmer designs
- Pb-free and Cd-free construction
- RoHS compliant
- Gold-plated leads provide high conductivity, low contact resistance, high corrosion resistance and good solderability
- Top cross-slot adjustment (top single-slot models available as special order)
- Tape and reel packaging



### SERIES SPECIFICATIONS

| Series | Wattage | Manufactured Range ( $\Omega$ ) | Rotation                 | Adj. Location | Taper  | Tolerance |
|--------|---------|---------------------------------|--------------------------|---------------|--------|-----------|
| SMUA   | 0.125   | 50-2M                           | $250^\circ \pm 10^\circ$ | Top           | Linear | 20%       |
| SMUB   | 0.25    | 50-2M                           | $250^\circ \pm 10^\circ$ | Top           | Linear | 20%       |

### CHARACTERISTICS

|  |   |                                  |  |  |
|--|---|----------------------------------|--|--|
| <b>Standard Resistance Range</b>         | 50 $\Omega$ to 2M $\Omega$<br>(standard 1, 2 & 5 sequence)                      | <b>Low Temperature Operation</b> | -55°C, 0.125 watt, 1 hour                                  | $\Delta T/R \leq \pm 2\%$ ,<br>S.S. $\leq \pm 2\%$ |
| <b>Resistance Tolerance</b>              | $\pm 20\%$ standard   | <b>High Temp. Exposure</b>       | +125°C, 250 hours  | $\Delta T/R \leq \pm 2\%$ ,<br>S.S. $\leq \pm 2\%$ |
| <b>End Resistance</b>                    | 1% or 3 $\Omega$ , whichever is greater   | <b>Load Life</b>                 | +70°C, 0.125 watt, 1,000 hours                             | $\Delta T/R \leq \pm 3\%$ ,<br>S.S. $\leq \pm 2\%$ |
| <b>Temp. Range</b>                       | -55°C to +125°C   | <b>Thermal Shock</b>             | -55°C, +125°C, 30 minutes each, 5 cycles                   | $\Delta T/R \leq \pm 2\%$ ,<br>S.S. $\leq \pm 1\%$ |
| <b>Resistance Taper</b>                  | Linear  | <b>Shock</b>                     | 100G, 6ms, 6 directions, 3 times each                      | $\Delta T/R \leq \pm 1\%$ ,<br>S.S. $\leq \pm 1\%$ |
| <b>Peak Noise (C.R.V.)</b>               | 2% or 3 $\Omega$ , whichever is greater   | <b>Vibration</b>                 | 10-2,000Hz, 1.5mm amplitude, 20G, 12 hours                 | $\Delta T/R \leq \pm 1\%$ ,<br>S.S. $\leq \pm 1\%$ |
| <b>Power Rating</b>                      | SMUA 0.125w @70°C; 0w @+125°C<br>SMUB 0.250w @70°C; 0w @+125°C                  | <b>Humidity</b>                  | +40°C, 90-95%RH, 0.125 watt, 500 hours                     | $\Delta T/R \leq \pm 3\%$ ,<br>S.S. $\leq \pm 2\%$ |
| <b>Maximum Input Voltage</b>             | 200VDC or power rating, whichever is smaller                                    | <b>Moisture Resistance</b>       | -10°C to +65°C, 80-98%RH, 0.125 watt, 10 cycles, 240 hours | $\Delta T/R \leq \pm 3\%$                          |
| <b>Temperature Coefficient</b>           | $\pm 100$ ppm/°C, 200 $\Omega$ to 1M $\Omega$<br>$\pm 250$ ppm/°C, other values | <b>Soldering Heat Resistance</b> | 240°C, 10 seconds  | $\Delta T/R \leq \pm 1\%$                          |
| <b>Insulation Resistance</b>             | 100M $\Omega$ minimum at 500VDC   | <b>Seal Test</b>                 | +85°C, hot water for 1 minute                              |  |
| <b>Dielectric Strength</b>               | 500VAC, 1 minute  | <b>Rotational Life</b>           | 100 cycles without discontinuity, no load                  | $\Delta T/R \leq \pm 5\%$                          |
| <b>Adjustment Travel</b>                 | $250^\circ \pm 10^\circ$  |                                  |  |  |
| <b>Mechanical Travel</b>                 | $250^\circ \pm 10^\circ$  |                                  |  |  |
| <b>Shaft Torque</b>                      | 0 gf•cm (0.69 oz•in) max.   |                                  |  |  |
| <b>Stop Strength</b>                     | 200 gf•cm (2.77 oz•in) min.   |                                  |  |  |
| <b>Flammability of Plastic Materials</b> | Meets UL 94V-0  |                                  |  |  |
| <b>Nominal Weight</b>                    | 0.068g  |                                  |  |  |

**Marking** Resistance value or code, date code



Position of Rotor Inside



Outside Markings



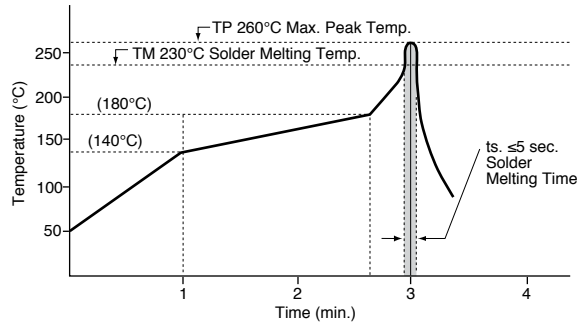
# SMU Series

SMD, single-turn, sealed cermet trimmers

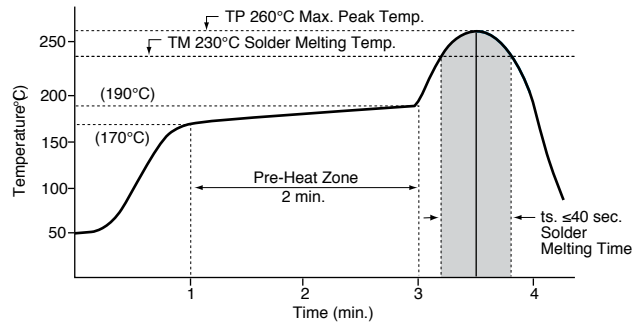
## CHARACTERISTICS

(continued)

