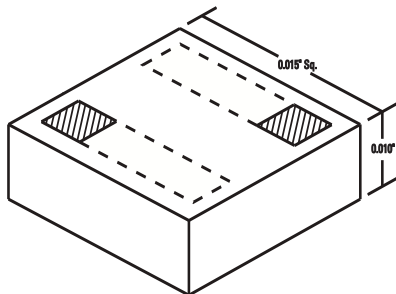


THIN FILM CHIP RESISTOR

MSTF 1 SERIES



---- Layout varies with value



Minimum bonding area
for < 100Ω Resistance.

MECHANICAL DATA

SIZE	0.015" x 0.015" x 0.010" (±0.003")	
SUBSTRATE	(S)SILICON, (A)ALUMINA, (Q)QUARTZ, OR (G)GLASS	
RESISTOR	NICHROME OR TANTALUM NITRIDE	
BONDING PADS	15,000 Å MINIMUM GOLD	
	10,000 Å MINIMUM: ALUMINUM OPTIONAL	
BACKSIDE SURFACE	BARE SUBSTRATE	
	GOLD BACK OPTIONAL	

ELECTRICAL DATA

RESISTANCE RANGE	NICHROME	TANTALUM NITRIDE
SILICON, QUARTZ, GLASS	2Ω TO 150KΩ*	2Ω TO 150KΩ*
ALUMINA	2Ω TO 33KΩ	2Ω TO 33KΩ
TOLERANCES	0.01% TO 10% (Value Dependent)	0.01% TO 10% (Value Dependent)
T.C.R.	±25ppm/°C STANDARD OPTIONAL TO ±5ppm/°C (S, Q, G)	±150ppm/°C STANDARD OPTIONAL TO ±10ppm/°C (S, Q, G) OPTIONAL TO ±25ppm/°C (A)

SERIES DATA

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	50 mW (70°C DERATED LINEARLY TO 150°C) P = √(E*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, 125mW, ±0.5% MAX. ΔR/R: 0.1% MSI TYPICAL
OPERATING TEMP RANGE	-55°C TO +125°C
STRAY DISTRIBUTED CAPACITANCE	
SILICON	2pF
ALUMINA	0.06pF
QUARTZ	0.02pF

PART NUMBER DESIGNATION

MSTF 1	X	X	XXXXX	X	X
SERIES	SUBSTRATE	RESISTIVE FILM	OHMIC VALUE	TOLERANCE	OPTION DESIGNATOR (If Required)
	A = Alumina G = Glass Q = Quartz S = Silicon	N = Nichrome T = Tantalum Nitride	5-Digit Number: 1st 4 Digits Are Significant With "R" As Decimal Point When Required. 5th Digit Represents Number of Zeros.	S = 0.01%* Q = 0.05%* 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 Pads (always used when no other option is required)



MINI-SYSTEMS, INC.

THIN FILM DIVISION

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508-695-0203 FAX: 508-695-6076

EXAMPLE: MSTF 1SN-50R00F-BGB = 0.015" x 0.015", Silicon Substrate,
Nichrome Resistor, 50Ω, ±1% Tol., ±25ppm/°C, Gold Backside.