

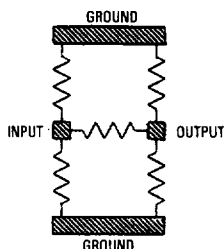
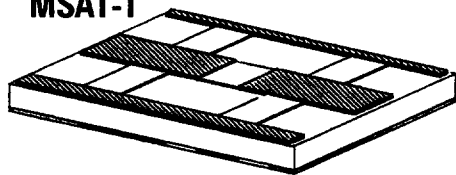
# THIN FILM CHIP ATTENUATORS

## MSAT SERIES

The MSAT series Thin Film chip attenuators provide attenuation accuracy for frequencies through 18GHz. They offer the low noise, stray capacitance and tight tolerance of Thin Film in compact sizes that make them ideal for smaller micro-wave and strip line applications.

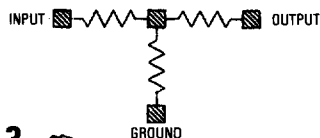
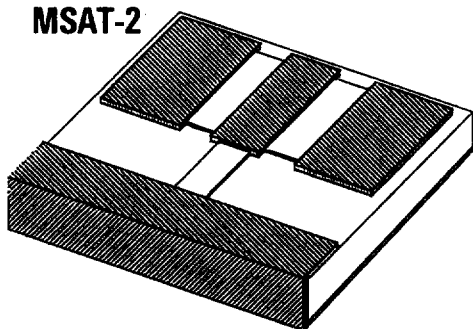
### MSAT-1 (FORMERLY 210-0047) SERIES

**MSAT-1**



SIZE	.100" × .080" (±0.003") × .010" (±.001")
MATERIAL	QUARTZ
BOND PADS	GOLD
ATTENUATION RANGES	-1dB THROUGH -24dB (½dB STEPS AVAILABLE)
ATTENUATION ACCURACY	±0.2dB
FREQUENCY RANGE	DC THROUGH 18GHz
IMPEDANCE	50
VSWR	1.5:1 MAX.
CURRENT NOISE	-20dB TYPICAL
STRAY DISTRIBUTED CAPACITANCE	0.02pF
POWER RATING	125mW (HIGHER POWER RATINGS AVAILABLE) OPTIONAL RIBBON WIRE GROUND AVAILABLE

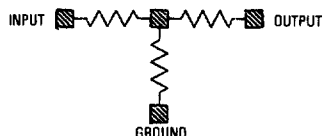
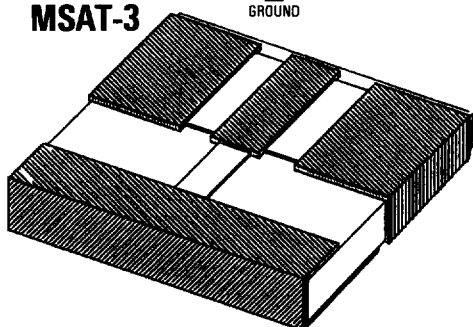
**MSAT-2**



### MSAT-2 SERIES WITH WRAPAROUND GROUND

SIZE	.050" × .050" (±.003")
MATERIAL	99.6% ALUMINA
BOND PADS	GOLD BOND PADS, WRAPAROUND GROUND
ATTENUATION RANGES	-1dB THROUGH -24dB
ATTENUATION ACCURACY	±0.2dB
FREQUENCY RANGE	DC THROUGH 18GHz
IMPEDANCE	50
VSWR	1.5:1 MAX.
CURRENT NOISE	-20dB TYPICAL
STRAY DISTRIBUTED CAPACITANCE	0.08pF
POWER RATING	250mW

**MSAT-3**



### MSAT-3 SERIES FULLY SURFACE MOUNTABLE

SIZE	.050" × .050" (±.003")
MATERIAL	99.6% ALUMINA
BOND PADS	GOLD BOND PADS, FULLY SURFACE MOUNTABLE
ATTENUATION RANGES	-1dB THROUGH -24dB
ATTENUATION ACCURACY	±0.2dB
FREQUENCY RANGE	DC THROUGH 18GHz
IMPEDANCE	50
VSWR	1.5:1 MAX.
CURRENT NOISE	-20dB TYPICAL
STRAY DISTRIBUTED CAPACITANCE	0.08pF
POWER RATING	250mW

### PART NUMBER DESIGNATION

MSAT	—	X	—	XX
SERIES		1 2 3		dB

EXAMPLE: -01 = 1dB, -20 = -20dB

CONSULT FACTORY FOR OTHER CONFIGURATIONS



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