









EWA65xxZZ

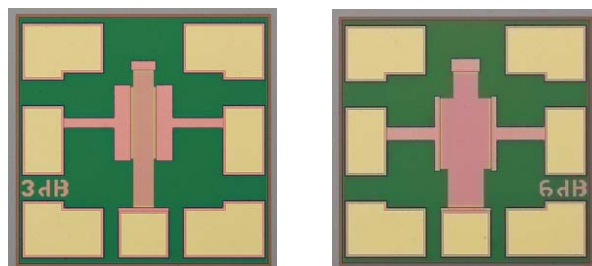
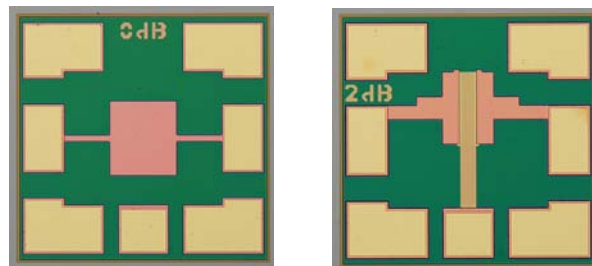
September 2009 – Rev 7

Production

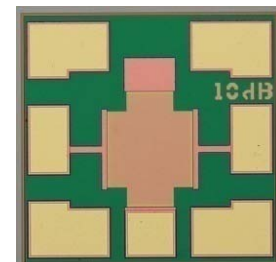
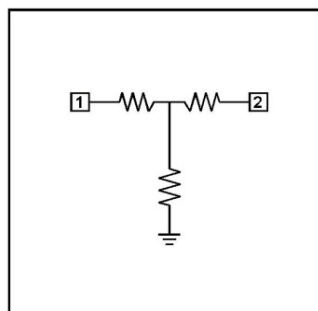
Features

-  Fixed-level 0, 2, 3, 6, and 10 dB
-  Ultra Broadband Response: 0 to 105 GHz
-  Excellent Return Loss: < -20 dB
-  Flat Attenuation Response
-  On-Chip Ground Via
-  Power Handling: 20 dBm
-  Small Die Size: 0.5 x 0.5 x 0.1mm
-  100% DC and RF tested

Device Photos



Block Diagram



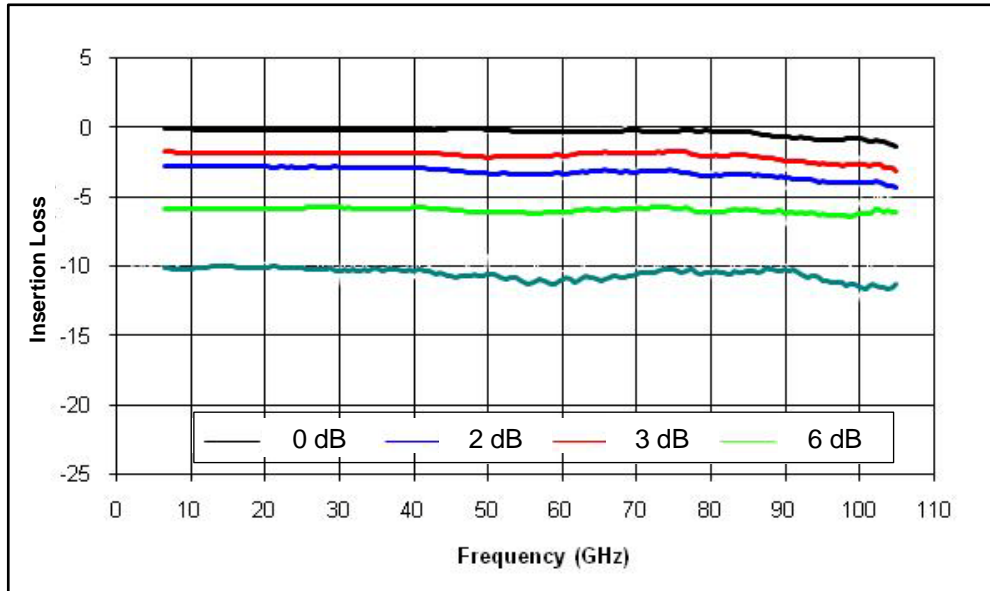
Description

The Endwave *EWA65xxZZ* is a fixed broadband GaAs attenuator MMIC with excellent return losses and very flat attenuation. It has on-die grounding for ease of integration with other die. This device can be used for a wide range of applications from defense electronics to commercial communication systems. All die are 100% DC and RF tested and visually inspected to Mil-Std-883 Method 2010.

