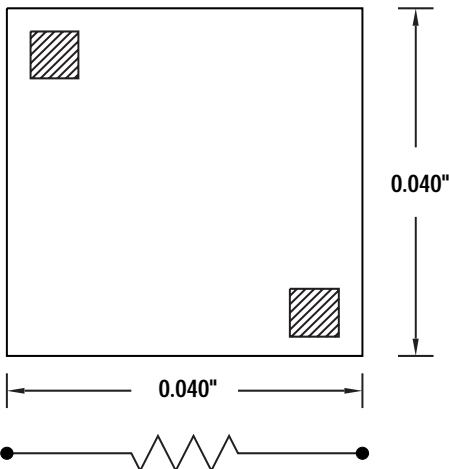
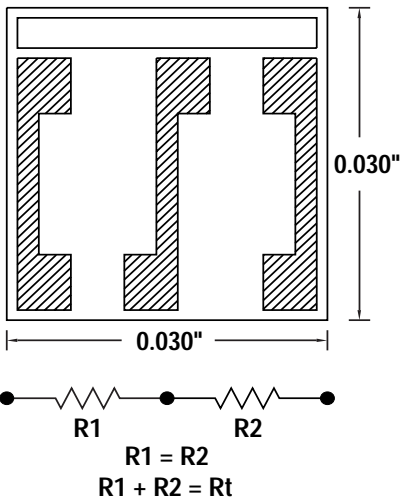
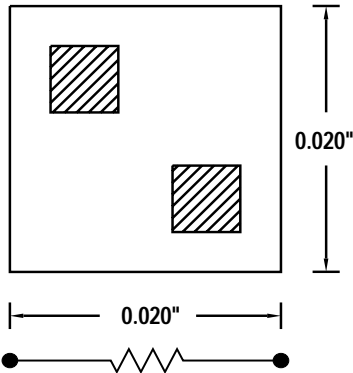


HIGH VALUE CHIP RESISTORS

SICHROME MSHR SERIES



MSHR-2

SIZE 0.020" x 0.020" x 0.010" (± 0.003 "
RESISTANCE RANGE 1.2M Ω TO 15M Ω

MSHR-3

SIZE 0.030" x 0.030" x 0.010" (± 0.003 "
RESISTANCE RANGE 2M Ω TO 25M Ω

MSHR-4

SIZE 0.040" x 0.040" x 0.010" (± 0.003 "
RESISTANCE RANGE 10M Ω TO 150M Ω

COMMON SERIES DATA

SUBSTRATE TYPE	SILICON
RESISTOR	SICHROME
BOND PADS	ALUMINUM (10,000 Å MIN.), OPTIONAL: GOLD (15,000 Å MIN.)
BACKSIDE SURFACE	BARE SUBSTRATE OR GOLD BACK OPTIONAL
TOLERANCES	1%, 2%, 5%, 10%, 20%
T.C.R.	STANDARD (± 300 ppm/ $^{\circ}$ C), OPTIONAL (± 100 ppm/ $^{\circ}$ C)
CURRENT NOISE	-20dB
DIELECTRIC BREAKDOWN	400 V MIN.
INSULATION RESISTANCE	10 ¹² Ω MIN.
OPERATING VOLTAGE	100 V MAX.
POWER RATING	250 mW (70 $^{\circ}$ C DERATED LINEARLY TO 150 $^{\circ}$ C) P = E ² / R
SHORT TERM OVERLOAD	5X RATED POWER, 25 $^{\circ}$ C, 5 SEC., ± 0.25 % MAX. Δ R/R
HIGH TEMP EXPOSURE	150 $^{\circ}$ C, 100 HRS., ± 0.25 % MAX. Δ R/R
THERMAL SHOCK	MIL-STD 202, METHOD 107F, ± 0.25 % MAX. Δ R/R
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, ± 0.5 % MAX. Δ R/R
STABILITY	1000 HRS., 70 $^{\circ}$ C, 100% Power, ± 0.5 % MAX. Δ R/R
OPERATING TEMP RANGE	-55 $^{\circ}$ C TO +150 $^{\circ}$ C

PART NUMBER DESIGNATION

MSHR X	SS	XXXXX	X	X
SERIES	SUBSTRATE/ RESISTOR	OHMIC VALUE	TOLERANCE	OPTION DESIGNATOR (If Required)
2	SS = Silicon/ Sichrome	5-Digit	F = 1%	GB = Gold Backside F = ± 100 ppm/ $^{\circ}$ C G = Gold Bond Pads E = Aluminum Bond Pads (Always used when no other option is required)
3		Number: 1st	G = 2%	
4		4 Digits Are Significant With "R" As Decimal Point When Required. 5th Digit Represents Number of Zeros.	J = 5% K = 10% M = 20%	

EXAMPLES: MSHR2SS -15003F-E = 0.020" x 0.020", Silicon Substrate
Sichrome Resistor, 1.5 M Ω , ± 1 % Tol., Aluminum Bond Pads.

MSHR3SS-20005F-RCE = 0.030" x 0.030", Silicon Substrate,
Sichrome Resistor, 20M Ω , ± 1 % Tol., ± 0.1 % Ratio, Aluminum Bond
Pads.

**Consult sales department for tolerances <0.5%.



MINI-SYSTEMS, INC.
THIN FILM DIVISION

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