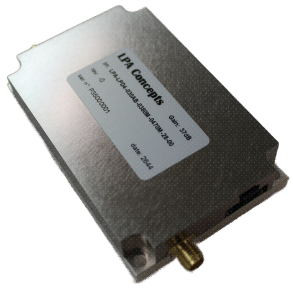
LINEAR POWER DRIVER AMPLIFIER	LPA-LPD4-040AB-0380M-0470M-28-00
P3500	

FEATURES

- ♦ 380-470MHz
- ♦ Gain: 45dB
- ♦ 50Ω input / output
- ♦ 28V / 480mA idle
- ♦ 28V / 1.0A @ 5W LTE
- ♦ Aluminum flange
- ♦ Low cost

PACKAGE

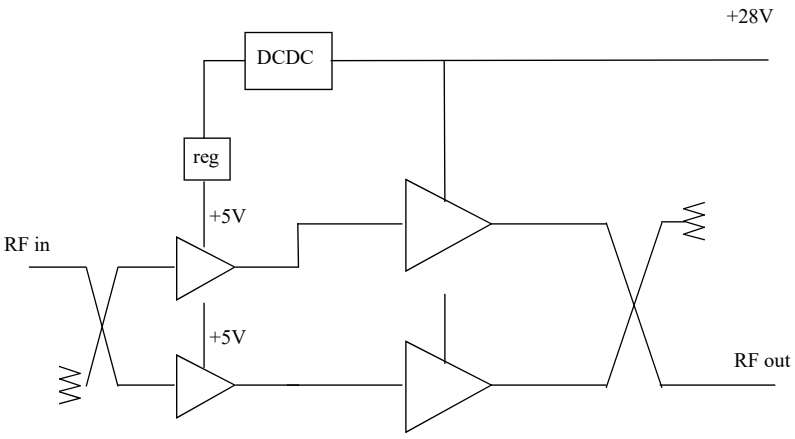


LPD4 package

APPLICATIONS

- ♦ General purpose

BLOCK DIAGRAM



Electrical characteristics: 50 ohms; +48V; -25°C to +80°C (1, 2)

Ref	Parameter	Conditions	Note	Min	Typ	Max	Units
1	Bandwidth			380		470	MHz
2	Gain small signal	430 MHz; 50°C			44.5		dB
3	Gain variation vs frequency	380 MHz - 470 MHz			2	3	dBpp
4	Gain variation vs temperature	-25°C to +80°C	2		3		dB
5	Input return loss	50 ohms			-15		dB
6	Output return loss	50 ohms			-15	-12	dB
7	Peak power	P1dB	3		40		W
8	Current consumption idle	On state			0.48		A
9	Current consumption 5W LTE		3		1.0		A
10	Max current	Shut down current			2.4		A
11	Harmonics, IMD2	Signal CW 40dBm			-20		dBc

1. Unless otherwise specified
2. Housing temperature
3. 1 carrier LTE 10MHz PAR 9dB

Maximum ratings

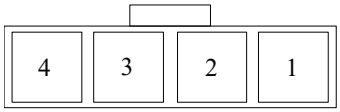
Ref	Parameter	Conditions	Note	Min	Nom	Max	Units
1	Operating temperature	flange temperature		-40°C		+80	°C
2	Supply voltage			27	28	30	V
3	Input peak power					+10	dBm
4	Input average power					+7	dBm
5	Max load VSWR				TBD		

Protections & Alarm

Ref	Parameter	Conditions	Note	Min	Nom	Max	Units
1	Temperature shut down		5		+80		°C
2	Over voltage shut down		6		36		V
3	Under voltage shut down		7		20		V
4	Reverse voltage		8			55	V
5	Overcurrent shut down				2.4		A
6	Alarm	All above conditions	9				V

4. Auto restart at 70°C
5. Restart when voltage <52V
6. Restart when voltage >40V
7. No current drawn
8. Pulls low on alarm

