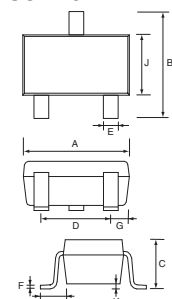


## features

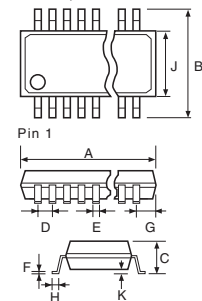
- Thin film (metal film) resistor array on silicon wafer
- Excellent resistance matching, TCR tracking and stabilities
- Custom circuits are available with flexible layout (Different resistance combinations possible)
- High integration saves board space and overall assembly costs
- Excellent reliability with standard molded IC package
- Suitable for reflow soldering
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

## dimensions and construction

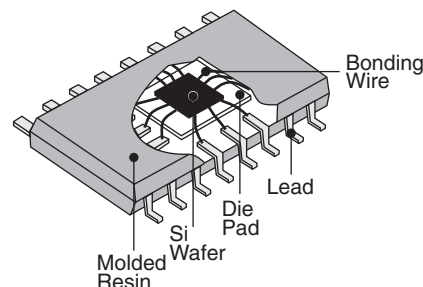
### SOT-23



### QSOP, SOIC-N



| Package<br>Symbol | Package | Pins | Dimensions inches (mm) |                |                |                 |                |                |                |                |                |                |                |
|-------------------|---------|------|------------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                   |         |      | A ±0.2                 | B ±0.2         | C ±0.2         | D ±0.1          | E ±0.1         | F ±0.1         | G ±0.1         | H ±0.2         | J ±0.2         | K ±0.1         |                |
| S03               | SOT-23  | 3    | .115<br>(2.92)         | .091<br>(2.3)  | .037<br>(0.95) | .075<br>(1.910) | .017<br>(0.44) | .005<br>(0.13) | .020<br>(0.51) | .021<br>(0.53) | .051<br>(1.3)  | .004<br>(0.11) |                |
| Q16               | QSOP    | 16   | .193<br>(4.90)         | .236<br>(5.99) | .063<br>(1.60) | .025<br>(0.635) | .010<br>(0.25) | .008<br>(0.20) | .008<br>(0.20) | .026<br>(0.66) | .150<br>(3.81) | .007<br>(0.18) |                |
| Q20               |         | 20   | .341<br>(8.66)         |                |                |                 |                |                | .058<br>(1.47) |                |                |                |                |
| Q24               |         | 24   |                        |                |                |                 |                |                | .033<br>(0.84) |                |                |                |                |
| N08               | SOIC-N  | 8    | .190<br>(4.83)         |                |                | .050<br>(1.27)  | .016<br>(0.41) |                | .008<br>(0.20) |                |                |                | .020<br>(0.52) |
| N14               |         | 14   | .341<br>(8.66)         |                |                |                 |                |                |                |                |                |                |                |
| N16               |         | 16   | .390<br>(9.91)         |                |                |                 |                |                |                |                |                |                |                |



## ordering information

### RBA, RBB

#### New Part #

| RBA                                                            | Q20                                                                                       | T                    | TEB                   | 1002                                   | B                                                               | E                                     | B                                                                                          | T                                                            |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------|-----------------------|----------------------------------------|-----------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Circuit Code                                                   | Package Symbol                                                                            | Termination Material | Packaging             | Nominal Resistance                     | Absolute Tolerance                                              | T.C.R.                                | Relative Res. Toler.                                                                       | T.C.R. Tracking                                              |
| RBA: Bussed resistor network<br>RBB: High speed bussed network | Package type symbol + number of pins<br>Q16, Q20, Q24: QSOP<br>N08, N14, N16: SOIC narrow | T: Sn<br>(L: Sn/Pb)  | TEB: Embossed plastic | B, C, D, F: 4 digits<br>G, J: 3 digits | B: ±0.1%<br>C: ±0.25%<br>D: ±0.5%<br>F: ±1%<br>G: ±2%<br>J: ±5% | T: ±10<br>E: ±25<br>C: ±50<br>H: ±100 | A: ±0.05%<br>B: ±0.1%<br>C: ±0.25%<br>D: ±0.5%<br>F: ±1%<br>G: ±2%<br>Blank: Not specified | Y: ±05<br>T: ±10<br>E: ±25<br>C: ±50<br>Blank: Not specified |

