

# DATA SHEET

## 500-W Solid State Amplifier 1250-1500 MHz

DESY-MHFe, Vers. 1.0

July 2005

Type: RF12501500-500  
 S/N: 05 2446  
 Manufacturer: R.F.P.A. S.A., F-33370 Artigues Pres Bordeaux  
 Distributor: Telemeter Electronic GmbH

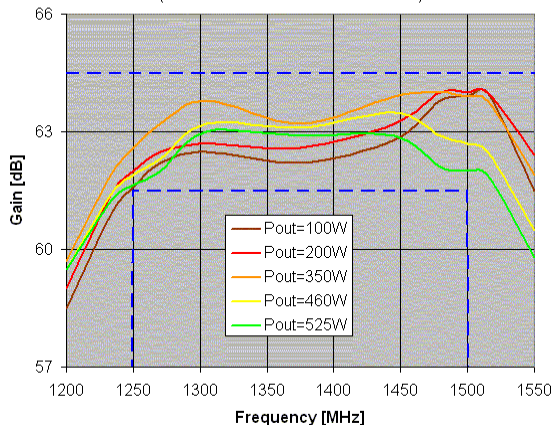


- Class AB linear broadband power amplifier.
- LD MOS final stage.
- Forced air cooled.
- Size: 10 U, 19''
- Weight: about 40 kg

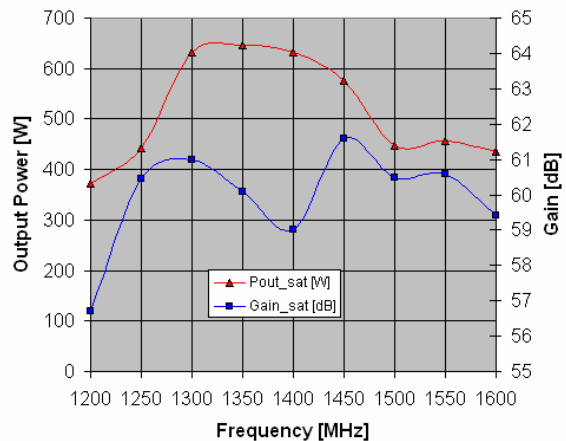
### Technical Data:

	unit	min.	nom.	max.	remarks
Output power (saturated)	W	440			@ 1250MHz
Output power (1 dB compr.)	W	360			@ 1500MHz
Gain	dB	62		64	
Input power	dBm		-6	0	+10 without damage
Impedance	$\Omega$		50		
Input VSWR	-			2:1	
Output mismatch	-			3:1	Isolator required
Frequency range	MHz	1250		1500	$\pm 1$ dB
Group delay	ns	18		20	
Harmonics	dBc			-20	
Intermodulation (IP3 above 57 dBm)	dB	20			f1: 1333.5 MHz f2: 1416.5 MHz
Intermodulation (IP3 above 57 dBm)	dB	30			f1: 1365 MHz f2: 1385 MHz
Temperature range	$^{\circ}\text{C}$	10	25	45	

500-W Solid State Amplifier  
 Gain vs Frequency  
 RF12501500-500, S/N 05 2446  
 (Power levels measured at 1375 MHz)



500-W Solid State Amplifier  
 Saturated Output Power  
 RF12501500-500, S/N 05 2446



