

Digital Step Attenuators offer Precision and Linearity



DAT-31-SP+
Mini-Circuits
ISO 9001 ISO 14001 AS 9100

Mini-Circuits new series of digital step attenuators (DAT family) manufactured using Super RF CMOS technology, has an unprecedented combination of accuracy, linearity, programmability, ESD tolerance, and wide bandwidth in a small 4×4×0.9 mm surface mount package. This attenuator family includes models requiring only a single positive or positive-negative supply voltage. The supply voltage choice depends on switching speed and ultra-low noise requirements.

All Super RF CMOS Attenuators are configured as a chain of fixed attenuators with bypass switches and an internal driver for control of the switches (Fig. 1). While the Super RF CMOS Attenuator is basically a surface mount component, Mini-Circuits is also introducing a series of connectorized Super RF CMOS Attenuator models (ZX case style) for ease of connection and use in the lab, for prototyping, and in systems.

In Super RF CMOS attenuators the driver is integrated on the same die, reducing the package size, cost and complexity.

The Mini-Circuits DAT family of attenuators is available in frequency ranges from DC to 4 GHz, with attenuation of up to 31.5dB and in 50 and 75 Ohm models. All the DAT family attenuators require a 5 bit control signal.

A most important parameter in the DAT family step attenuators is accuracy. The DAT family attenuators have an accuracy of 0.05dB typical between DC and 2.4 GHz at a temperature of 25°C.

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