







## EWE8601ZZ

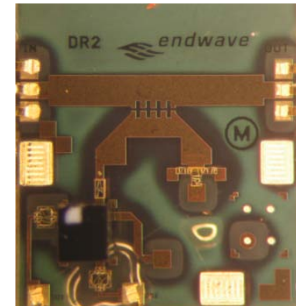
November 2009 – Rev. 1

*Production*

### Features

-  Frequency: 71 - 86 GHz
-  Operating Range: 15 dB, typical
-  Insertion Loss: 0.5 dB, typical
-  In-Band Return Loss: <15 dB
-  Die size: 1.81 x 2.11 x 0.227 mm, height includes flipped diodes
-  MLMS™ Technology Provides Excellent Performance and Repeatability

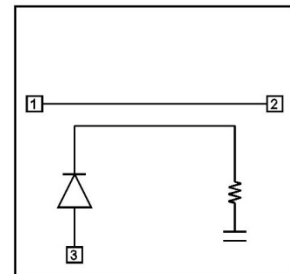
### Device Photo



### Description

The Endwave *EWE8601ZZ* is a high performance MLMS™ power detector with linear voltage output over a 15 dB operating range, 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. The chip may be used for a wide range of applications from defense electronics to commercial communication systems and is ideally used for E-band applications. All chips are visually inspected using Mil-Std-883 Method 2010.

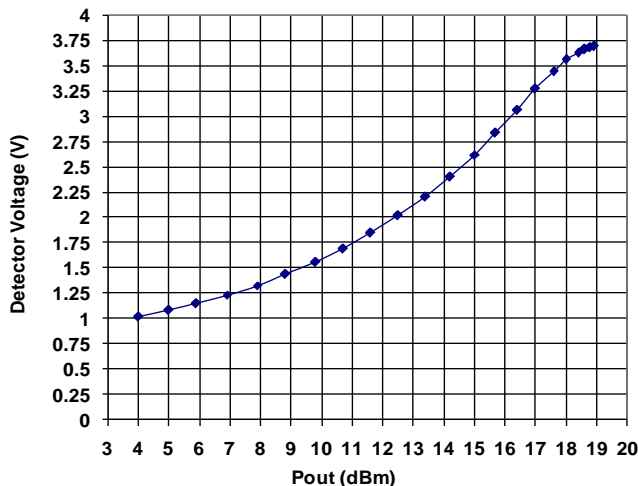
### Block Diagram



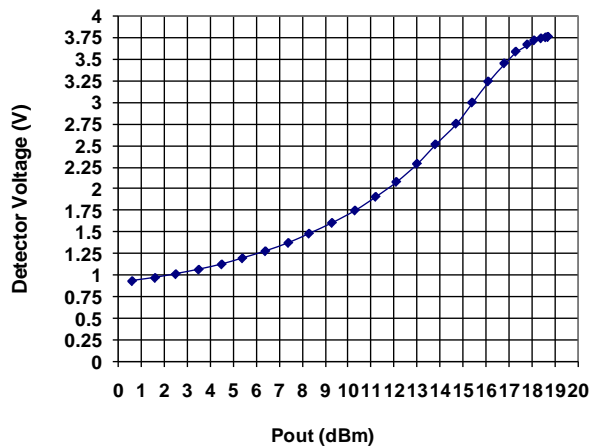
### Electrical Characteristics (Temperature = +25 °C)