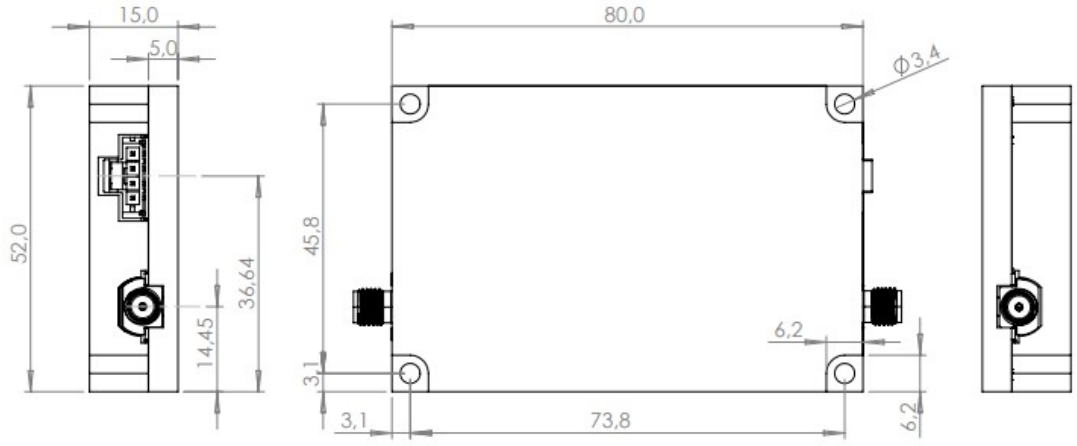
Power Supply & DC Connection

Pin description			Molex 105430-1204
Pin 1	unconnected		
Pin 2	Alarm	Open drain output, need a pull up resistor. '0' means alarm	
Pin 3	Gnd	Power supply. Protections include reverse voltage, under voltage and over voltage.	
Pin 4	+28V		

Mechanical characteristics

Ref	characteristic	description	remarks
1	Package dimensions	80mm x 52mm x 15mm	
2	Flange dimensions	80mm x 52mm x 5mm	4 x M3 screws for heatsink attach
3	Cover plating	Nickel	
4	Flange plating	Silver	
5	Input/output RF connectors	SMA	
6	DC Connector	Nanofit 4 contacts	105430-1204 mates with 105307-1204
7	Weight	100 grams	

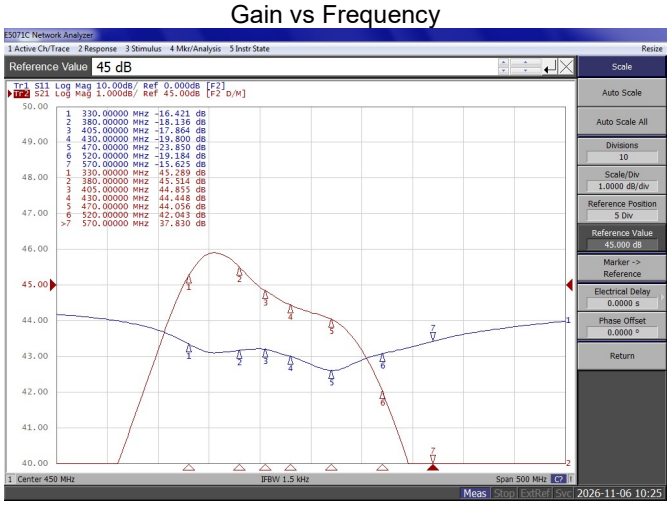
Package outline:



