

## Product Specification

# P1935

Power Amplifier 1880-1920 MHz, 35 dB min. Gain @ 1900 Hz @ 33.5 dBm Output



### FEATURES

- 1.9 GHz Power Amplifier Module
- Typical 33.5 dBm output power
- Excellent adjacent leakage power
- Typical 35.7 dB power gain
- Low cost metal package

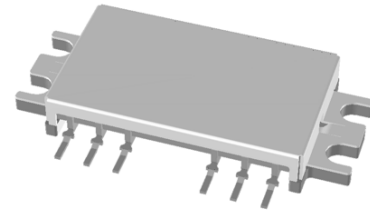
### APPLICATION

- Final stage power amplifier of base station for PHS

### DESCRIPTION

- The P1935 is a high performance 1.9 GHz band power amplifier offering excellent linearity. The device provides 33.5 dBm output power with a typical 35.7 dB gain at 1.9 GHz. It is housed in a cost effective metal package and operates from +10 V and -5 V power supplies.

## P1935



Power Amplifier

1880-1920 MHz  
35 dB min. Gain @ 1900MHz

### LIMITING VALUES

Notes: Operating the device above these parameters may cause permanent damage, Case Temperature  $T_c=25^\circ\text{C}$

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
$V_1$	DC supply voltage	-	12	V
$V_2$		-	-7	V
$P_{in}$	Input Power	-	10	dBm
$T_{stg}$	Storage Temperature	- 40	+ 95	$^\circ\text{C}$
$T_{opt}$	Operating Temperature	- 20	+ 80	$^\circ\text{C}$

### CHARACTERISTICS

Table 1: Test condition  $25^\circ\text{C}$

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
f	Frequency		1880		1920	MHz
$I_d$	Supply Current	$P_{out}=33.5\text{ dBm}$ $V_1=10\text{ V}$ $V_2=-5\text{ V}$	-	1200	1270	mA
Ga	Power Gain		35	35.7	-	dB
	Input VSWR		-	1.5	2.5	-
2f <sub>0</sub>	Harmonic Distortion		-	-55	-40	dBc
3f <sub>0</sub>			-	-55	-36	dBc
Padj1	Adjacent Channel	$\pm 600\text{ kHz}$	-	-64	-61	dBc
Padj2	Leakage Power <sup>1)</sup>	$\pm 900\text{ kHz}$	-	-71	-69	dBc

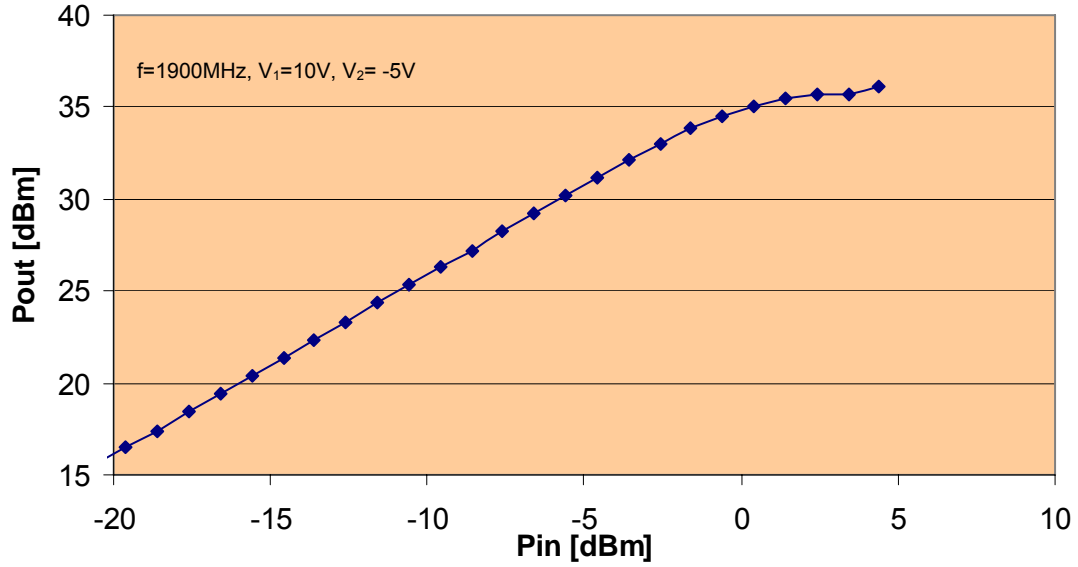
Notes:1) RF signal modulation is per PHS RCR-28

