



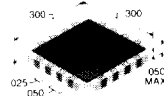
State of the Art, Inc.

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MIL-PRF-914 Surface Mount Resistor Networks

JEDEC Styles



03 Thick Film (16 I/O)



E
Watts/resistor 0.1
Watts/package 0.8
Max Vdc 50



W
Watts/resistor 0.1
Watts/package 0.8
Max Vdc 50



M
Watts/resistor 0.05
Watts/package 0.75
Max Vdc 50



04 Thick Film (20 I/O)



E
Watts/resistor 0.1
Watts/package 1.0
Max Vdc 50

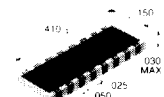


P
Watts/resistor 0.1
Watts/package 1.0
Max Vdc 50

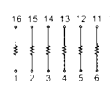


M
Watts/resistor 0.05
Watts/package 0.95
Max Vdc 50

SLAMDIP Style



05 Thick Film (16 I/O)



A
Watts/resistor 0.1
Watts/package 0.8
Max Vdc 50



B
Watts/resistor 0.055
Watts/package 0.8
Max Vdc 50



C
Watts/resistor 0.1
Watts/package 0.8
Max Vdc 50

PART MARKING—MIL-PRF-914 networks are marked with a three-line code with four digits in each line, as shown in the example above. The code is defined as follows:

Line 1 — Digits 1-3: Date code. Digit 1 = year, digits 2 & 3 = week. Digit 4: TCR.

Line 2 — Digits 1-4: Resistance value. Three significant digits & multiplier.

Line 3 — Digit 1: Tolerance. Digit 2: Schematic configuration. Digit 3: Failure rate. Digit 4: Military JAN certification.

A dot is used to mark the pin 1 location.

MIL-PRF-914 PRODUCTION TESTING

Product levels are based on the same design as established reliability parts at M level failure rate. Product level C is a Non-Established Reliability part requiring no Group A, B, or C testing. Established Reliability level M is subject to Group A, B, and C testing per MIL-PRF-914 as summarized in the tables below.

GROUP A INSPECTION

SUBGROUP 1 (100%)

THERMAL SHOCK
POWER CONDITIONING
DC RESISTANCE

SUBGROUP 2 (SAMPLING)

VISUAL INSPECTION

SUBGROUP 3 (SAMPLING)

SOLDERABILITY

GROUP B INSPECTION

SUBGROUP 1 (SAMPLING)

VISUAL AND MECHANICAL

SUBGROUP 2 (SAMPLING)

TEMPERATURE COEFFICIENT OF RESISTANCE

SUBGROUP 3 (SAMPLING)

RESISTANCE TO SOLVENTS

To order MIL-PRF-914 networks, follow the part numbering format below. The part number **M914D04K1002FMM** specifies a 10 kilohms $\pm 1\%$, 20-pin thick film network with fused tin/lead terminations, ± 100 TCR, schematic M configuration, and 1% per 1000 hours failure rate.

M914 D 04 K 1002 F M M

PRODUCT LEVEL DESIGNATOR

M: 1% per 1000 hours **C:** Non-ER

SCHEMATIC CONFIGURATION

See diagrams above

TOLERANCE

F: 1% **G:** 2% **J:** 5%

RESISTANCE VALUE

Three or four digits are used with all leading digits significant. Four digits are used for 1% tolerance or lower; otherwise, three digits are used. The last digit specifies the number of zeros to add. The letter "R" is used to represent the decimal for fractional ohmic values. Example: 5R6 is 5.6 ohms. 10R0 is 10 ohms; 16R9 is 16.9 ohms; etc.

TEMPERATURE CHARACTERISTIC

K: ± 100 ppm **M:** ± 300 ppm

SIZE CODE

03: .300 x .300 inch **04:** .350 x .350 inch **05:** .410 x .150 inch

TERMINATION TYPE

D: Fused Tin/Lead Plated **G:** Hot Solder Dip

MILITARY ESTABLISHED RELIABILITY SPECIFICATION MIL-PRF-914

Standard surface mount resistor networks are also available or may be customized for special applications. The JEDEC and SLAMDIP styles above and others, including a 0.200 inch wide SLAMDIP, are available in the standard schematics shown or as customized parts. Custom designs include mixed resistor values, and modified length, width, I/O count, or pitch. Chip capacitors can be mounted on the SMT package to form a low profile RC network. Please check with our factory for complete availability.

Thick & Thin Film Custom Networks

State of the Art produces a variety of custom conductor networks, resistor networks, and resistor/capacitor networks in low and high volume. We can quote and manufacture from a complete network layout or from a schematic with size, component, and output pad location requirements. Our design staff will be glad to assist you in developing your network.

Our thin film custom circuits provide the flexibility needed to meet high density, low TCR, close thermal tracking, and high stability requirements for microwave and other microelectronic applications. Our wide variety of packaging options, styles, and sizes, with in-process screening and quality control, provide the optimum solution to your design challenges. Our expert design staff can help you develop your network.