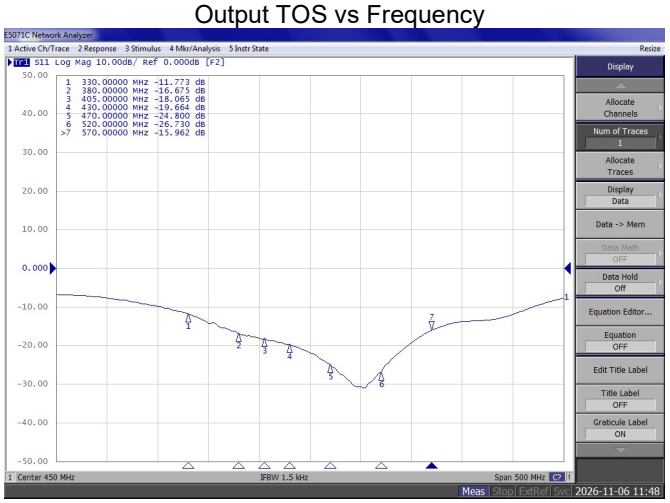
dimensions are in mm

TYPICAL PERFORMANCE

Gain vs Frequency

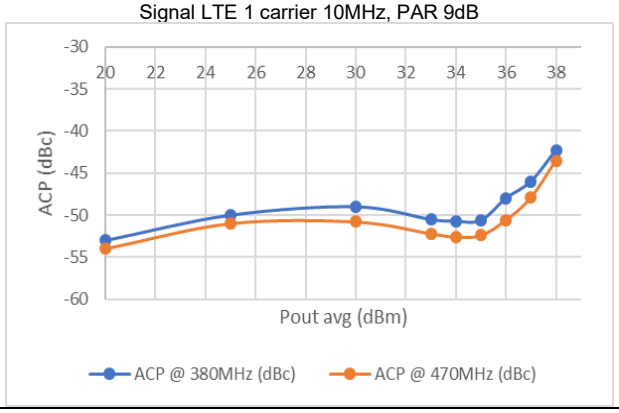


Output TOS vs Frequency



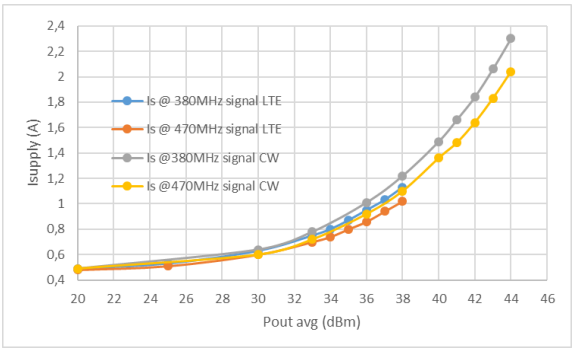
ACPs vs Pout

Signal LTE 1 carrier 10MHz, PAR 9dB



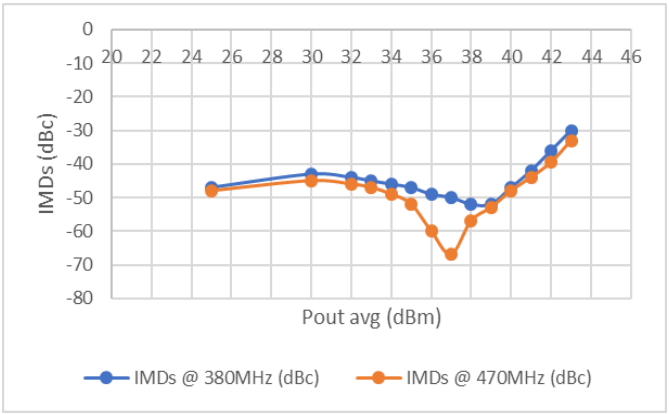
Supply Current vs Pout

Signal LTE 1 carrier 10MHz, PAR 9dB

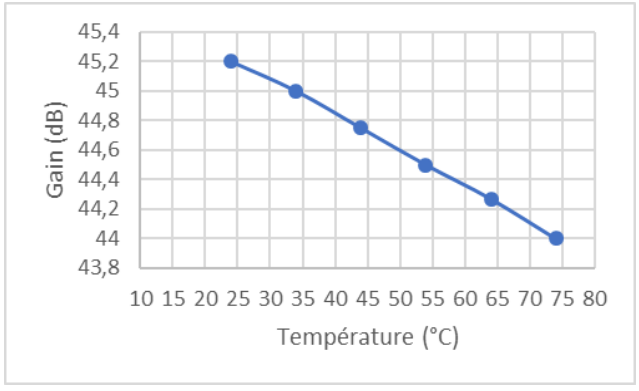


IMDs vs Pout

Signal 2 tones, 2MHz spacing



Gain vs Temperature



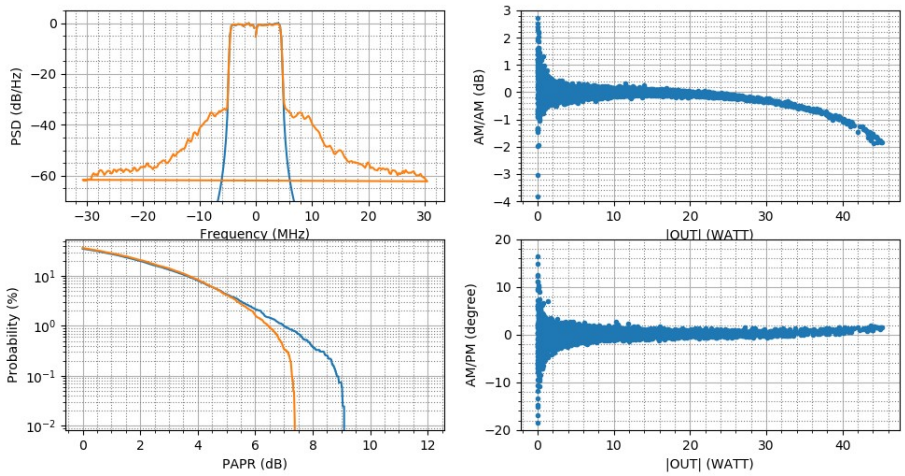
