






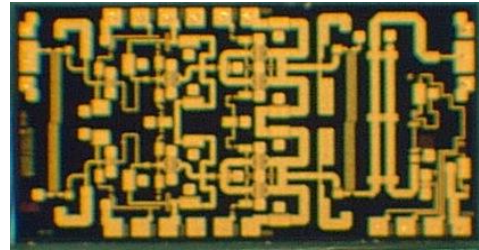


Features

-  Broadband Performance: 21 to 26.6 GHz
-  Gain: 26 dB typical
-  Output IP3: +31 dBm typical
-  Output P1dB: +22 dBm typical
-  Psat: +25 dBm typical
-  100% DC and RF tested
-  Die size: 3.4 x 1.78 x 0.1 mm

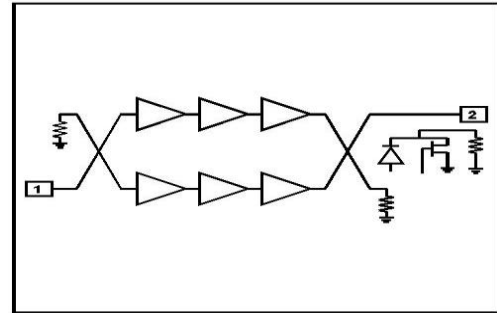
Device Photo



Description

The Endwave *EWP2702ZZ* is a 0.15um GaAs pHEMT broadband medium power amplifier MMIC. The high linearity medium power amplifier with +31 dBm typical output IP3 and +22 dBm output P1dB is optimal as a PA itself or as a driver to higher power applications. The chip may be used for a wide range of applications from defense electronics to commercial communication systems. All parts are 100% DC and RF tested and visually inspected using Mil-Std-883 Method 2010.

