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

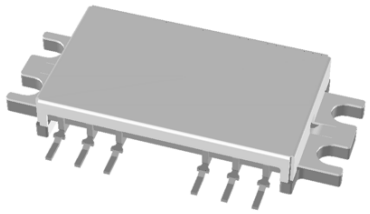
APPLICATION

- 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°C

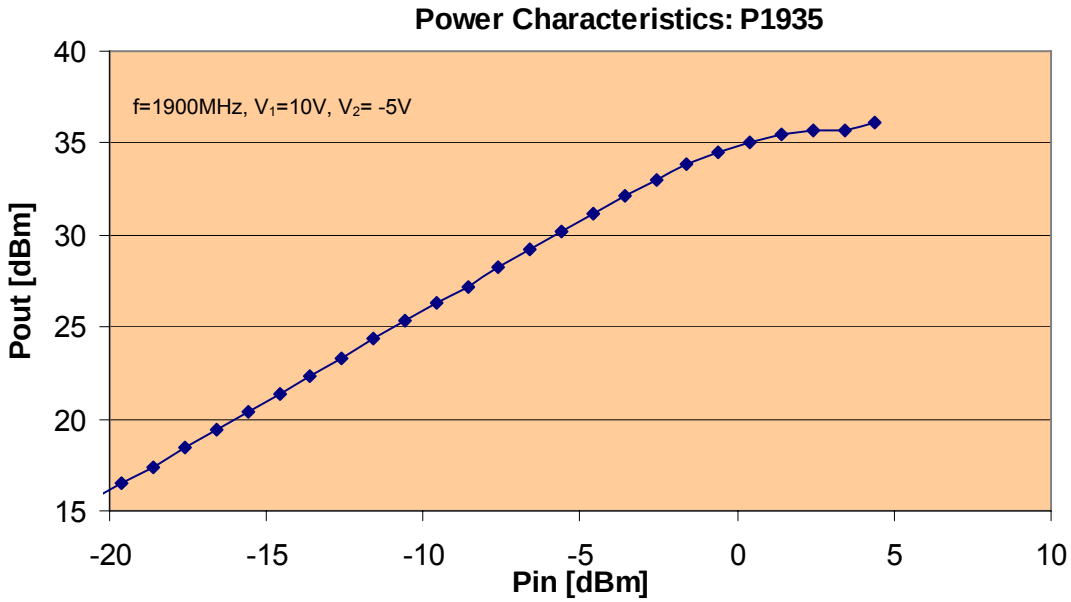
SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V_1	DC supply voltage	-	12	V
V_2		-	-7	V
P_{in}	Input Power	-	10	dBm
T_{stg}	Storage Temperature	- 40	+ 95	°C
T_{opt}	Operating Temperature	- 20	+ 80	°C