Flow Soldering Profile



Reflow Soldering Profile



## DIMENSIONS

(mm)



## Land Pattern

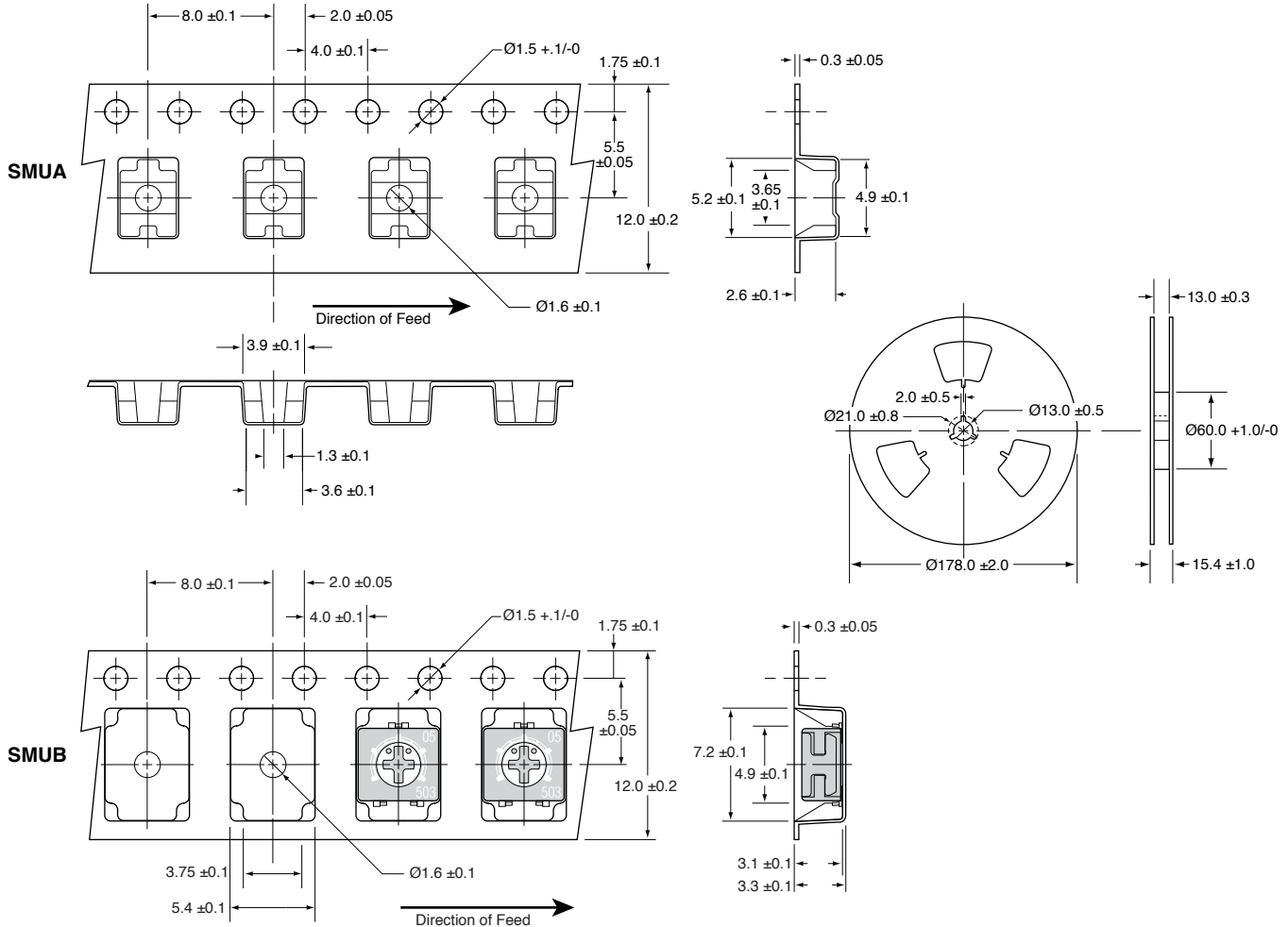


# SMU Series

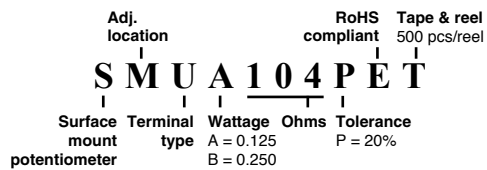
SMD, single-turn, sealed cermet trimmers

## TAPE AND REEL

(mm)



## ORDERING INFORMATION



### Standard Part Numbers

|            |            |
|------------|------------|
| SMUA500PET | SMUB500PET |
| SMUA101PET | SMUB101PET |
| SMUA201PET | SMUB201PET |
| SMUA501PET | SMUB501PET |
| SMUA102PET | SMUB102PET |
| SMUA202PET | SMUB202PET |
| SMUA502PET | SMUB502PET |
| SMUA103PET | SMUB103PET |
| SMUA203PET | SMUB203PET |
| SMUA503PET | SMUB503PET |
| SMUA104PET | SMUB104PET |
| SMUA204PET | SMUB204PET |
| SMUA504PET | SMUB504PET |
| SMUA105PET | SMUB105PET |