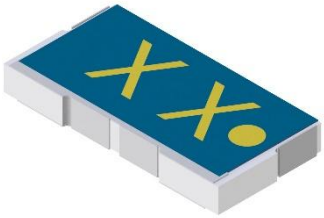
Surface Mount Attenuator
10 Watts



The D10AAXXZ4 is high performance Alumina (Al_2O_3) surface mount attenuator intended as a lower cost alternative to Aluminum Nitride (AlN) and Beryllium Oxide (BeO). The attenuator is well suited to all cellular frequency bands such as; AMPS, GSM, DCS, PCS, PHS and UMTS. The high power handling makes the part ideal for inter-stage matching, directional couplers, and for use in isolators.

Features:

- **RoHS Compliant**
- **10 Watts**
- **Low Cost**
- **DC – 4.0GHz**
- **Alumina Ceramic**
- **Non-Nichrome Resistive Element**
- **Low VSWR**
- **100% Tested**

General Specifications

Resistive Element	Thick film
Substrate	Alumina Ceramic
Terminal Finish	Matte Tin over Sulfamate Nickel
Operating Temperature	-55 to +150°C (see de rating chart)

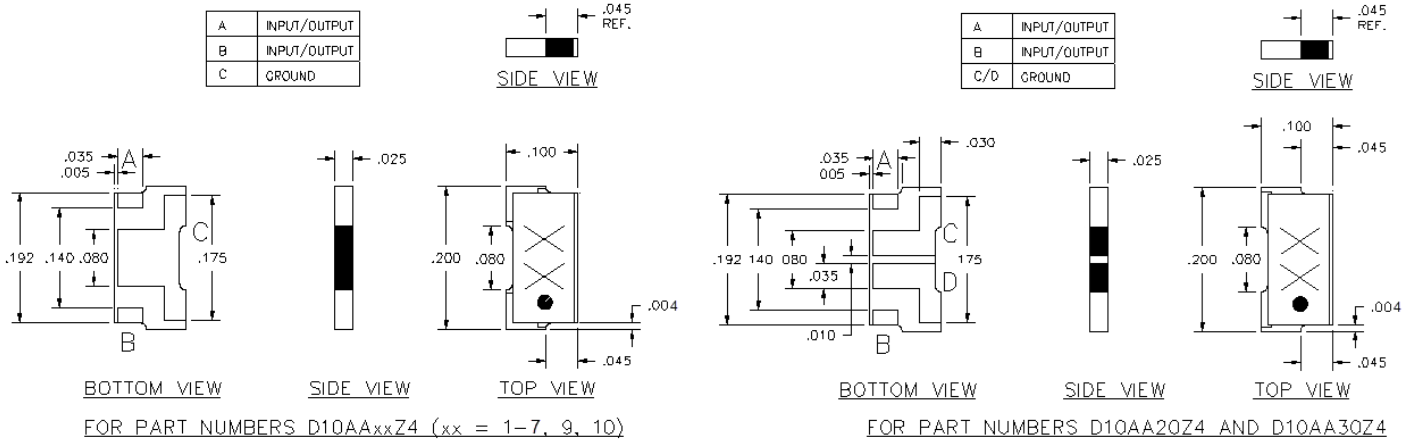
Tolerance is ±0.010”, unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. **All dimensions in inches.**

Electrical Specifications

Attenuation Value:	1 – 7, 9, 10, 20 & 30dB
Power:	10 Watts
Frequency Range:	DC – 4.0GHz
VSWR	See Specification Table

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. **Specifications subject to change.**

Outline Drawing



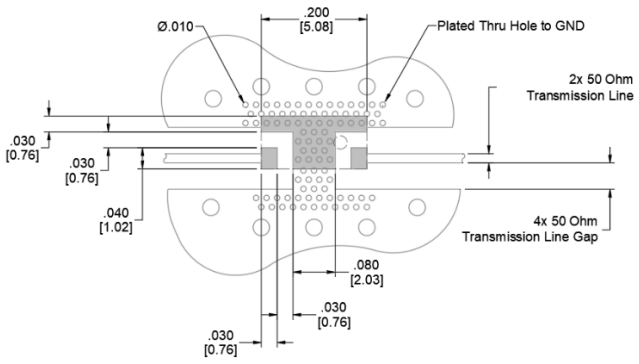
THE D10AAxxZ4 SERIES OF ATTENUATORS ARE SYMMETRICAL
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
XX ON TOP PART IS PLACEHOLDER FOR ATTENUATION VALUE

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Typical Specifications

	Frequency Range DC – 3.0Ghz		Frequency Range 3.0 – 4.0Ghz	
PART NUMBER	**ATTENUATION (dB)**	**RL (dB)**	**ATTENUATION (dB)**	**RL (dB)**
D10AA1Z4	1 ±0.30	19	1 ±0.30	15
D10AA2Z4	2 ±0.30	19	2 ±0.30	15
D10AA3Z4	3 ±0.30	19	3 ±0.30	15
D10AA4Z4	4 ±0.30	19	4 ±0.40	14
D10AA5Z4	5 ±0.30	19	5.1 ±0.35	14.75
D10AA6Z4	6 ±0.30	19	6 ±0.30	15
D10AA7Z4	7 ±0.30	19	7 ±0.30	12
D10AA9Z4	9 ±0.25	19	9 ±0.30	12
D10AA10Z4	10 ±0.25	19	10 ±0.35	14.75
D10AA20Z4	20 ±0.50	19	19.5 ±0.50	14.75
D10AA30Z4	30 ±1.50	19	30.25 ±1.5	15

