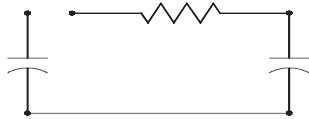
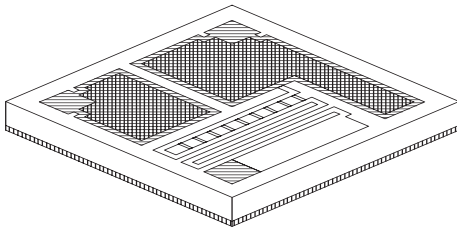
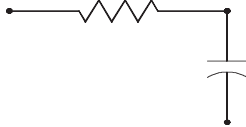
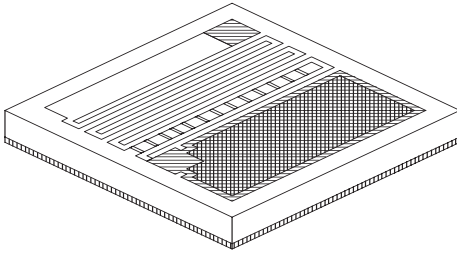


THIN FILM RC NETWORKS

MRCN SERIES

The MRCN series offers the high stability, low noise, and low T.C.R./T.C.C. tracking of thin film resistors combined with MOS capacitors. This combination provides greater flexibility to the hybrid designer.



MECHANICAL DATA

SUBSTRATE	SILICON
DIELECTRIC	SILICON OXIDE
RESISTOR	TANTALUM NITRIDE
BOND PADS	10,000 Å MINIMUM: ALUMINUM OR 15,000 Å MINIMUM: GOLD
BACKSIDE SURFACE	GOLD; SUITABLE FOR EUTECTIC OR CONDUCTIVE EPOXY ATTACH

ELECTRICAL DATA

	RESISTORS	CAPACITORS
VALUES	2Ω TO 1.2MΩ	2pF TO 1000pF
TOLERANCES	0.1%, 0.5%, 1%, 2%, AVAILABLE TO ±0.1%	5%, 10%, 20% (±0.5pF < 20pF)
RATIO TOLERANCE	±250ppm/°C STANDARD	-----
T.C.R.	OPTIONAL TO ±100ppm/°C	-----
T.C. TRACKING	±2ppm/°C	-----
T.C.C.	-----	+45ppm/°C, ±25ppm/°C

Consult sales for other values and tolerances.

SERIES DATA

OPERATING TEMP RANGE	-55°C TO +125°C
FREQUENCY	TO 20 GHz
RESISTORS	
CURRENT NOISE	101Ω TO TO 250KΩ: -40dB ≤ 100Ω, ≥ 250KΩ: -30dB
DIELECTRIC BREAKDOWN	400 V MIN.
INSULATION RESISTANCE	10 ¹² Ω MIN.
OPERATING VOLTAGE	100 V MAX.
POWER RATING	250 mW (70°C DERATED LINEARLY TO 150°C) P = E ² /R
SHORT TERM OVERLOAD	5X RATED POWER, 25°C, 5 SEC., ±0.25% MAX. ΔR/R: ±0.1% MSI TYPICAL
HIGH TEMP EXPOSURE	150°C, 100 HRS., ±0.25% MAX. ΔR/R: ±0.03% MSI TYPICAL
THERMAL SHOCK	MIL-STD 202, METHOD 107F, ±0.25% MAX. ΔR/R: ±0.1% MSI TYPICAL
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, ±0.5% MAX. ΔR/R: ±0.1% MSI TYPICAL
STABILITY	1000 HRS., 70°C, 100% POWER, ±0.5% MAX. ΔR/R: ±0.1% MSI TYPICAL
CAPACITORS	
INSULATION RESISTANCE	@ WORKING VOLTAGE, 10 ⁹ Ω
SHORT TERM OVERLOAD	1.5X WORKING VOLTAGE, 5 SEC., ΔC: ±0.5pF OR 1% ΔC MAX WHICH EVER IS GREATER
HIGH TEMP EXPOSURE	150°C, 100 HRS., ΔC: ±0.5pF OR ±1% ΔC MAX., WHICH EVER IS GREATER
THERMAL SHOCK	MIL-STD 202, METHOD 107F, ΔC: ±0.5pF MAX., ±0.1pF MSI TYPICAL
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, ΔC: ±1pF OR ±2% ΔC MAX., WHICH EVER IS GREATER
STABILITY	1000 HRS., 70°C, @ WORKING VOLTAGE, ΔC: ±2.5pF OR ±2.5% MAX., WHICH EVER IS GREATER
DISSIPATION FACTOR	1KHz, 1Vrms, 25°C, 0.1%
Q	1MHz, 50Vrms, 25°C, 1000 MIN.
OPERATING FREQUENCY	TO 20 GHz

Consult sales for part numbers.



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