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

Detector Voltage vs. Pout @ 72.8 GHz

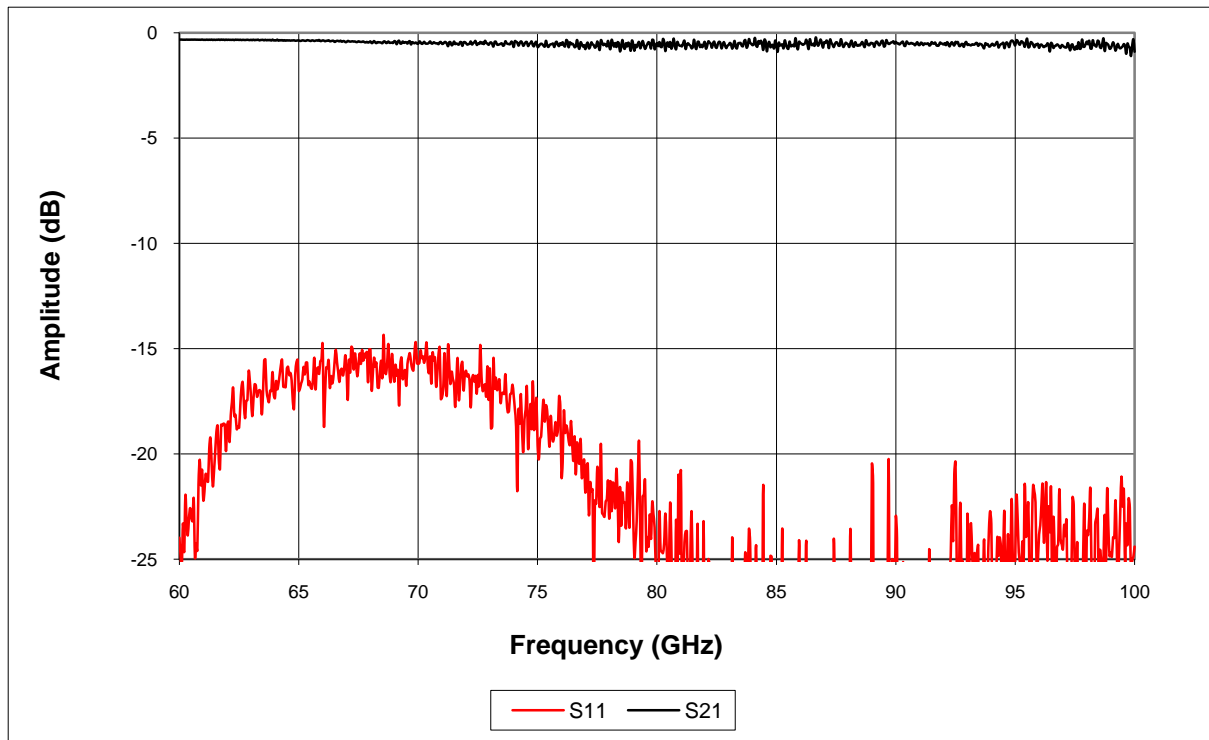


Detector Voltage vs. Pout @ 82.4 GHz

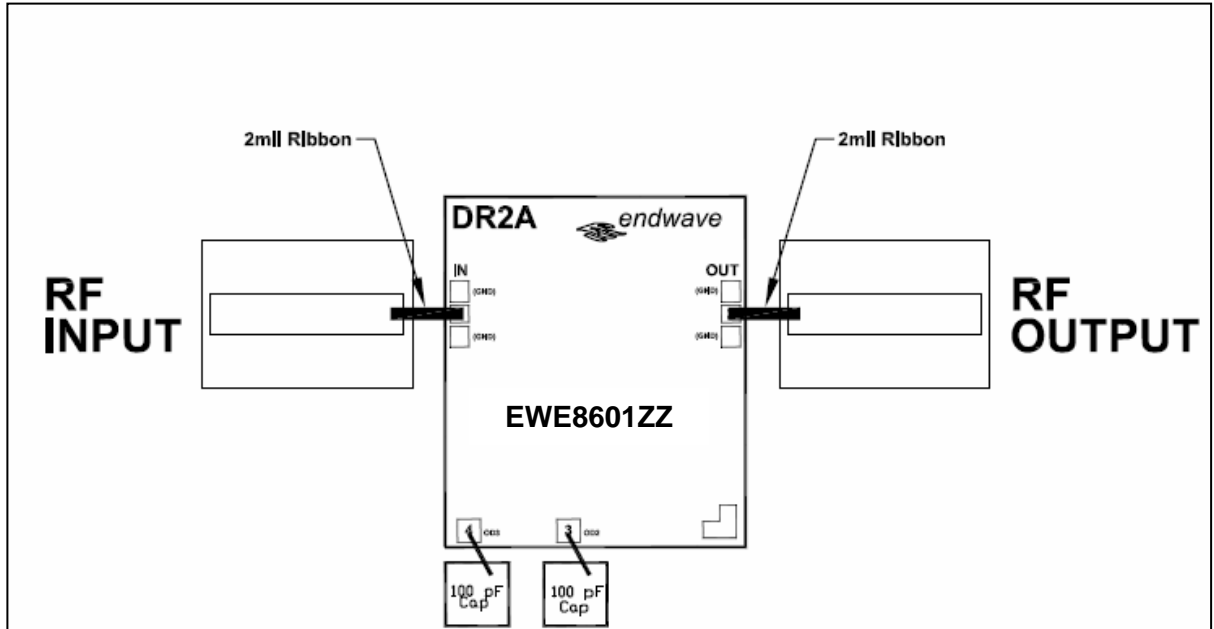


**Note:** The measured data is from the detector circuit (detector + op amp circuit).

Insertion loss and Return loss