Slope -1dB / 40°C

Specifications and information are subject to change without notice

AMAM AMPM at 380MHz

Signal LTE 1 carrier 10MHz, PAR 9dB

ioft_Radio/Python/PLOT_AM_AM_AM_PM/FDD_CFR_SHORTER_FRAME3/LTE_TM1.1_BW_10MHz[1]PAPR=9dB_Sampling_Rate=61.44MHz_v2.r



AMAM AMPM at 430MHz

Signal LTE 1 carrier 10MHz, PAR 9dB

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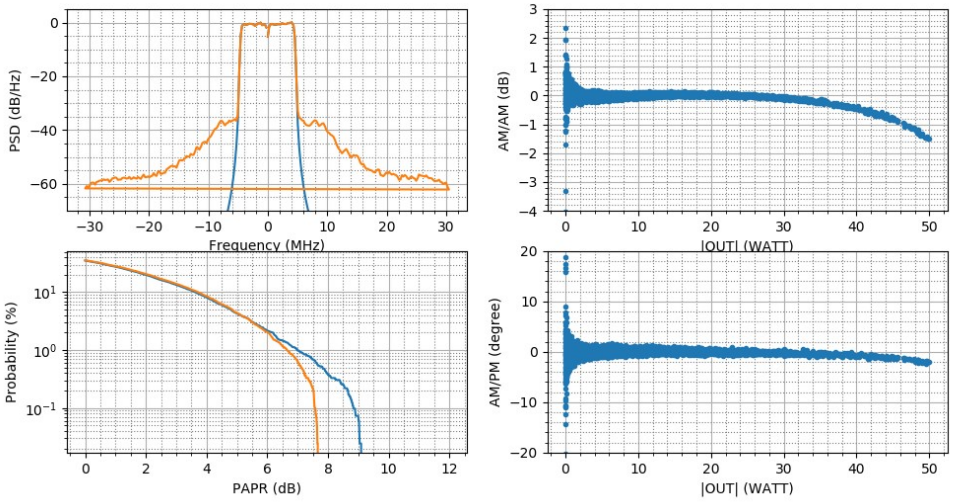

AMAM AMPM at 470MHz

Signal LTE 1 carrier 10MHz, PAR 9dB

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