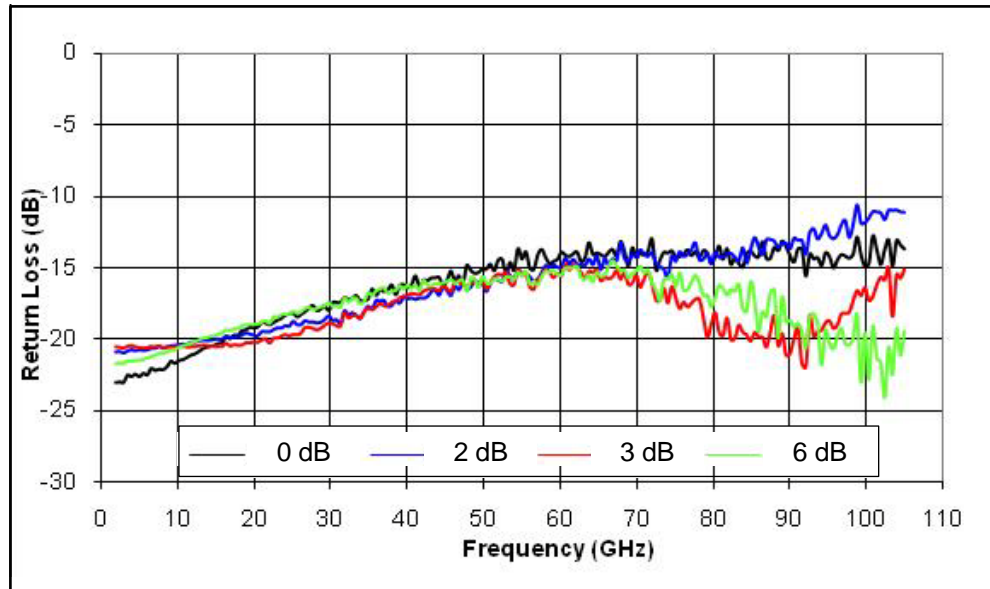
Electrical Characteristics (Temperature = +25 °C)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0		105	GHz
Insertion Loss @ 30 GHz				
EWA6500ZZ (0 dB attenuation)		0.2		dB
EWA6502ZZ (2 dB attenuation)		1.8		dB
EWA6503ZZ (3 dB attenuation)		2.9		dB
EWA6506ZZ (6 dB attenuation)		5.9		dB
EWA6510ZZ (10 dB attenuation)		10.2		dB
Input Return Loss		15		dB
Output Return Loss		15		dB
Power Handling		20		dBm

