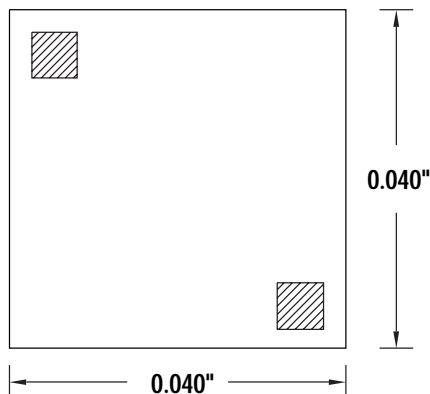
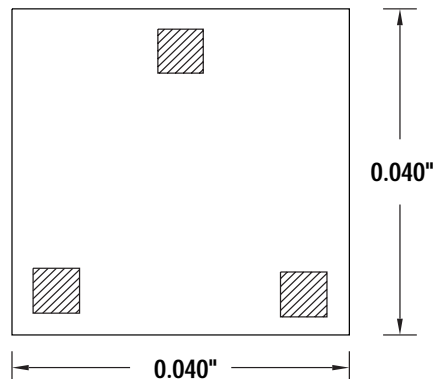


# MEGOHM CHIP RESISTORS

## MSTF-4



## MSDR-4



$$R1 = R2$$

$$R1 + R2 = Rt$$

## MSTF-4 SERIES

RESISTANCE RANGE 1MΩ TO 25MΩ

## MSDR-4 SERIES

RESISTANCE RANGE 1MΩ TO 10MΩ  
RESISTANCE RATIO ±1% STANDARD; OPTIONAL TO ±0.1%

### COMMON SERIES DATA

SIZE	0.040" x 0.040" x .010" ±0.003"
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%, 20%; TO ±0.1% AVAILABLE**
T.C.R.	
NICHROME	±50ppm/°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 <sup>2</sup> / 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 / NiCr OR TaN	2pF
QUARTZ / NiCr	0.02pF
QUARTZ / TaN	0.05pF
GLASS / NiCr	0.04pF
GLASS / TaN	0.06pF

### PART NUMBER DESIGNATION

XXXXX	X	X	—	XXXXX	X	—	X
SERIES	SUBSTRATE	RESISTIVE FILM		TOTAL OHMIC VALUE	TOLERANCE **		OPTION DESIGNATOR (If Required)
MSTF4	G = Glass	N = Nichrome		5-Digit	D = 0.5%		A = ±50ppm/°C
MSDR4	Q = Quartz	T = Tantalum Nitride		Number: 1st 4 Digits Are Significant With "R" As Decimal Point When Required. 5th Digit Represents Number of Zeros.	F = 1%		B = ±25ppm/°C
	S = Silicon				G = 2%		C = ±10ppm/°C
					J = 5%		D = ±5ppm/°C
					K = 10%		E = Aluminum Bond Pads
					M = 20%		GB = Gold Backside Pads (Always used when no other option is required)
							F = ±100ppm/°C
							G = Gold Bond Pads
							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.

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

45 FRANK MOSSBERG DRIVE, ATTLEBORO, MA 02703  
508-226-2111 FAX: 508-226-2211  
DCN TF 103-E-0199

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