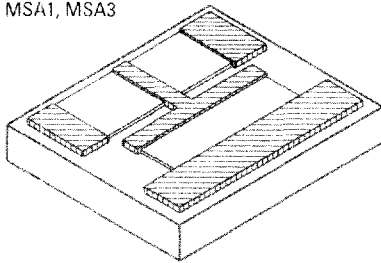


THICK FILM CHIP ATTENUATORS

DESCRIPTION

Wire and ribbon bondable and Flipchip thick film chip attenuators, printed and fired on 96% alumina. Provides attenuation accuracy for frequencies through 10Ghz. Double layer terminations provide additional bonding surface. Abrasive trimming ensures optimum resistor stability. Diamond sawed for dimensional uniformity and accuracy. Advanced processing techniques, and Hi-Rel construction assure optimum performance.

MSA1, MSA3



MSA1, MSA3

SIZE

MSA1 0.320" x 0.240" x 0.025" (± 0.002 "
MSA3 0.155" x 0.125" x 0.025" (± 0.002 "

SUBSTRATE

96% ALUMINA

BOND PADS

WIRE BONDABLE, RIBBON BONDABLE, OR SOLDERABLE

ATTENUATION RANGES

-1dB THROUGH -20dB. CONSULT SALES FOR 0.5dB STEPS.

ATTENUATION ACCURACY

± 0.5 dB

FREQUENCY RANGE

DC THROUGH 10 GHz

IMPEDANCE

50 Ω

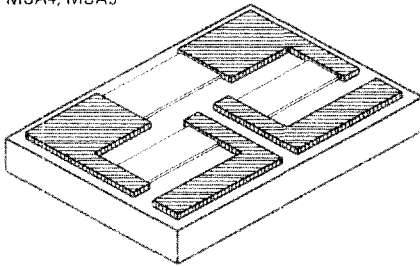
VSWR

1.5:1 MAX.

POWER RATING

MSA1 1W
MSA3 500mW

MSA4, MSA5



MSA4, MSA5

SIZE

MSA4 0.155" x 0.125" x 0.025" (± 0.002 "
MSA5 0.320" x 0.240" x 0.025" (± 0.002 "

SUBSTRATE

96% ALUMINA

BOND PADS

WIRE BONDABLE, RIBBON BONDABLE, OR SOLDERABLE

ATTENUATION RANGES

-1dB THROUGH -20dB. CONSULT SALES FOR 0.5dB STEPS.

ATTENUATION ACCURACY

± 0.5 dB

FREQUENCY RANGE

DC THROUGH 10 GHz

IMPEDANCE

50 Ω

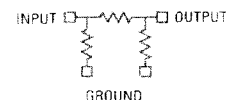
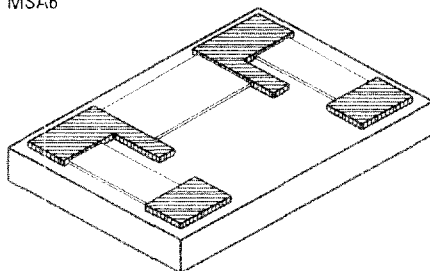
VSWR

1.5:1 MAX.

POWER RATING

MSA4 500mW
MSA5 1W

MSA6



MSA6

SIZE

0.090" x 0.050" x 0.010" (± 0.002 "

SUBSTRATE

96% ALUMINA

BOND PADS

WIRE BONDABLE, RIBBON BONDABLE, OR SOLDERABLE

ATTENUATION RANGES

-1dB THROUGH -20dB. CONSULT SALES FOR 0.5dB STEP.

ATTENUATION ACCURACY

± 0.5 dB

FREQUENCY RANGE

DC THROUGH 10 GHz

IMPEDANCE

50 Ω

VSWR

1.5:1 MAX.

POWER RATING

125mW (HIGHER POWER RATINGS AVAILABLE)

PART NUMBER DESIGNATION

EXAMPLE: MSA3G-01dB-BU. (MSA-3 Series, Gold Termination, -1dB, Back Metal, Untinned)

MSA	3	G	-	01dB	-	B	U
MSI STYLE	TYPE NUMBER	BASE METAL		dB VALUE		METAL OPTIONS	OPTIONS
	1, 3 4, 5 6	G = Gold PG = Platinum Gold PS = Palladium Silver				B = Back Metal Leave blank for no metal	U = Untinned S = Soldered

CONSULT SALES FOR OTHER CONFIGURATIONS AND IMPEDANCES.

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MSI

THICK FILM DIVISION

8023 Rev A 1297