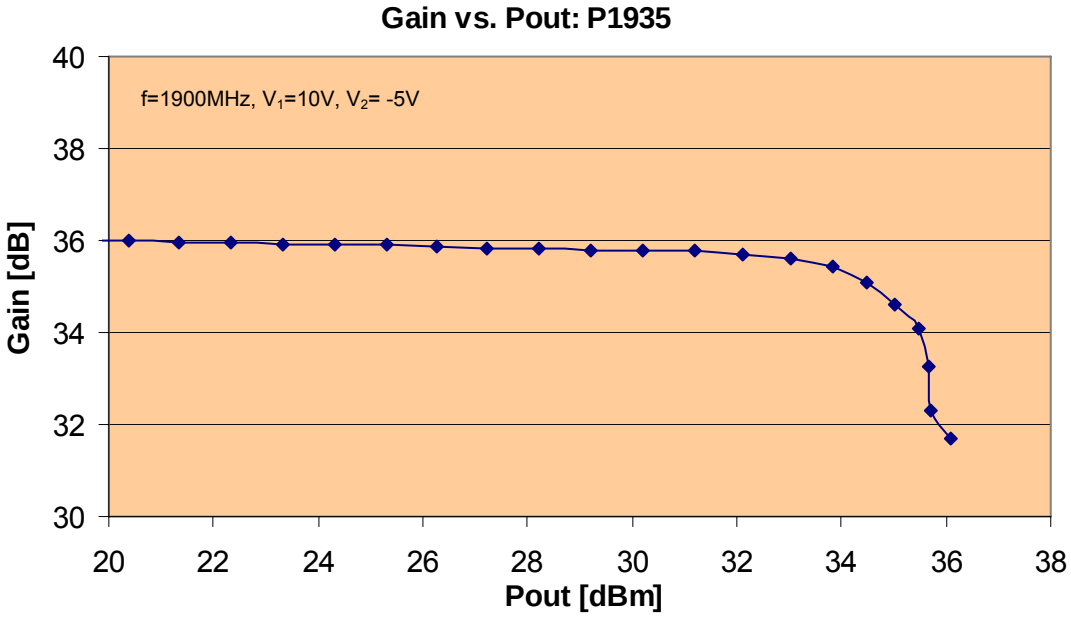
CHARACTERISTICS

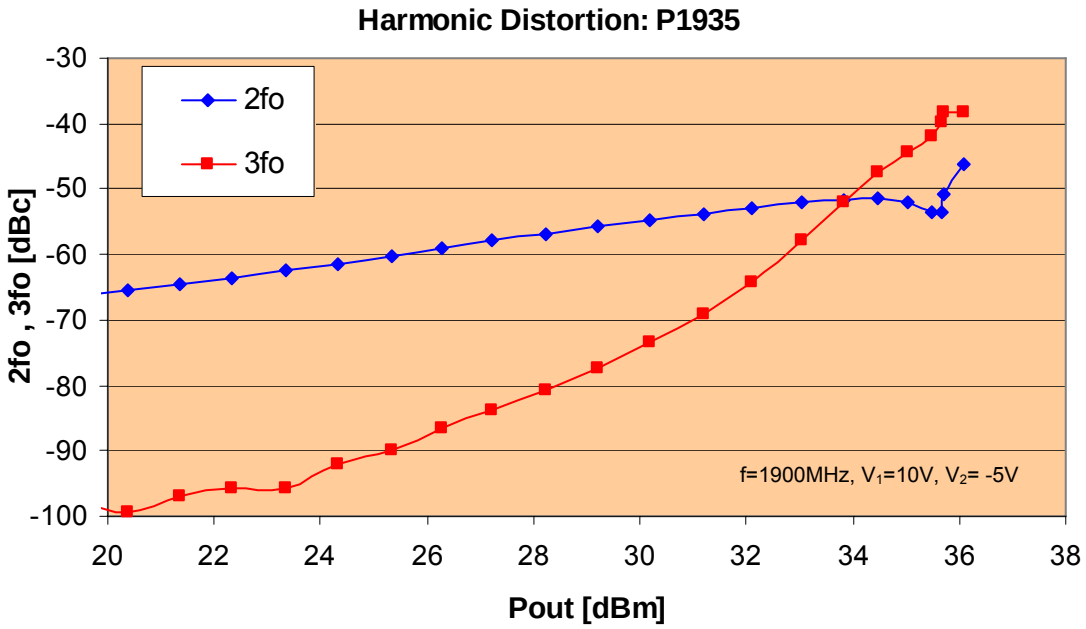
Table 1: Test condition 25°C

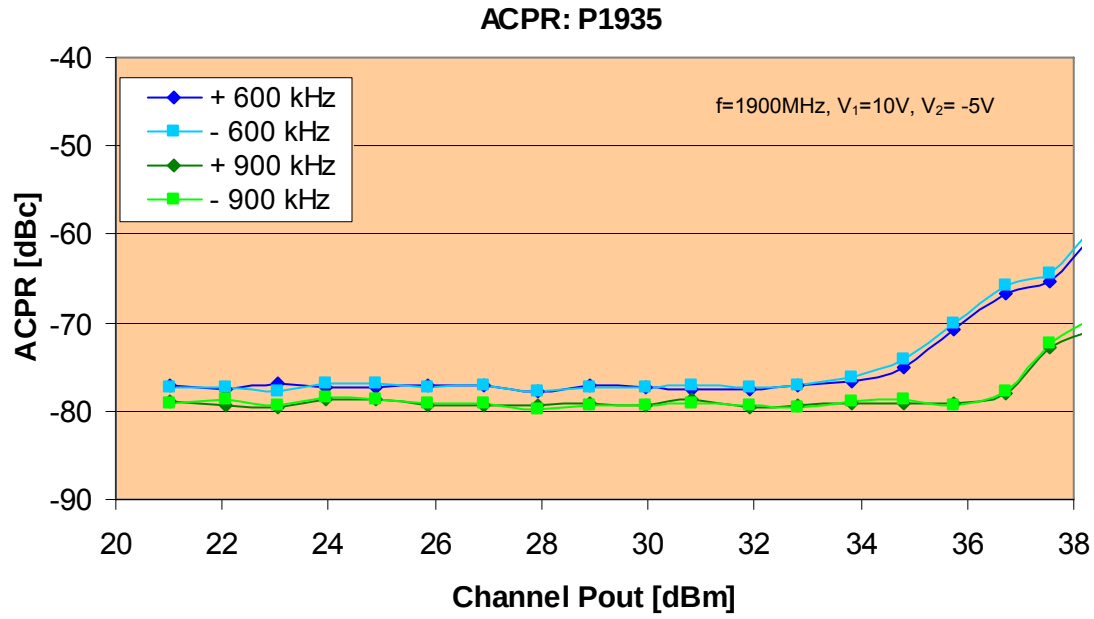
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
f	Frequency		1880		1920	MHz
Id	Supply Current	P_{out}=33.5 dBm V_1= 10 V V_2= -5 V	-	1200	1270	mA
Ga	Power Gain		35	35.7	-	dB
	Input VSWR		-	1.5	2.5	-
2f0	Harmonic Distortion		-	-55	-40	dBc
3f0			-	-55	-36	dBc
Padj1	Adjacent Channel Leakage Power[1)]	± 600 kHz	-	-64	-61	dBc
Padj2		± 900 kHz	-	-71	-69	dBc

