









EWE8601ZZ

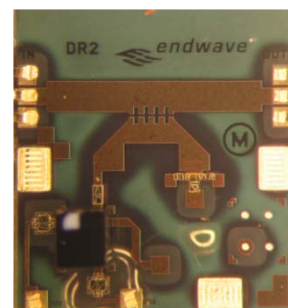
November 2009 – Rev. 2

Production

Features

-  Frequency: 71 - 86 GHz
-  Operating Power Range: +5 to + 20dBm
-  Insertion Loss: 0.5 dB, typical
-  In-Band Return Loss: <15 dB
-  100% RF and DC tested
-  RoHS Compliant
-  Die size: 1.81 x 2.11 x 0.227mm, height includes flipped diodes
-  MLMS™ Technology Provides Excellent Performance and Repeatability

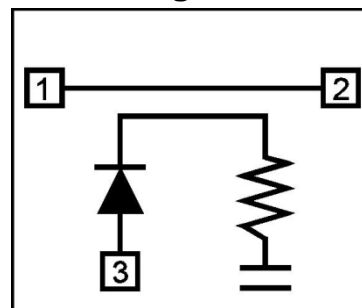
Device Photo



Description

The Endwave *EWE8601ZZ* is a high performance MLMS™ power detector with linear voltage output over an input operating power range from +5 to +20 dBm, low insertion loss of 0.5 dB typical, broadband performance from 71 to 86 GHz, return loss at better than 15 dB and excellent repeatability. This device can be used for a wide range of applications from defense electronics to commercial communication systems and is ideally used for E-band applications. All die are 100% DC and RF tested and visually inspected to Mil-Std-883 Method 2010.

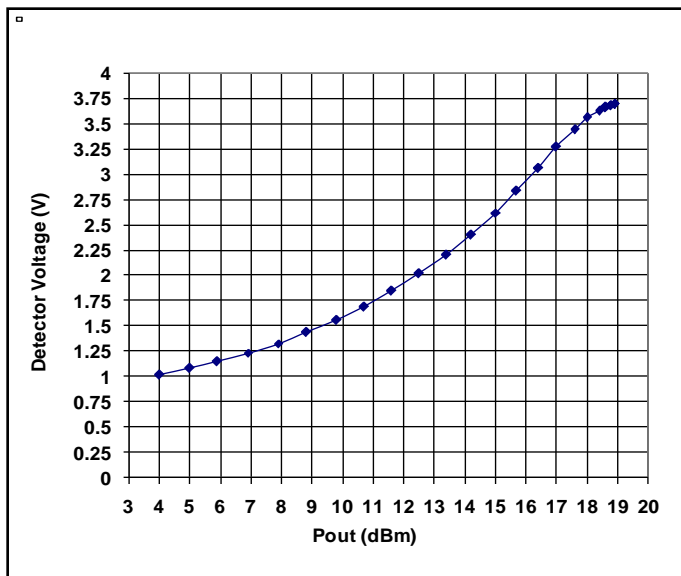
Block Diagram



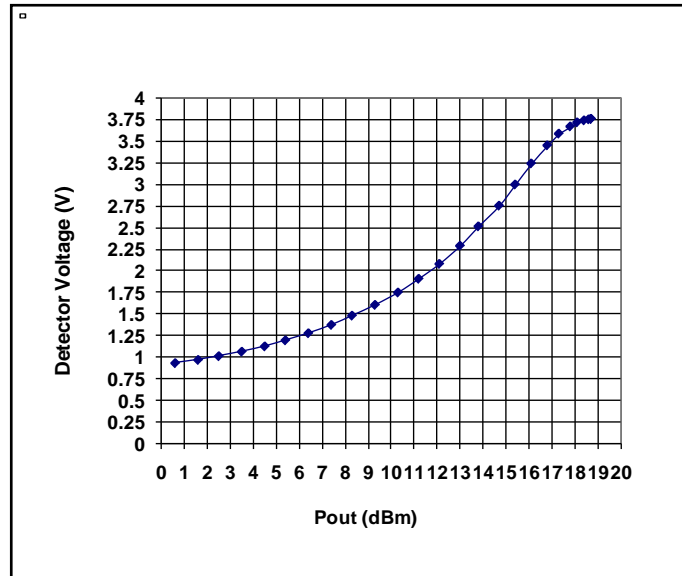
Electrical Characteristics (Temperature = +25 °C)

Parameter	Min.	Typ.	Max.	Units
Frequency	71		86	GHz
Input Operating Power Range	+5		+20	dB
Insertion Loss		0.5		dB
Input Return Loss		15		dB
Output Return Loss		15		dB