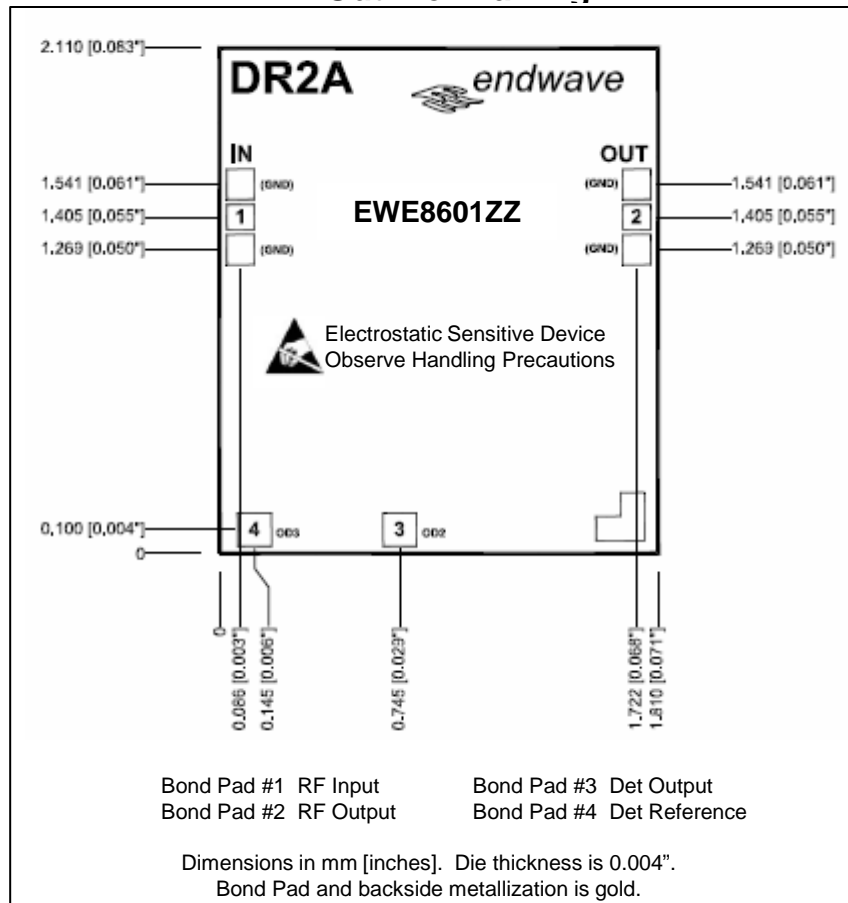


Assembly Drawing



Note: Optimum performance can be achieved by coplanar bonding.

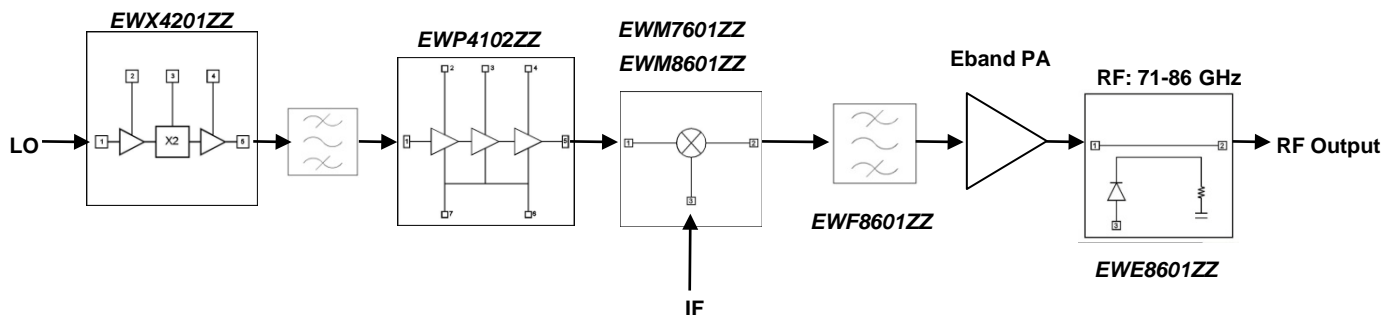
Outline Drawing



**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](http://www.endwave.com).

**Ordering Information**

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

MLMS™ Detector- Chip