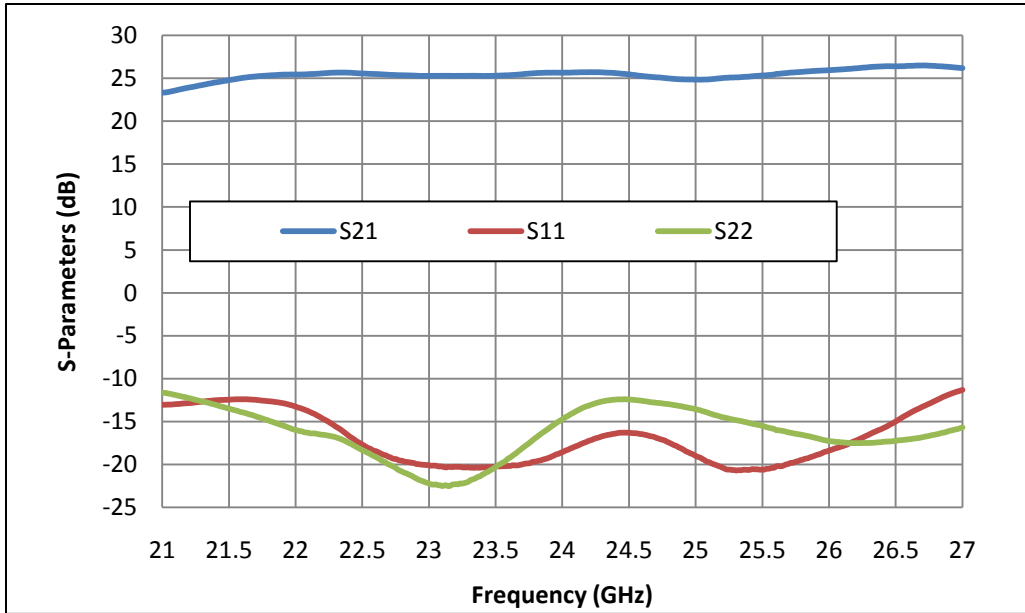
Block Diagram



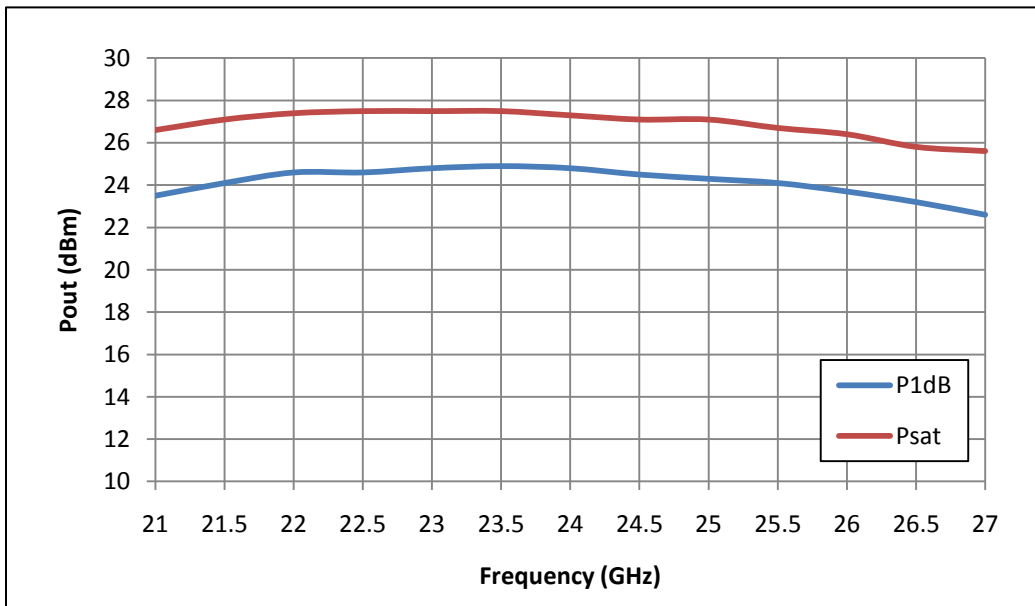
Electrical Characteristics (Temperature = +25 °C)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	21		26.6	GHz
Gain		26		dB
Input Return Loss		12		dB
Output Return Loss		12		dB
Output IP3		31		dBm
Output P1dB		22		dBm
Saturated Output Power		25		dBm
Drain Bias Voltages (Vd1,2,3)	3.9	4.2	4.5	V
Drain Bias Currents (Id1+Id2+Id3)		530		mA
Gate Bias Voltages (Vg1)		-0.67		V

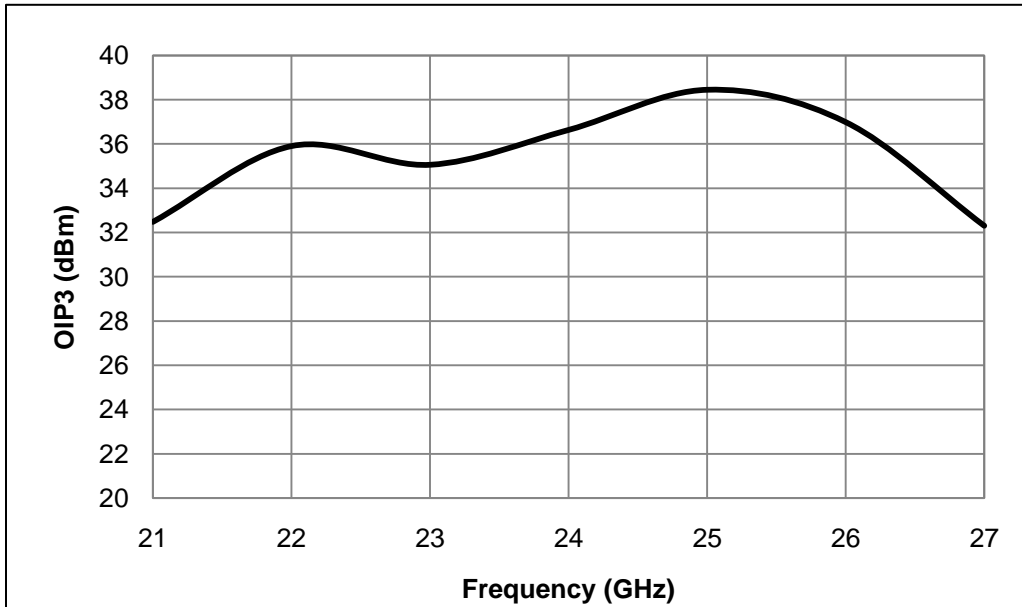
Gain and Return Loss vs. Frequency
(Vd = +4.2V and Id = 490 mA)