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/08/15

## ordering information (continued)

### RTX, RTY

New Part #

| RTY                               | Q20                                  | T                           | TEB                                               | 5001               |
|-----------------------------------|--------------------------------------|-----------------------------|---------------------------------------------------|--------------------|
| <b>Circuit Code</b>               | <b>Package Symbol</b>                | <b>Termination Material</b> | <b>Packaging</b>                                  | <b>Custom Code</b> |
| RTX, RTY: SOT-23 Resistor network | Package type symbol + number of pins | T: Sn<br>(L: Sn/Pb)         | TE: 7" embossed plastic<br>(RTX, RTY SOT-23 only) |                    |

### RDA, RDB

New Part #

| RDA                                                                  | Q20                                                                        | T                           | TEB                   | 471J                                            | 511J                                            | E                                          |
|----------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------|-----------------------|-------------------------------------------------|-------------------------------------------------|--------------------------------------------|
| <b>Circuit Code</b>                                                  | <b>Package Symbol</b>                                                      | <b>Termination Material</b> | <b>Packaging</b>      | <b>Nominal Resistance &amp; Tolerance of R1</b> | <b>Nominal Resistance &amp; Tolerance of R2</b> | <b>T.C.R.</b>                              |
| RDA: Dual terminator network<br>RDB: Differential terminator network | Package type symbol + number of pins<br>Q16, Q20: QSOP<br>N16: SOIC narrow | T: Sn<br>(L: Sn/Pb)         | TEB: Embossed plastic | 3 digits: G: $\pm 2\%$ ,<br>J: $\pm 5\%$        | 3 digits: G: $\pm 2\%$ ,<br>J: $\pm 5\%$        | E: $\pm 25$<br>C: $\pm 50$<br>H: $\pm 100$ |

## ratings

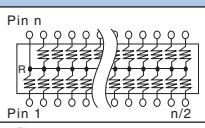
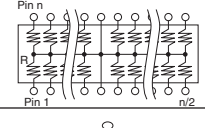
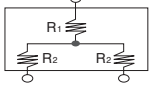
| Package               |           | QSOP                                                                                           |      |      | SOIC |      | SOT-23 |                                      |
|-----------------------|-----------|------------------------------------------------------------------------------------------------|------|------|------|------|--------|--------------------------------------|
| Package Symbol        |           | Q16                                                                                            | Q20  | Q24  | N08  | N14  | N16    | S03                                  |
| Package Power Rating  |           | 0.8W                                                                                           | 1.0W | 1.0W | 0.4W | 0.6W | 0.8W   | 0.2W                                 |
| Resistance Range      | 10Ω ~ 1kΩ | Power rating 200mW/resistor element *                                                          |      |      |      |      |        |                                      |
|                       | 1.1kΩ ~   |                                                                                                |      |      |      |      |        | Power rating 50mW/resistor element * |
| Max. Working Voltage  |           | 100V                                                                                           |      |      |      |      |        |                                      |
| Rated Voltage         |           | √ Rated power x nominal resistance value, rated voltage should not exceed max. working voltage |      |      |      |      |        |                                      |
| Rated Ambient Temp.   |           | +70°C                                                                                          |      |      |      |      |        |                                      |
| Operating Temp. Range |           | -55°C ~ +125°C **                                                                              |      |      |      |      |        |                                      |

Above ratings are based on the thermal resistance using multi-layer circuit board (EIA/JESD51). For mounting on a mono-layer board, power derating shall be needed. Please contact us about conditions.

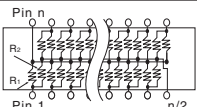
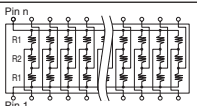
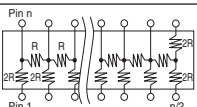
\* Total power consumption of all elements should not exceed the package power rating.

\*\* About operating temperature range -55°C ~ +155°C. We can provide custom devices. Please contact us.