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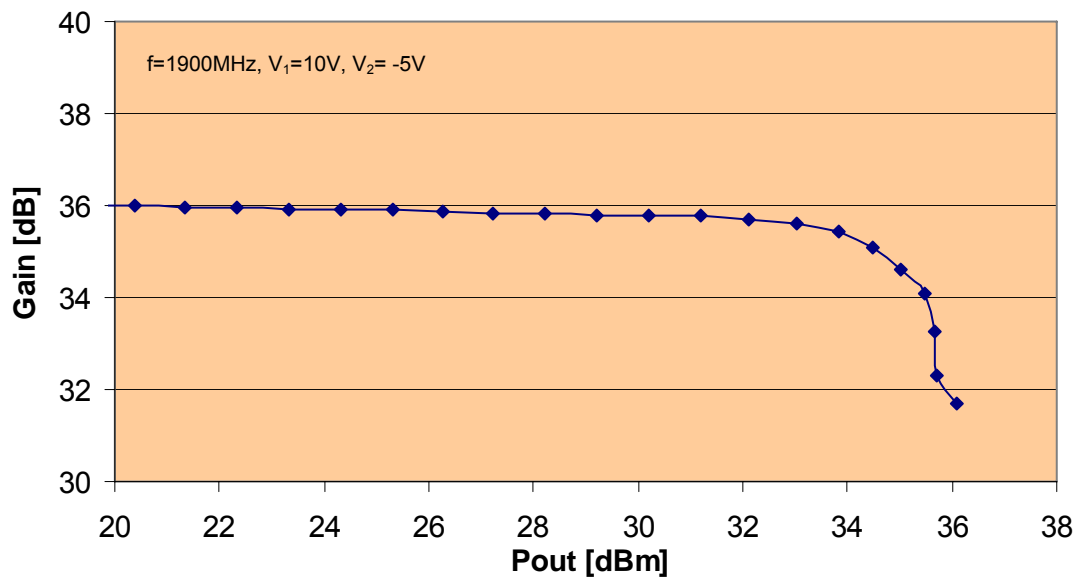
Power Amplifier 1880-1920 MHz, 35 dB min. Gain @ 1900 Hz @ 33.5 dBm Output



Power Characteristics: P1935



Gain vs. Pout: P1935

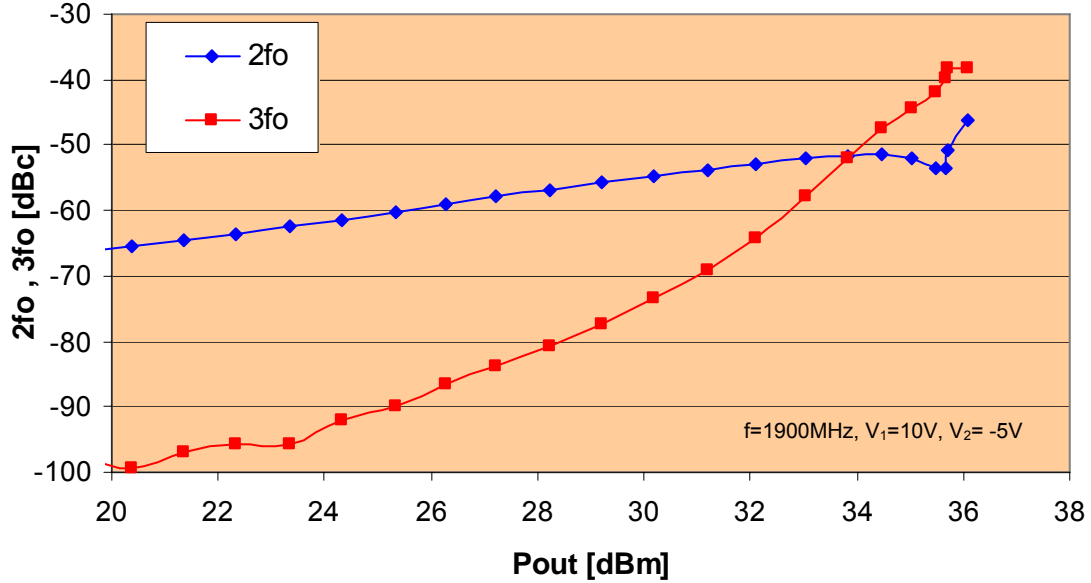


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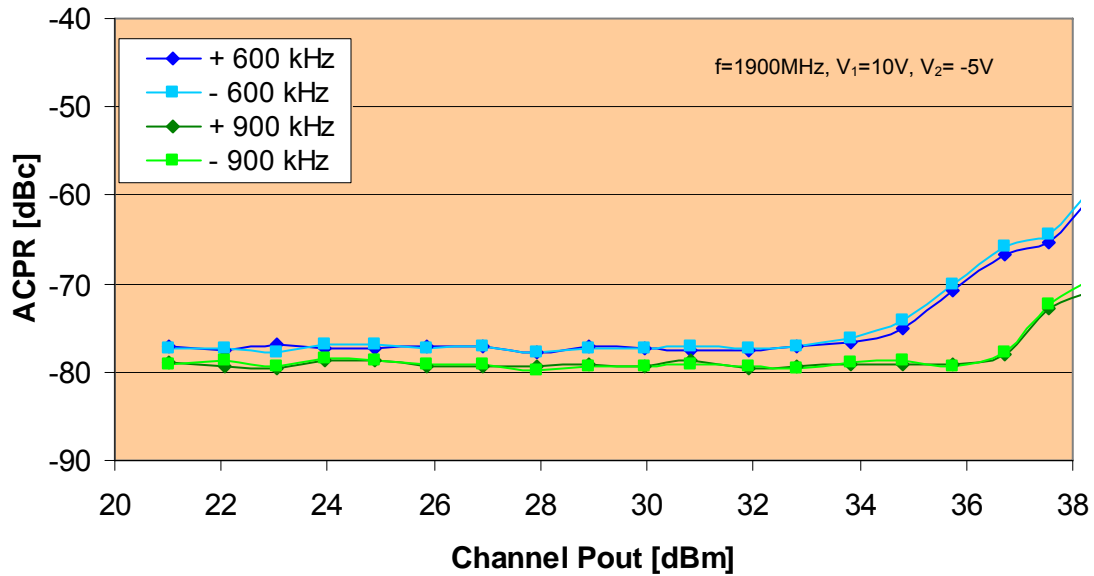
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Harmonic Distortion: P1935



