

POWER THIN FILM ATTENUATORS

MSAT-5, MSAT-6, MSAT-7 SERIES

The MSAT series Thin Film Power chip attenuators provide attenuation accuracy for frequencies through 20 GHz. They offer the low noise, low stray capacitance and tight tolerance of Thin Film in compact sizes that make them ideal for smaller microwave and stripline applications at operating powers to 2 Watts.

MECHANICAL DATA

| | |
|-------------------|--|
| SIZE | 0.148" x 0.122" (±0.003") x 0.025" (±0.003") |
| SUBSTRATE | 99.6% ALUMINA |
| BOND PADS | 25K Å MIN. GOLD; WIRE OR RIBBON BONDABLE, OR SOLDERABLE. |
| BACKSIDE SURFACE | GOLD |
| RESISTOR MATERIAL | TANTALUM NITRIDE |

ELECTRICAL DATA

| | |
|----------------------|---|
| ATTENUATION RANGE | -1dB THROUGH -24dB; (0.5dB STEPS AVAILABLE) |
| ATTENUATION ACCURACY | ±0.2dB |
| FREQUENCY RANGE | DC THROUGH 20 GHz |
| IMPEDANCE | 50Ω |
| VSWR | 1.5:1 MAX. |

COMMON SERIES DATA

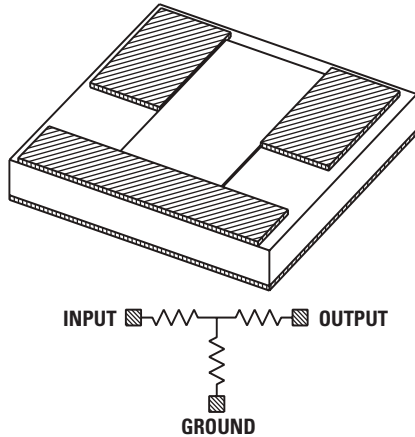
| | |
|-------------------------------|---|
| CURRENT NOISE | -20dB TYPICAL |
| POWER RATING | 2 WATTS, (70°C DERATED LINEARLY TO 150°C) $P = E^2/R$ |
| T.C.R. | ±150ppm/°C |
| HIGH TEMP EXPOSURE | 150°C, 100 HRS., ±0.25% MAX. ΔR/R: ±0.03% MSI TYPICAL |
| THERMAL SHOCK | MIL-STD 202, METHOD 107F, ±0.25% MAX. ΔR/R: ±0.1% MSI TYPICAL |
| STABILITY | 1000 HRS., 70°C, 100% POWER, ±0.5% MAX. ΔR/R: ±0.1% MSI TYPICAL |
| OPERATING TEMP RANGE | -55°C TO +150°C |
| STRAY DISTRIBUTED CAPACITANCE | ALUMINA 0.06pF |

PART NUMBER DESIGNATION

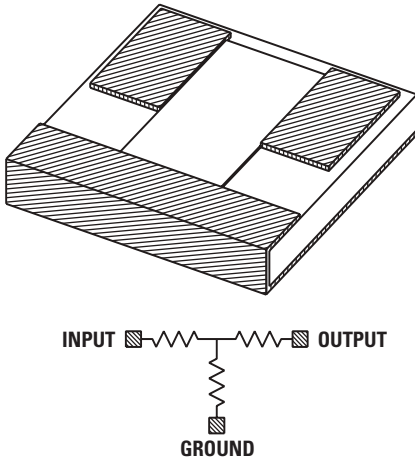
| | | | | |
|--------|---|----|---|----|
| MSAT | — | XG | — | dB |
| SERIES | | 5 | | |
| | | 6 | | |
| | | 7 | | |

EXAMPLE: MSAT 7G-03dB (MSAT 7 Series: -3dB)

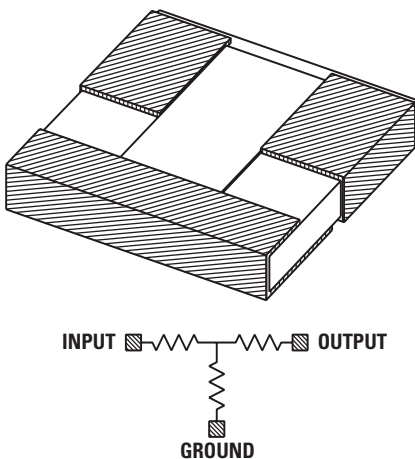
MSAT-5
TOP CONTACT W/ GOLD BACK



MSAT-6
TOP CONTACT W/ WRAPAROUND GROUND



MSAT-7
FULLY SURFACE MOUNTABLE

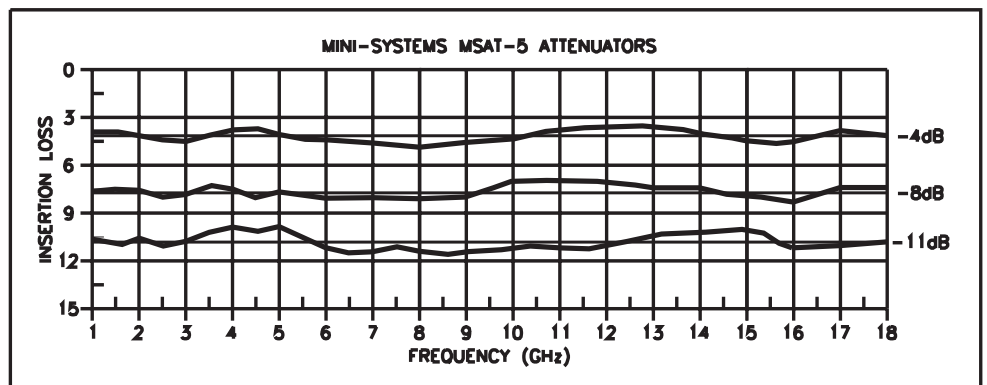


MINI-SYSTEMS, INC.

THIN FILM DIVISION

20 DAVID ROAD, N. ATTLEBORO, MA 02780
508-695-0203 FAX: 508-695-6076

DCN TF 124-D-0306



CHIP
ATTENUATORS