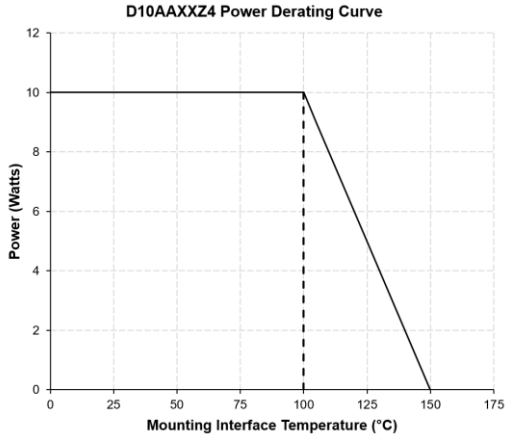
Mounting Footprint:



1. The component has been designed and qualified with this mounting footprint with a 0.020" test board with Dk value of approximately 3.5 comprised of commonly used board substrate materials such as RO4350 and Isola I-tera MT40. Deviations from the recommended mounting footprint may reduce RF and power handling performance. It is the customer's responsibility to qualify the component in the end application.
2. 1x 50 ohm transmission line is for reference only and can be oriented in any direction. Customer to determine transmission line and gap dimensions to achieve 50 ohm impedance for end application.
3. To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part orientated as shown with part marking facing up.
4. PTH connecting pads to ground are representative.
5. Ground vias under part should be filled to prevent solder wicking.
6. Solder mask and solder stencil dimensions may vary due to different manufacturer capabilities and process variations. Layers may be modified to account for manufacturer capabilities.
7. Dimensions are in inches [millimeters].

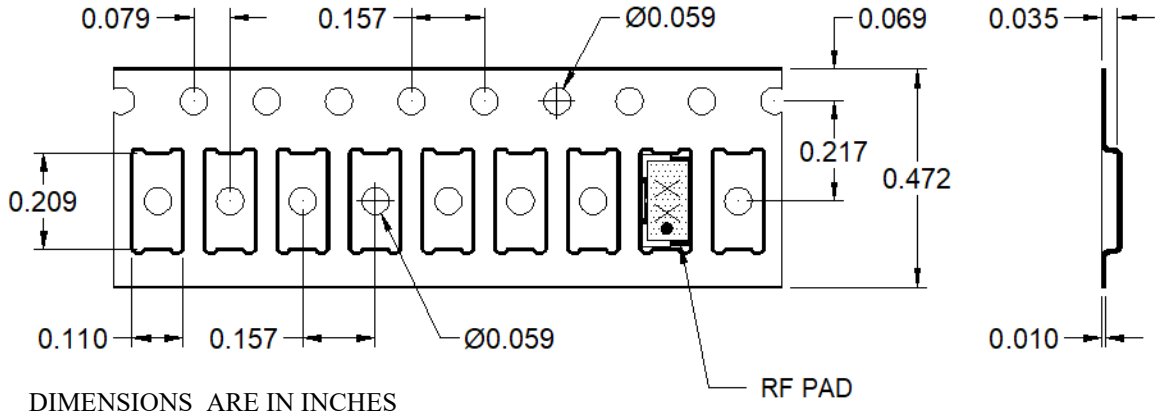
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Power Derating Specifications



Packaging and Ordering Information:

Parts are available in reels. Parts are oriented in tape and reel as shown below.



DIMENSIONS ARE IN INCHES

DESPOOLING DIRECTION

TAPE DETAIL & RF PAD ORIENTATION

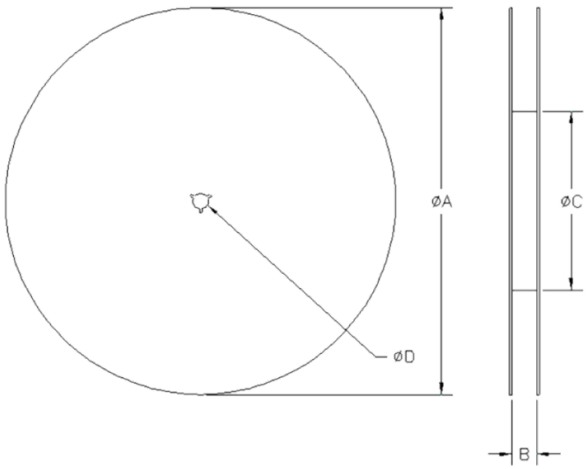


TABLE 1	REEL DIMENSIONS inches [mm]
∅A	7.0 [177.80]
B	.472 [12.00]
∅C	2.00 [50.80]
∅D	0.512 [13.00]

Contact us:
rf&s_support@ttm.com

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