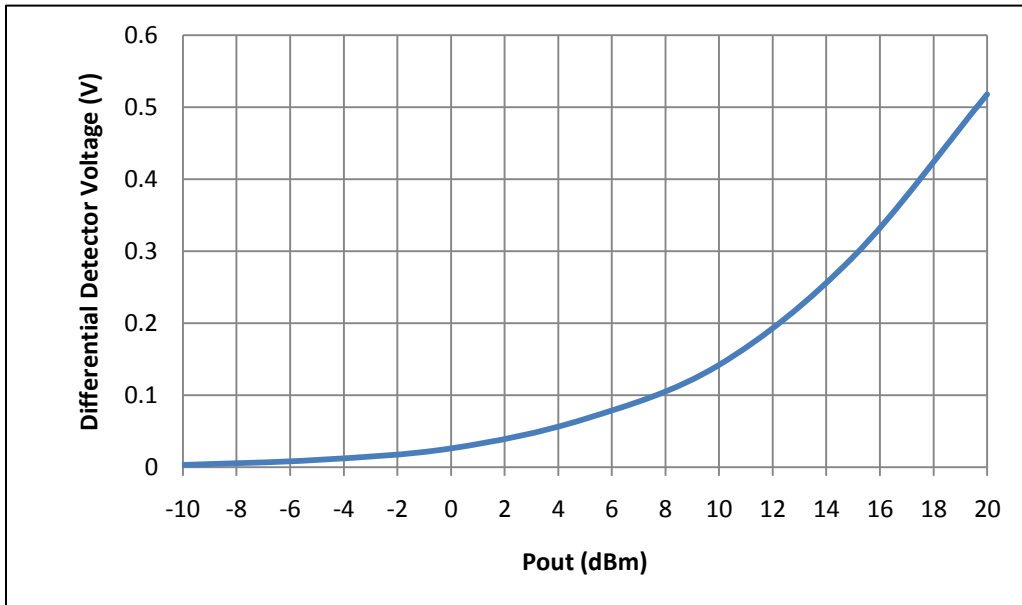
P1dB and Psat vs. Frequency
(Vd = +4.2V and Id = 490 mA)



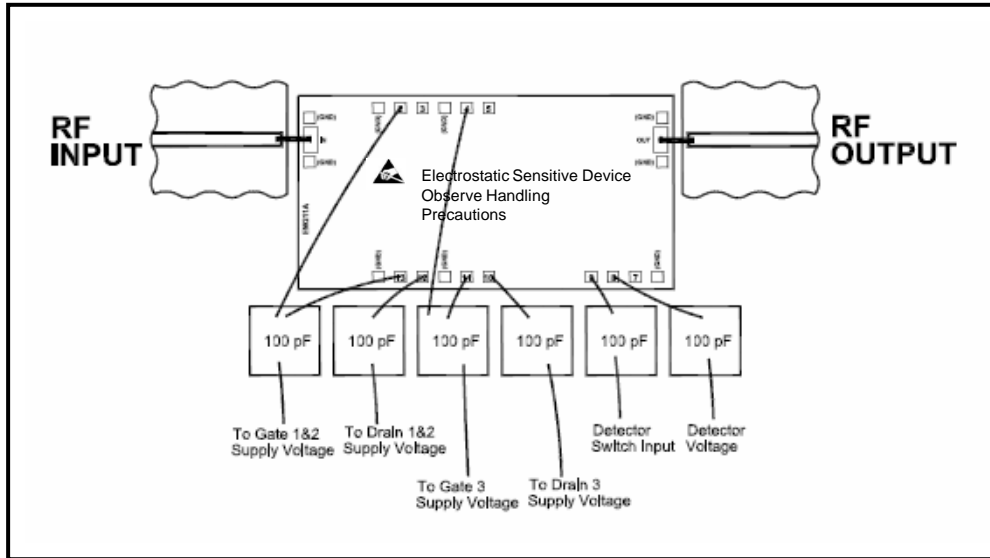
OIP3 @ 15 dBm/tone Pout vs. Frequency
(Vd = +4.2 V and Id = 490 mA)