ACPR: P1935



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**PDI**

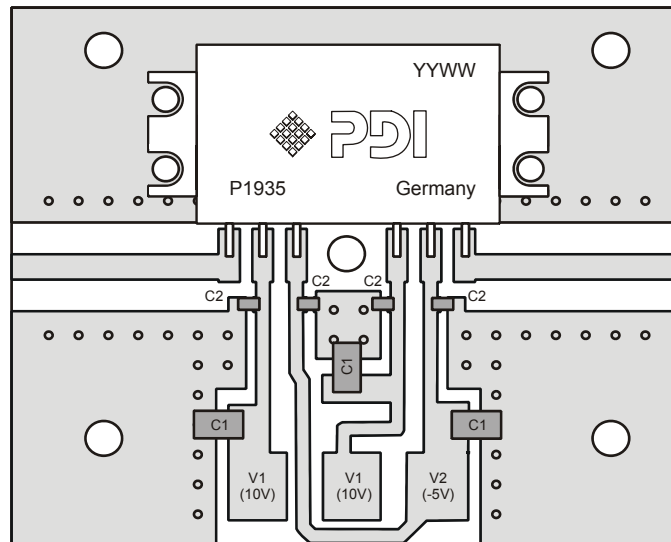
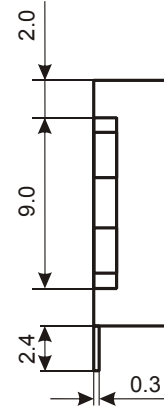
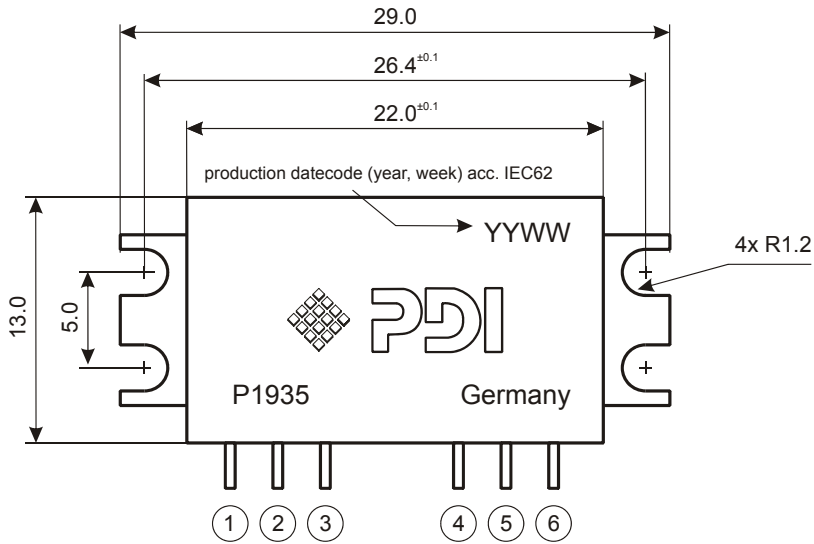
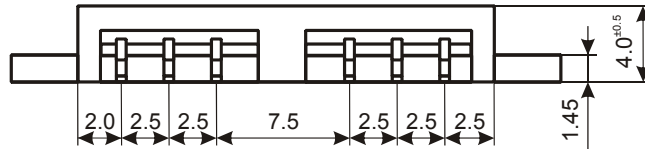
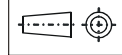
Notes:

all dimensions in mm

Pinning:

1	RFout
2	V1 (10V)
3	V2 (-5V)
4	V1 (10V)
5	V2 (-5V)
6	RFIn
Case	Ground

European Projection



C1	1 $\mu$ F
C2	0.1 $\mu$ F

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**DEFINITIONS**

<b>Data Sheet Status</b>	
Objective Product Specification	This data sheet contains target or goal specifications for product development.
Preliminary Product Specification	This data sheet contains preliminary data; supplementary data may be published later.
Product Specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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