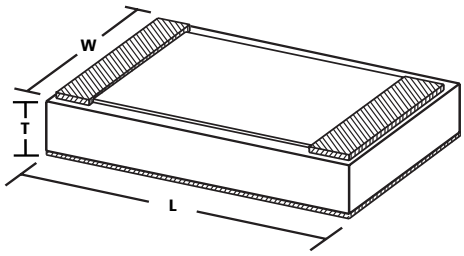
NON-MICROWAVE CHIP RESISTORS

MSTF SERIES



Shown with optional Gold Back

MECHANICAL DATA

SERIES	L		W		T	TOLERANCE
MSTF 110	0.037"	x	0.017"	x	0.010"	(±0.003")
MSTF 112	0.050"	x	0.050"	x	0.010"	(±0.003")
MSTF 115	0.050"	x	0.025"	x	0.010"	(±0.003")
MSTF 118	0.021"	x	0.017"	x	0.010"	(±0.003")
MSTF 120	0.100"	x	0.050"	x	0.010"	(±0.003")
MSTF 121	0.100"	x	0.100"	x	0.010"	(±0.003")
MSTF 122	0.020"	x	0.016"	x	0.010"	(±0.003")
MSTF 124	0.150"	x	0.085"	x	0.010"	(±0.003")

ELECTRICAL DATA

SERIES	RESISTANCE RANGE		POWER RATING
	SILICON	ALUMINA	@ 70°C
MSTF 110	2Ω – 1MΩ	2Ω – 200KΩ	125mW
MSTF 112	2Ω – 1MΩ	2Ω – 400KΩ	125mW
MSTF 115	2Ω – 1MΩ	2Ω – 250KΩ	125mW
MSTF 118	2Ω – 500KΩ	2Ω – 100KΩ	125mW
MSTF 120	5Ω – 2MΩ	5Ω – 1MΩ	125mW
MSTF 121	10Ω – 3MΩ	10Ω – 1.5MΩ	500mW
MSTF 122	2Ω – 500KΩ	2Ω – 100KΩ	125mW
MSTF 124	10Ω – 3MΩ	10Ω – 1.5MΩ	500mW

ABSOLUTE TOLERANCE	1%, 2%, 5%, 10%
T.C.R.	±25ppm/°C STANDARD (NiCr); ±150ppm/°C STANDARD (TaN)
	CONSULT SALES FOR OTHER VALUES / TOLERANCES

SERIES DATA

SUBSTRATE MATERIAL	99.6% ALUMINA STANDARD, QUARTZ** OPTIONAL, SILICON
CURRENT NOISE	-20dB TYPICAL
OPERATING VOLTAGE	100 V MAX.
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, 100% POWER, ±0.5% MAX. ΔR/R: ±0.1% MSI TYPICAL
OPERATING TEMP RANGE	-55°C TO +150°C
STORAGE TEMP	+150°C
STRAY DISTRIBUTED CAPACITANCE	
ALUMINA / NiCr	0.06pF
ALUMINA / TaN	0.08pF
QUARTZ / NiCr	0.02pF
QUARTZ / TaN	0.05pF
SILICON / NiCr or TaN	2pF

PART NUMBER DESIGNATION

MSTF — XX — XXXXX — X — X

MSTF	XX	XXXXX	X	X
	SUBSTRATE / RESISTIVE FILM	OHMIC VALUE	TOLERANCE	OPTION
110, 112	AT = Alumina / TaN	5-Digit Number:	S = 0.01%	C = ±10ppm/°C
115, 118	AN = Alumina / NiCr	1st 4 Digits Are	X = 0.02%	D = ±5ppm/°C
120, 121	QT = Quartz / TaN	Significant	Q = 0.05%	F = ±100ppm/°C
122, 124	QN = Quartz / NiCr	With "R" As	B = 0.1%	G = Gold Bond
	PT = Polished / TaN	Decimal	D = 0.5%	Pads Std.*
	PN = Polished / NiCr	Point When	F = 1%	GB = Gold Backside
	SN = Silicon / NiCr	Required.	G = 2%	T = With Solder
	ST = Silicon / TaN	5th Digit	J = 5%	Bumps
		Represents	K = 10%	
		Number of		
		Zeros.		

EXAMPLE: MSTF 110AN-10001F-GB = 110 Series, Alumina Substrate, 10KΩ, ±1% Tol., ±25ppm/°C, Nichrome, Gold Backside.

*Always used when no other option is required.

**Consult sales for power capabilities on Quartz substrate

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