Detector Voltage vs. Pout @ 72.8 GHz

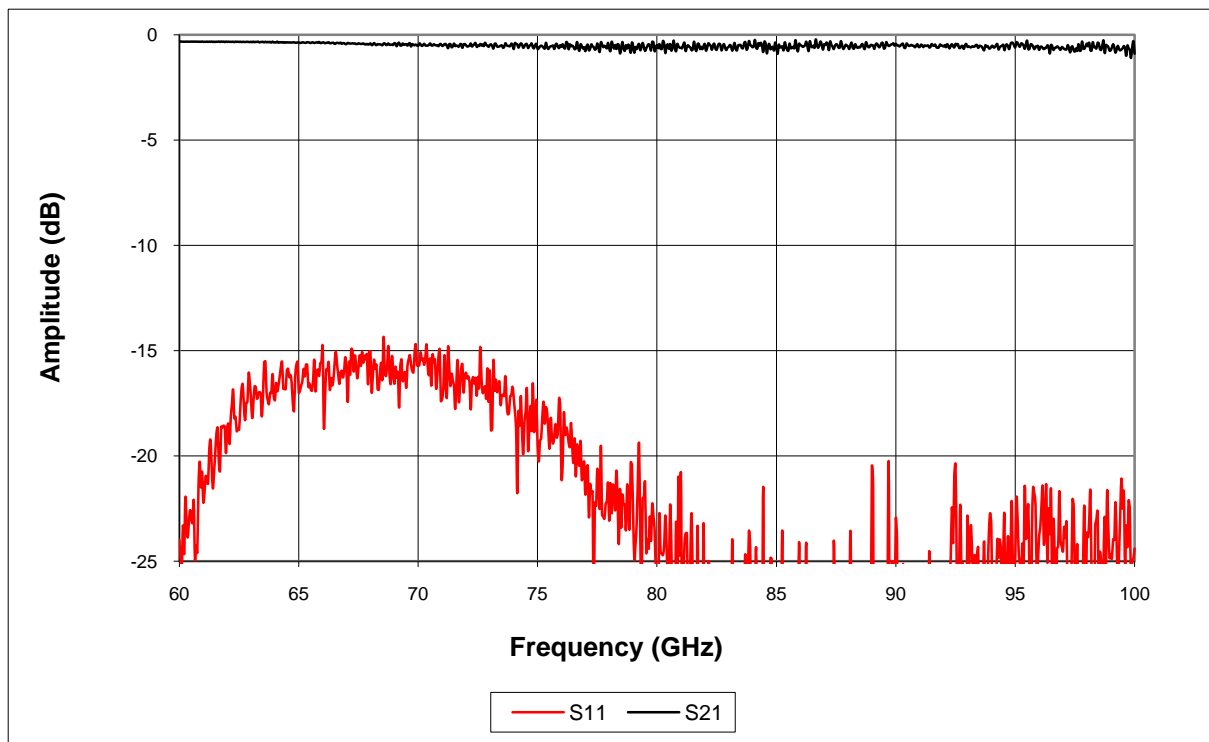


Detector Voltage vs. Pout @ 82.4 GHz

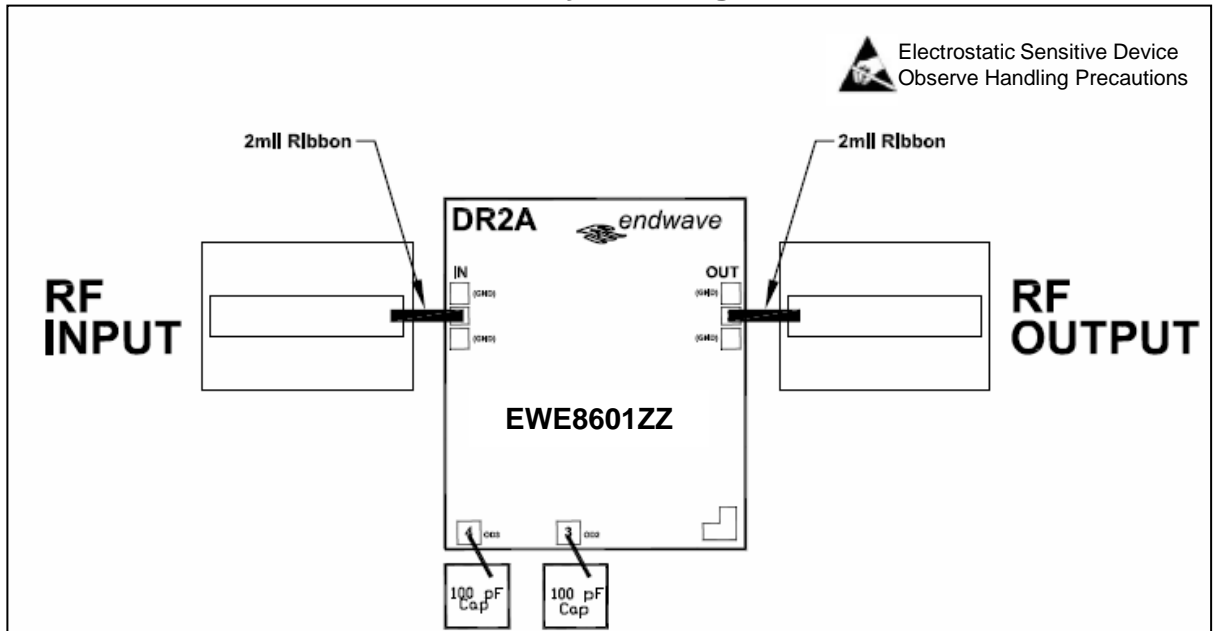


Note: The measured data is from the detector circuit (detector + op amp circuit).

