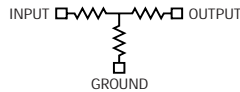
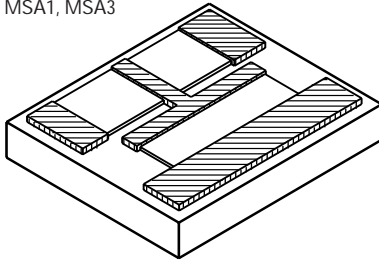
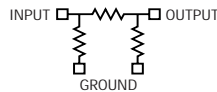
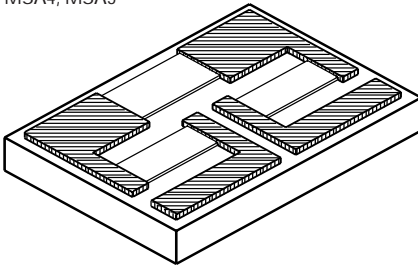


THICK FILM CHIP ATTENUATORS

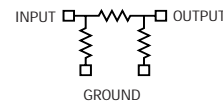
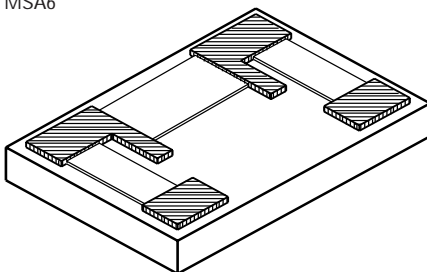
MSA1, MSA3



MSA4, MSA5



MSA6



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

SIZE

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

SUBSTRATE

BOND PADS

ATTENUATION RANGES

ATTENUATION ACCURACY

FREQUENCY RANGE

IMPEDANCE

VSWR

POWER RATING

MSA1 1W
MSA3 500mW

96% ALUMINA

WIRE BONDABLE, RIBBON BONDABLE, OR SOLDERABLE

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

± 0.5 dB

DC THROUGH 10 GHz

50 Ω

1.5:1 MAX.

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

BOND PADS

ATTENUATION RANGES

ATTENUATION ACCURACY

FREQUENCY RANGE

IMPEDANCE

VSWR

POWER RATING

MSA4 500mW
MSA5 1W

96% ALUMINA

WIRE BONDABLE, RIBBON BONDABLE, OR SOLDERABLE

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

± 0.5 dB

DC THROUGH 10 GHz

50 Ω

1.5:1 MAX.

MSA6

SIZE

0.090" x 0.050" x 0.010" (± 0.002 "

SUBSTRATE

BOND PADS

ATTENUATION RANGES

ATTENUATION ACCURACY

FREQUENCY RANGE

IMPEDANCE

VSWR

POWER RATING

96% ALUMINA

WIRE BONDABLE, RIBBON BONDABLE, OR SOLDERABLE

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

± 0.5 dB

DC THROUGH 10 GHz

50 Ω

1.5:1 MAX.

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.



8023 Rev A 1297

MINI-SYSTEMS, INC. 20 DAVID RD., P.O. BOX 69
NORTH ATTLEBORO, MA 02761-0069

(508) 695-0203 FAX: (508) 695-6076

E-mail: msithick@mini-systemsinc.com

Web site: <http://www.Mini-SystemsInc.com>