## applications and ratings

| Circuit Code | Circuit Schematics                                                                  | Number of Pins    | T.C.R.<br>(x10 <sup>-6</sup> /K) | Resistance Range ( $\Omega$ ) E24 & Absolute Tolerance |                             |
|--------------|-------------------------------------------------------------------------------------|-------------------|----------------------------------|--------------------------------------------------------|-----------------------------|
|              |                                                                                     |                   |                                  | F: $\pm 1\%$                                           | G: $\pm 2\%$ , J: $\pm 5\%$ |
| RBA          |  | 8, 14, 16, 20, 24 | E: $\pm 25$                      | 100 ~ 100k                                             | 100 ~ 100k                  |
|              |                                                                                     |                   | C: $\pm 50$                      | 51 ~ 100k                                              | 51 ~ 100k                   |
|              |                                                                                     |                   | H: $\pm 100$                     | 30 ~ 100k                                              | 10 ~ 100k                   |
| RBB          |  | 8, 14, 16, 20, 24 | E: $\pm 25$                      | 100 ~ 100k                                             | 100 ~ 100k                  |
|              |                                                                                     |                   | C: $\pm 50$                      | 51 ~ 100k                                              | 51 ~ 100k                   |
|              |                                                                                     |                   | H: $\pm 100$                     | 30 ~ 100k                                              | 10 ~ 100k                   |
| RTY          |  | 3(SOT-23 only)    | E: $\pm 25$                      | 100 ~ 40k                                              | 100 ~ 40k                   |
|              |                                                                                     |                   | C: $\pm 50$                      | 51 ~ 40k                                               | 51 ~ 40k                    |
|              |                                                                                     |                   | H: $\pm 100$                     |                                                        |                             |

**applications and ratings (continued)**

| Circuit Code | Circuit Schematics                                                                | Number of Pins | T.C.R.       | Resistance Range ( $\Omega$ ) E24 & Absolute Tolerance<br>G: $\pm 2\%$ , J: $\pm 5\%$ |
|--------------|-----------------------------------------------------------------------------------|----------------|--------------|---------------------------------------------------------------------------------------|
| RDA          |  | 16, 20         | E: $\pm 25$  | R1= 150 ~ 10k<br>R1: R2= 1:1 ~ 1:4                                                    |
|              |                                                                                   |                | C: $\pm 50$  |                                                                                       |
|              |                                                                                   |                | H: $\pm 100$ |                                                                                       |
| RDB          |  | 16, 20         | E: $\pm 25$  | R1= 150 ~ 10k<br>R1: R2= 1:1 ~ 1:4                                                    |
|              |                                                                                   |                | C: $\pm 50$  |                                                                                       |
|              |                                                                                   |                | H: $\pm 100$ |                                                                                       |
| RLA          |  | 14, 16         | H: $\pm 100$ | 1k ~ 30k                                                                              |

**environmental applications**
**Performance Characteristics**

| Parameter                    | Requirement $\Delta R \pm (\%+0.05\Omega)$     |              |                                              |              | Test Method                                                                         |
|------------------------------|------------------------------------------------|--------------|----------------------------------------------|--------------|-------------------------------------------------------------------------------------|
|                              | High Precision Resistance Tolerance $<\pm 5\%$ |              | Standard Resistance Tolerance $\geq \pm 5\%$ |              |                                                                                     |
|                              | Limit                                          | Typical      | Limit                                        | Typical      |                                                                                     |
| Resistance                   | Within specified tolerance                     |              |                                              |              | 25°C                                                                                |
| T.C.R.                       | Within specified T.C.R.                        |              |                                              |              | +25°C/-55°C, +25°C/+125°C                                                           |
| Resistance to Soldering Heat | $\pm 0.1\%$                                    | -0.03%       | $\pm 0.5\%$                                  | $\pm 0.25\%$ | 260°C $\pm 5^{\circ}\text{C}$ , 10 seconds $\pm 1$ second                           |
| Rapid Change of Temperature  | $\pm 0.25\%$                                   | $\pm 0.02\%$ | $\pm 0.5\%$                                  | $\pm 0.25\%$ | -55°C (30 minutes), +125°C (30 minutes), 100 cycles                                 |
| Moisture Resistance          | $\pm 0.25\%$                                   | $\pm 0.03\%$ | $\pm 0.5\%$                                  | $\pm 0.25\%$ | 40°C $\pm 2^{\circ}\text{C}$ , 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Endurance at 70°C            | $\pm 0.25\%$                                   | $\pm 0.03\%$ | $\pm 0.5\%$                                  | $\pm 0.25\%$ | 70°C $\pm 2^{\circ}\text{C}$ , 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle              |
| High Temperature Exposure    | $\pm 0.25\%$                                   | $\pm 0.05\%$ | $\pm 0.5\%$                                  | $\pm 0.25\%$ | +125°C, 100 hours                                                                   |



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.