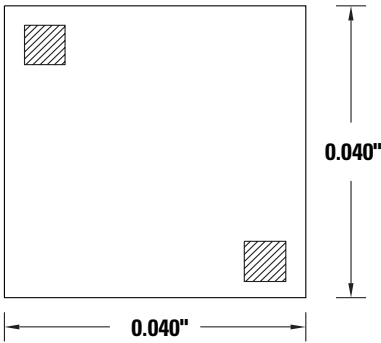


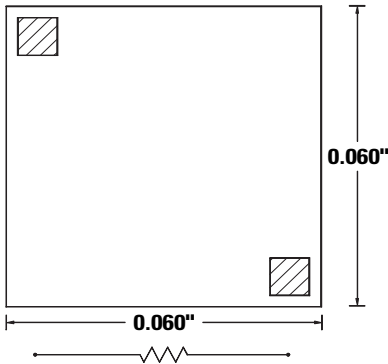
# MEGOHM CHIP RESISTORS

CHIP RESISTORS

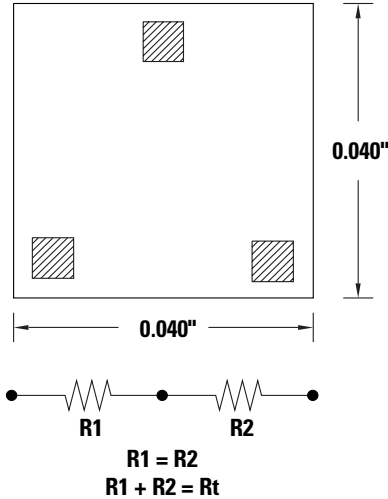
## MSTF 4



## 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 <sup>12</sup> 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	B = 0.1%	A = ±50ppm/°C
MSTF6	Q = Quartz	T = Tantalum	Number: 1st	D = 0.5%	B = ±25ppm/°C
MSDR4	S = Silicon	Nitride	4 Digits Are Significant	F = 1%	C = ±10ppm/°C
			With "R" As Decimal	J = 5%	D = ±5ppm/°C
			Point When Required.	K = 10%	E = Aluminum Bond Pads
			5th Digit Represents Number of Zeros.		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

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%.

**M S I**  
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