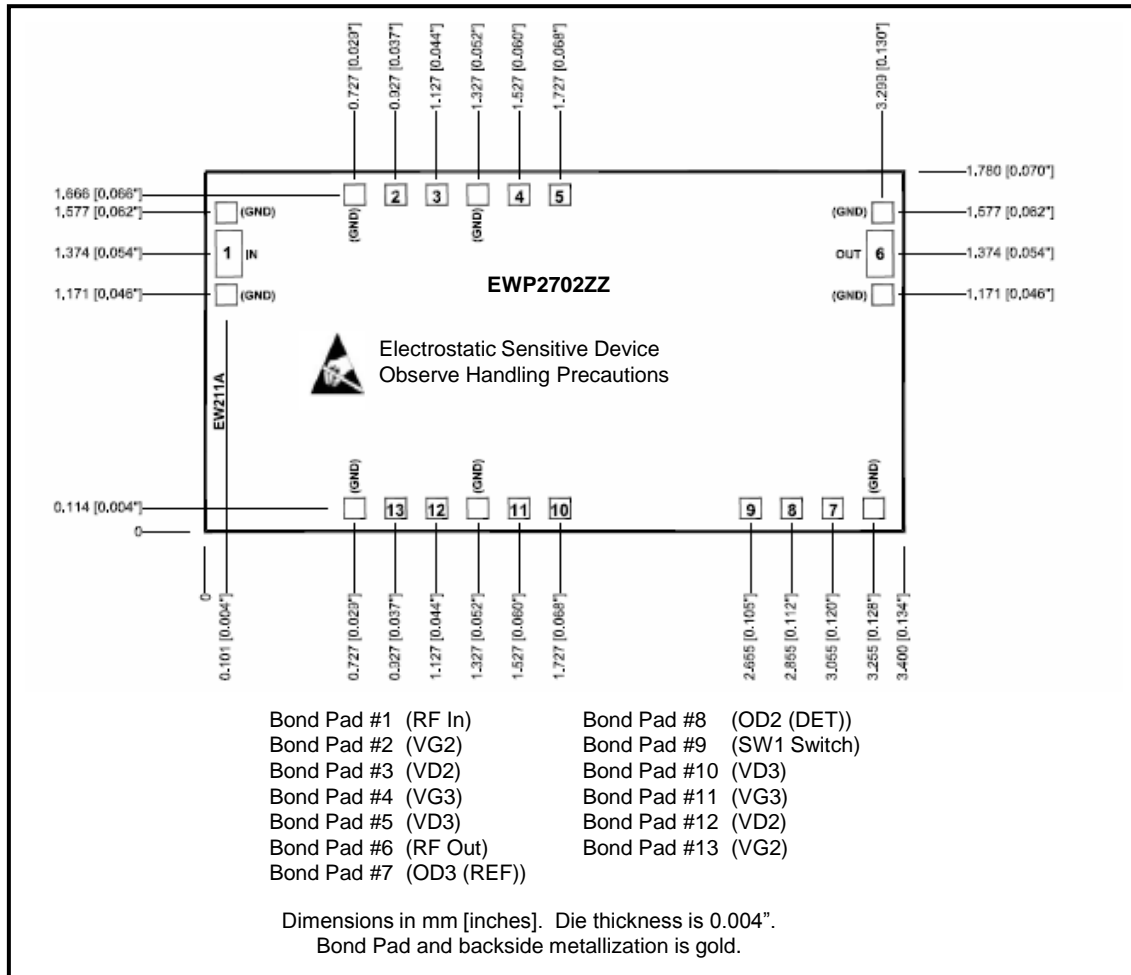
Differential Detector Voltage @ 24 GHz vs. Pout
(Vd = +4.2 V and Id = 490 mA)



Assembly Drawing



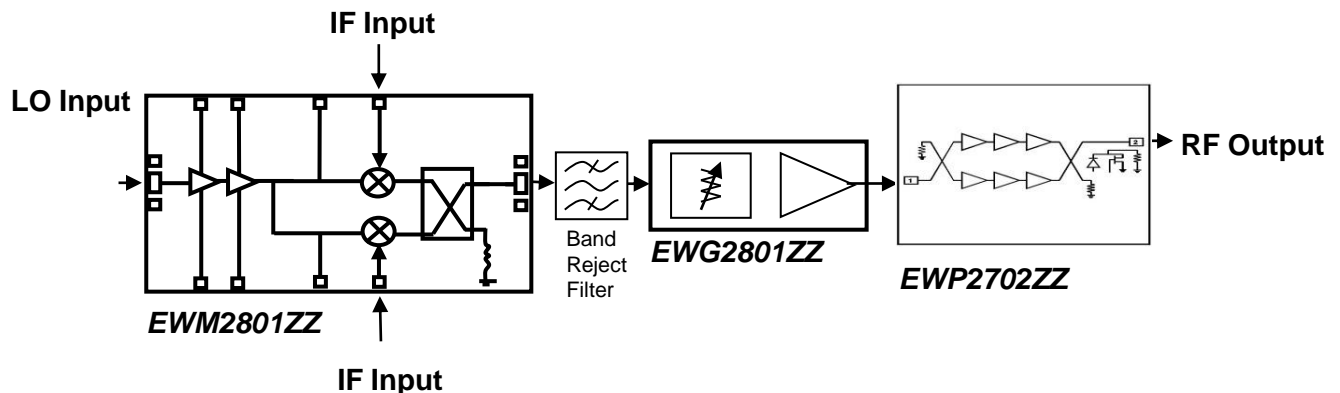
Outline Drawing



Absolute Maximum Ratings

RF Input Power (max gain)	+10 dBm
Supply Voltage (Vd1, 2, 3)	+5.5 V
Supply Current (Id1+ Id2+ Id3)	800 mA
Supply Voltage (Vg1)	-2.5 to 0V
Storage Temperature	-65 to +150 C
Operating Temperature	-40 to +85 C
Channel Temperature	175 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
EWP2702ZZ

Description
RoHs Compliant bare die in wafer or gel packs