

## RF MOSFET Amplifier Module 40 MHz-860 MHz

**AMP- 4086/05**

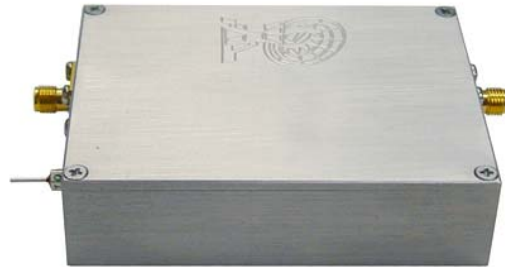
Power Output 0.5W

### Features

- Wireless Data, Satellite Terminals, exciter for small digital transmitters DVB-T, COFDM

### Applications

- PA Driver Amplifier
- Cellular, PCS, GSM, UMTS
- Wideband Instrumentation
- Wireless Data, Satellite Terminals



### Electrical Characteristics (T<sub>case</sub>=+25 °C, Z<sub>G</sub>=Z<sub>L</sub>=5W, unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TY P	MAX	UNIT
f	Frequency Range		40	-	860	MHz
P <sub>out</sub>	Output Power	V <sub>DD</sub> =24V, P <sub>in</sub> =0dBm	0.5	-	0.6	W
τ	Total Efficiency	P <sub>out</sub> =0.5W (V <sub>GG</sub> control), V <sub>DD</sub> =24V, P <sub>in</sub> =0dBm	38	-	-	%
2f <sub>o</sub>	2 <sup>nd</sup> Harmonic		-	-	-19	dBc
in	Input VSWR		-	-	4:1	—
S/N	Noise		4	-	5	dB
—	Stability	V <sub>DD</sub> =24V, P <sub>in</sub> =1mW P <sub>out</sub> <0.5W	No parasitic oscillation			—
—	Load VSWR Tolerance	V <sub>DD</sub> =24V, P <sub>in</sub> =1mW, P <sub>out</sub> =0.5W	No degradation or destroy			—

## CHARACTERISTICS

Table 1 Bandwidth 40 to 860 MHz;  $V_B = 24$  V;  $T_{case} = 30$  °C;  $Z_S = Z_L = 75 \Omega$

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
G <sub>p</sub>	power gain	f = 50 MHz	33.5	34	34.5	dB
		f = 860 MHz	34	35	–	dB
SL	slope cable equivalent	f = 40 to 860 MHz	0.5	1.1	2.5	dB
FL	flatness of frequency response	f = 40 to 860 MHz	–	±0.2	±0.5	dB
S <sub>11</sub>	input return losses	f = 40 to 80 MHz	20	25	–	dB
		f = 80 to 160 MHz	18.5	28	–	dB
		f = 160 to 320 MHz	17	28	–	dB
		f = 320 to 640 MHz	15.5	21	–	dB
		f = 640 to 860 MHz	14	18.5	–	dB
S <sub>22</sub>	output return losses	f = 40 to 80 MHz	20	25.5	–	dB
		f = 80 to 160 MHz	18.5	28.5	–	dB
		f = 160 to 320 MHz	17	26.5	–	dB
		f = 320 to 640 MHz	15.5	20.5	–	dB
		f = 640 to 860 MHz	14	21	–	dB
S <sub>21</sub>	phase response	f = 50 MHz	135	–	225	deg
CTB	composite triple beat	49 channels flat; V <sub>o</sub> = 44 dBmV; measured at 859.25 MHz	–	–63.5	–60	dB
X <sub>mod</sub>	cross modulation	49 channels flat; V <sub>o</sub> = 44 dBmV; measured at 55.25 MHz	–	–63	–59	dB
CSO	composite second order distortion	49 channels flat; V <sub>o</sub> = 44 dBmV; measured at 860.5 MHz	–	–64	–55	dB
d <sub>2</sub>	second order distortion	note 1	–	–74	–65	dB
V <sub>o</sub>	output voltage	d <sub>im</sub> = –60 dB; note 2	58	60	–	dBmV