Insertion loss and Return loss

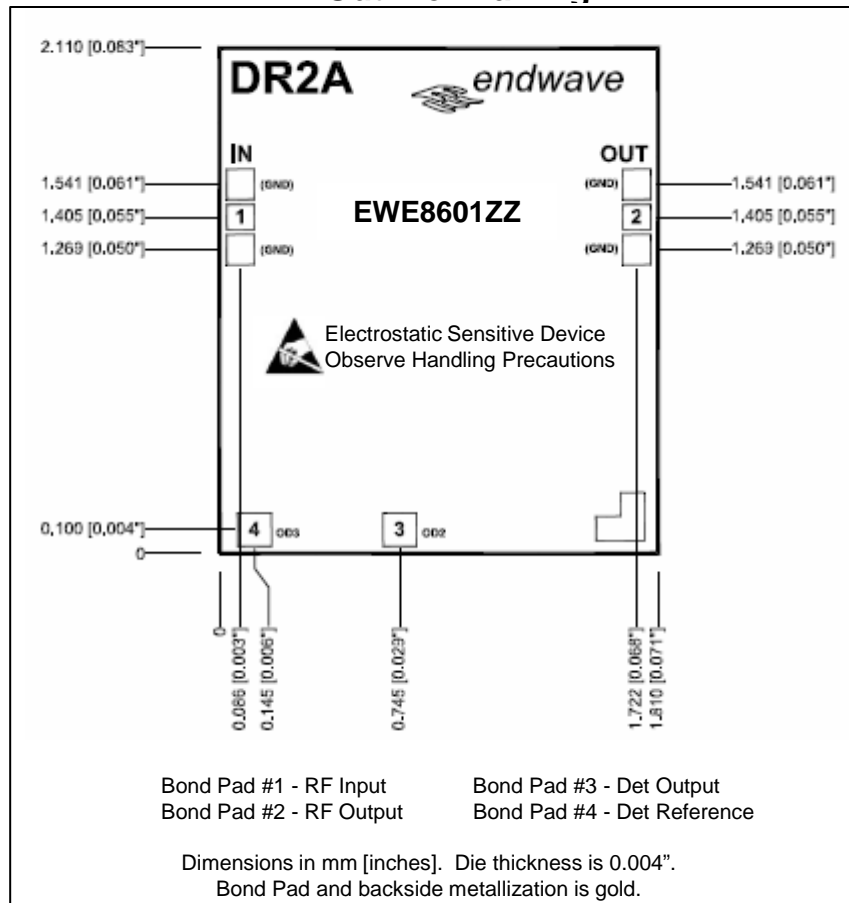


Assembly Drawing



Note: Optimum performance can be achieved by coplanar bonding.

Outline Drawing

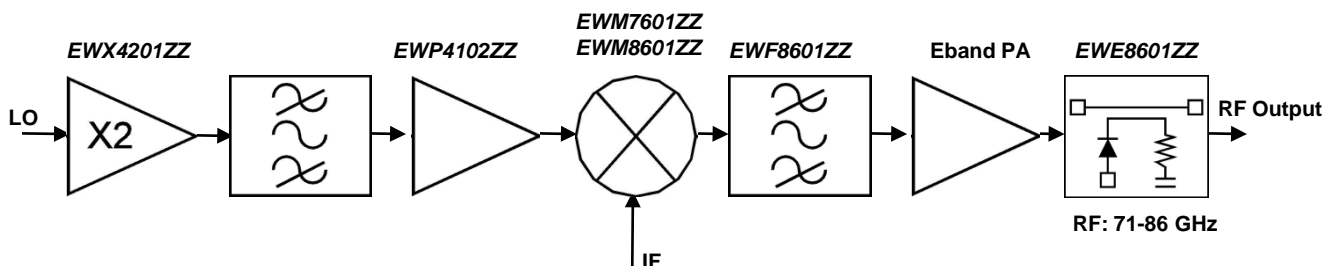


MLMS™ Power Detector - Stacked Die

Absolute Maximum Ratings

RF Input Power	25 dBm
Storage Temperature	-65° to +150°C
Operating Temperature	-40° to +85°C

Typical Application



Support Documentation

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

Ordering Information

Part Number	Description
EWE8601ZZ	RoHS compliant bare die in wafer or gel packs