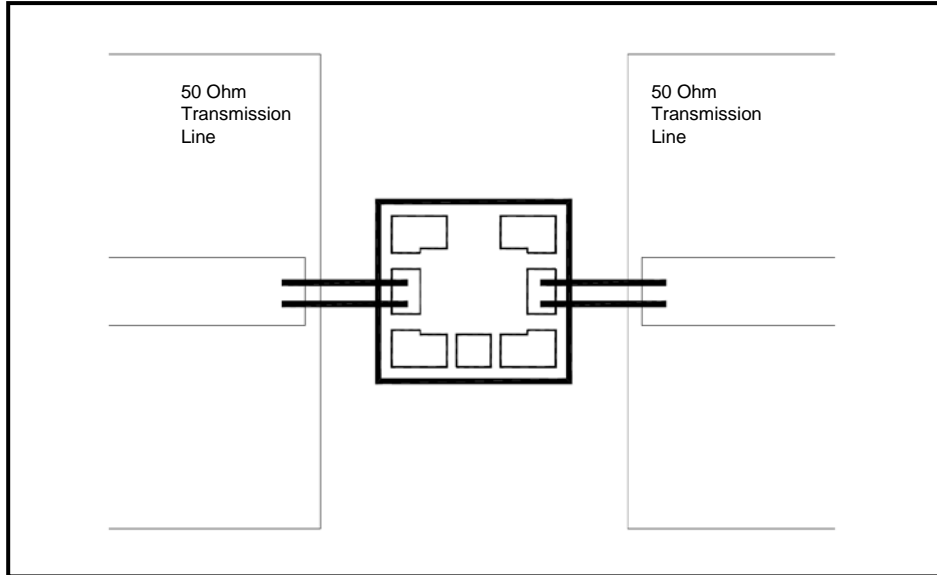
Insertion Loss vs. Frequency



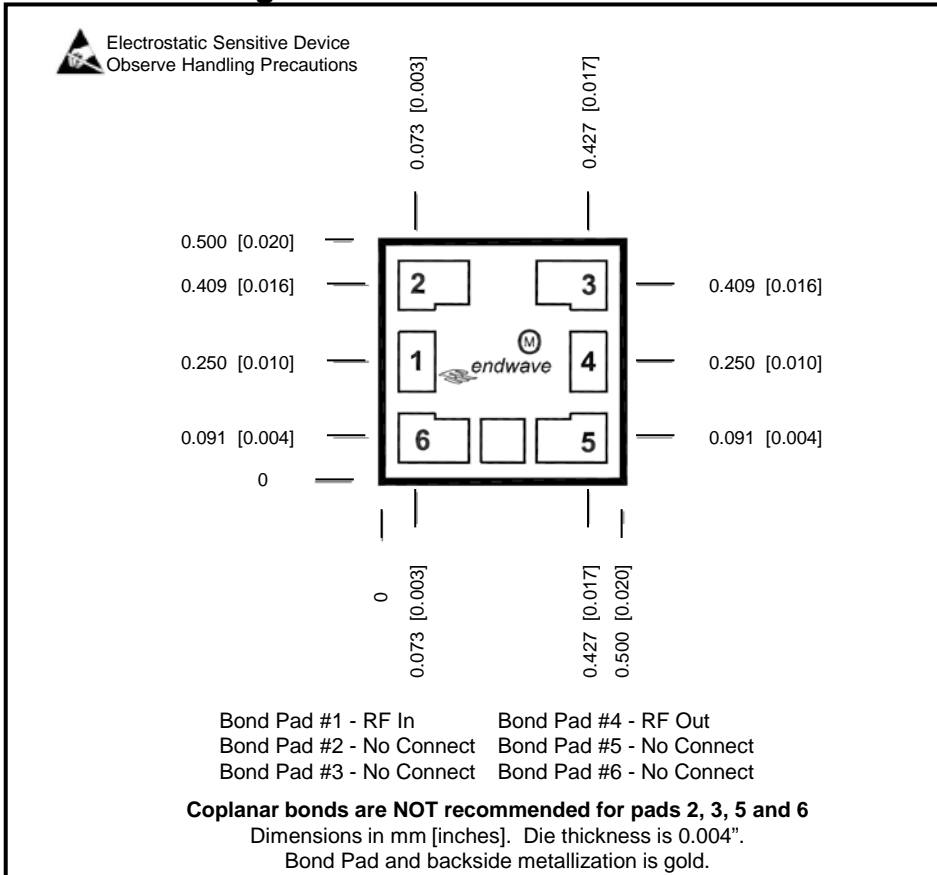
Return Loss vs. Frequency



Assembly Drawing



Outline Drawing



Attenuators – Bare Die

Absolute Maximum Rating

RF Input Power (CW)	+28 dBm
Storage Temperature	-65 to +150°C
Operating Temperature	-40 to +85°C

Support Documentation

Support documentation including Assembly Notes, Application Notes and Qualification Procedures can be found on our website at www.endwave.com.

Ordering Information

RoHS compliant bare die in waffle or gel packs

Part Number	Description
<i>EWA6500ZZ</i>	0 dB Attenuator
<i>EWA6502ZZ</i>	2 dB Attenuator
<i>EWA6503ZZ</i>	3 dB Attenuator
<i>EWA6506ZZ</i>	6 dB Attenuator
<i>EWA6510ZZ</i>	10 dB Attenuator