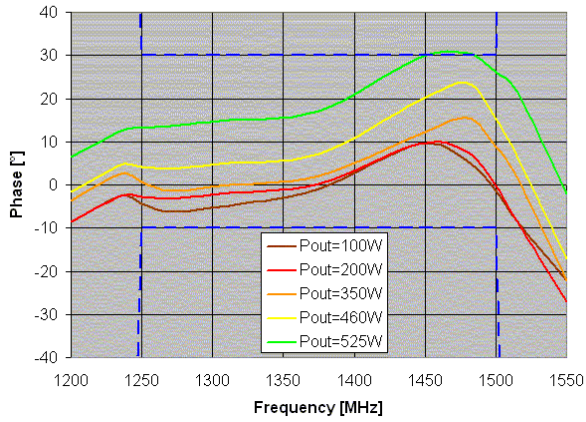
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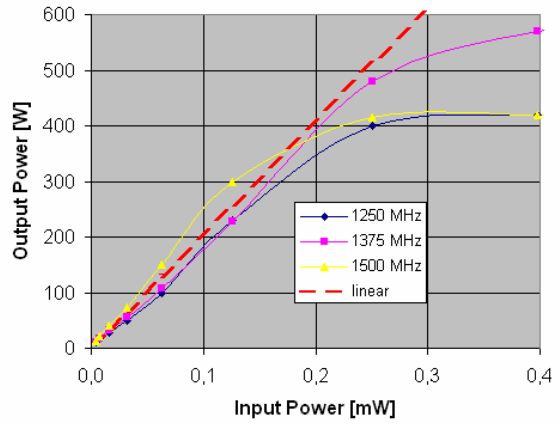
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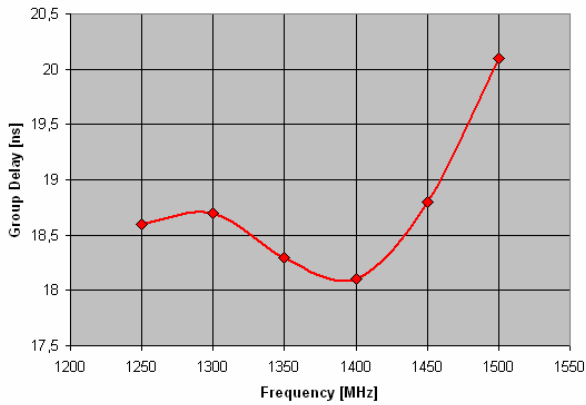
500-W Solid State Amplifier  
Phase vs Frequency  
RF12501500-500, S/N 05 2446  
(Power levels measured at 1375 MHz)



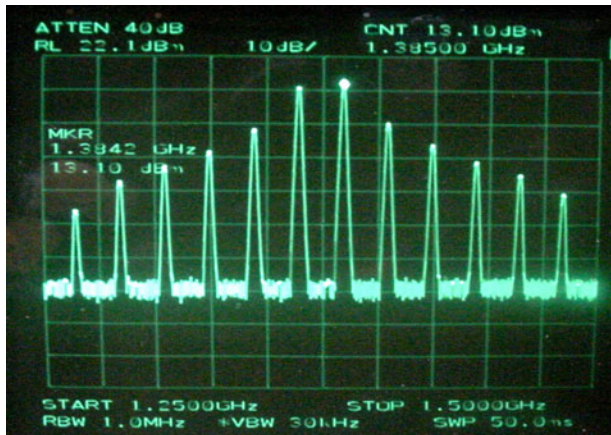
500-W Solid State Amplifier  
Output Power vs Input Power  
RF12501500-500, S/N 05 2446



500-W Solid State Amplifier  
Group Delay vs Frequency  
RF12501500-500, S/N 05 2446  
(measured at 250 W)



### Intermodulation Sidebands

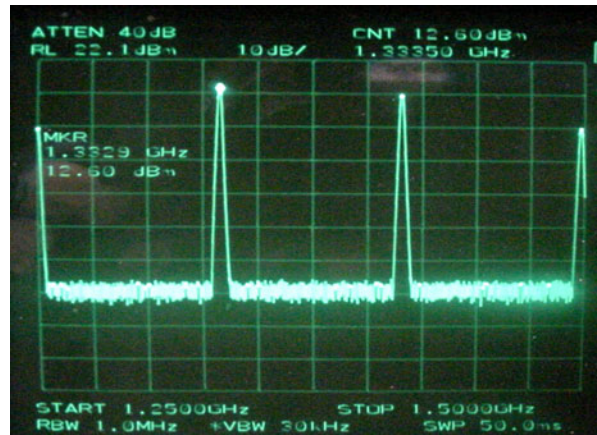


#### Input frequencies:

f<sub>1</sub>=1365 MHz, P = 210 W  
f<sub>2</sub>=1385 MHz, P = 270 W

#### IM products:

2f<sub>1</sub>-f<sub>2</sub>=1345 MHz, P = 10 W  
2f<sub>2</sub>-f<sub>1</sub>=1405 MHz, P = 22 W



#### Input frequencies:

f<sub>1</sub>=1333,5 MHz, P = 220 W  
f<sub>2</sub>=1416,5 MHz, P = 175 W

#### IM products:

2f<sub>1</sub>-f<sub>2</sub>=1250,5 MHz, P = 16 W  
2f<sub>2</sub>-f<sub>1</sub>=1499,5 MHz, P = 20 W