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


Power Characteristics: P1935
f=1900MHz, V1=10V, V2= -5V
Pout [dBm]
40
35
30
25
20
15
-20
-15
-10
-5
0
5
10
Pin [dBm]


Gain vs. Pout: P1935
f=1900MHz, V1=10V, V2= -5V
Gain [dB]
40
38
36
34
32
30
20
22
24
26
28
30
32
34
36
38
Pout [dBm]


Harmonic Distortion: P1935
2fo
3fo
f=1900MHz, V1=10V, V2= -5V
2fo , 3fo [dBc]
Pout [dBm]
-30
-40
-50
-60
-70
-80
-90
-100
20
22
24
26
28
30
32
34
36
38

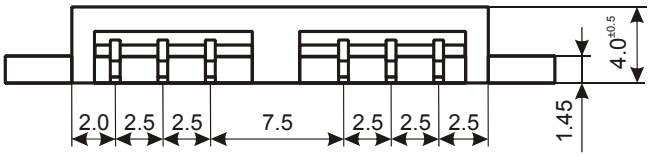

ACPR: P1935
+ 600 kHz
- 600 kHz
+ 900 kHz
- 900 kHz
f=1900MHz, V1=10V, V2= -5V
ACPR [dBc]
Channel Pout [dBm]
-40
-50
-60
-70
-80
-90
20
22
24
26
28
30
32
34
36
38

Notes:

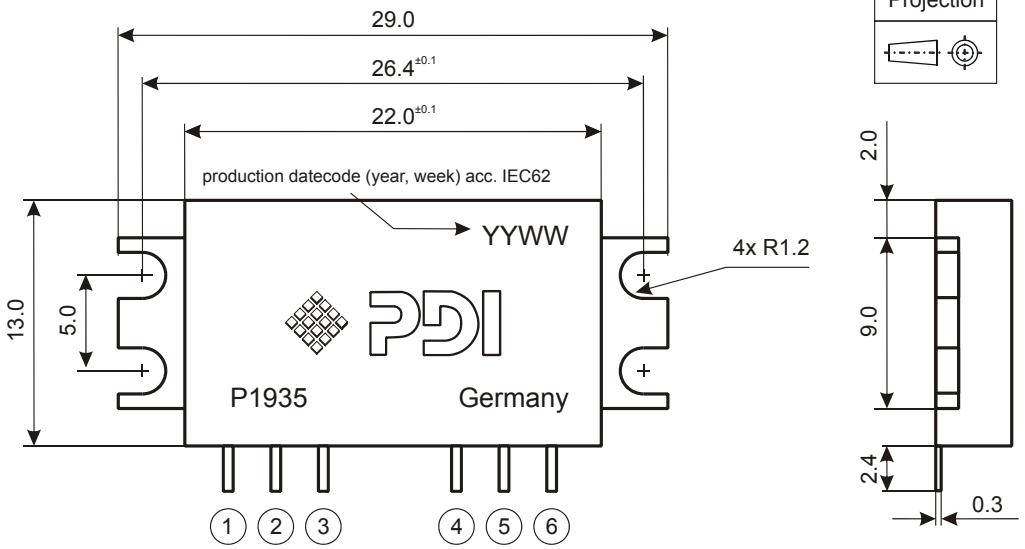
all dimensions in mm

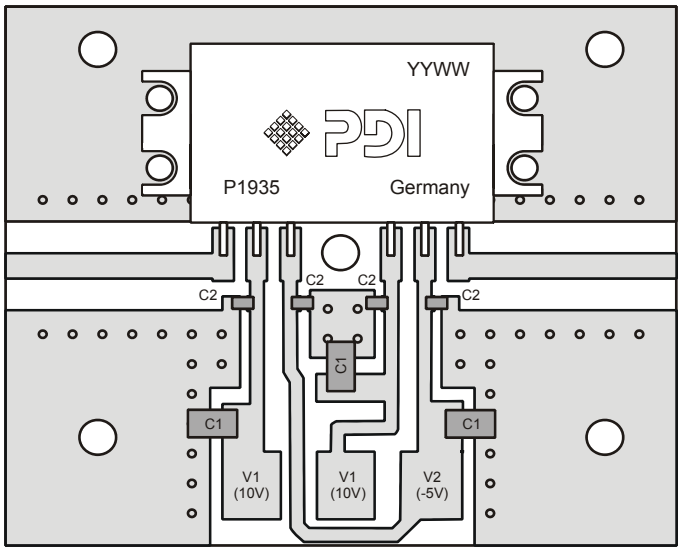
Pinning:

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



European Projection





C1	1 µF
C2	0.1 µF

DEFINITIONS

Data Sheet Status	
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.
Limiting values	
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.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

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