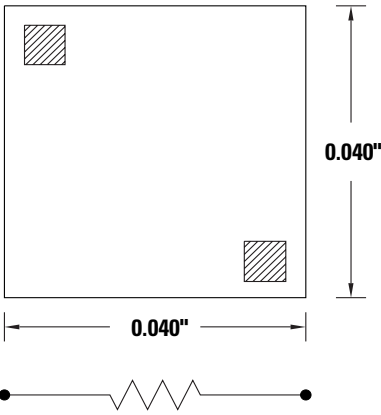


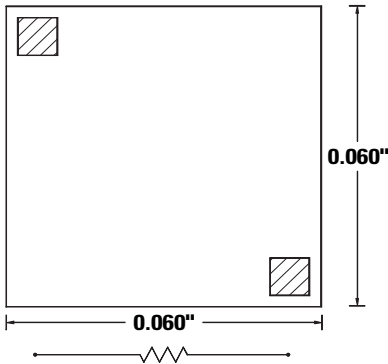
MEGOHM CHIP RESISTORS

CHIP RESISTORS

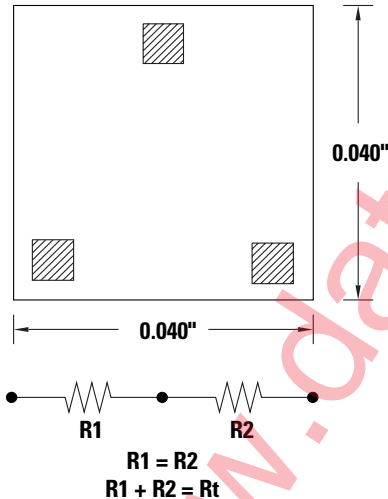
MSTF 4



MSTF 6



MSDR 4



Note: If $R1 \neq R2$, then custom design required.

MSTF 4 SERIES

SIZE 0.040" x 0.040" x .010" ±0.003"
RESISTANCE RANGE 1MΩ TO 15MΩ

MSTF 6 SERIES

SIZE 0.060" x 0.060" x .010" ±0.003"
RESISTANCE RANGE 2MΩ TO 35MΩ

MSDR 4 SERIES

SIZE 0.040" x 0.040" x .010" ±0.003"
RESISTANCE RANGE 1MΩ TO 10MΩ
RESISTANCE RATIO ±1% STANDARD; OPTIONAL TO ±0.1%

COMMON SERIES DATA

SUBSTRATE MATERIAL	SILICON, QUARTZ, OR GLASS
BOND PADS	GOLD (15,000 Å MIN.), OPTIONAL: ALUMINUM (10,000 Å MIN.)
BACKSIDE SURFACE	BARE SUBSTRATE OR GOLD BACK OPTIONAL
TOLERANCES	0.5%, 1%, 2%, 5%, 10%; TO ±0.1% AVAILABLE**
T.C.R.	
NICHROME	±25ppm/°C STANDARD; OPTIONAL TO ±5ppm/°C
TANTALUM NITRIDE	±150ppm/°C STANDARD; OPTIONAL TO ±10ppm/°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°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
HIGH TEMP EXPOSURE	150°C, 100 HRS., ±0.25% MAX. ΔR/R
THERMAL SHOCK	MIL-STD 202, METHOD 107F, ±0.25% MAX. ΔR/R
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, ±0.5% MAX. ΔR/R
STABILITY	1000 HRS., 70°C, 100% Power, ±0.5% MAX. ΔR/R
OPERATING TEMP RANGE	-55°C TO +150°C
STRAY DISTRIBUTED CAPACITANCE	
SILICON	2pF
QUARTZ	0.02pF

PART NUMBER DESIGNATION

XXXX	X	X	XXXXX	X	X
SERIES	SUBSTRATE	RESISTIVE FILM	TOTAL OHMIC VALUE	TOLERANCE **	OPTION DESIGNATOR (If Required)
MSTF4	G = Glass	N = Nichrome	5-Digit Number: 1st 4 Digits Are Significant With "R" As Decimal Point When Required. 5th Digit Represents Number of Zeros.	B = 0.1% D = 0.5% F = 1% G = 2% J = 5% K = 10%	A = ±50ppm/°C B = ±25ppm/°C C = ±10ppm/°C D = ±5ppm/°C E = Aluminum Bond Pads GB = Gold Backside F = ±100ppm/°C G = Gold Bond Pads (Always used when no other option is required) RC = ±0.1% Ratio* RD = ±0.5% Ratio* * MSDR-4 ONLY
MSTF6	Q = Quartz	T = Tantalum Nitride			
MSDR4	S = Silicon				

EXAMPLES: MSTF4SN-10003F-G = 0.040" x 0.040", Silicon Substrate, Nichrome Resistor, 1MΩ, ±1% Tol., Gold Bond Pads.

MSTF6ST-10004F-FGB = 0.060" x 0.060", Silicon Substrate, Tantalum Nitride Resistor, 10MΩ, ±1% Tol., ±100ppm/°C Gold Backside

MSDR4SN-10004F-RCE = 0.040" x 0.040", Silicon Substrate, Nichrome Resistor, 10MΩ, ±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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