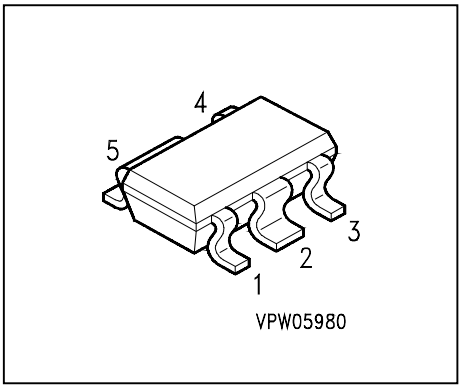
GaAs MMIC

- Broadband Power Amplifier [800..2000 Mhz]
- GSM,AMPS or PCN
- Operating voltage range: 2.7 to 5.0 V
- Pout = 35.0dBm at Vd=3.5V
- Overall power added efficiency 55 %
- Easy external matching



ESD: **E**lectro**s**tatic **d**ischarge sensitive device, observe handling precautions!

Type	Marking	Ordering code (taped)	Package
CGY98	t.b.d.	t.b.d.	SCT595

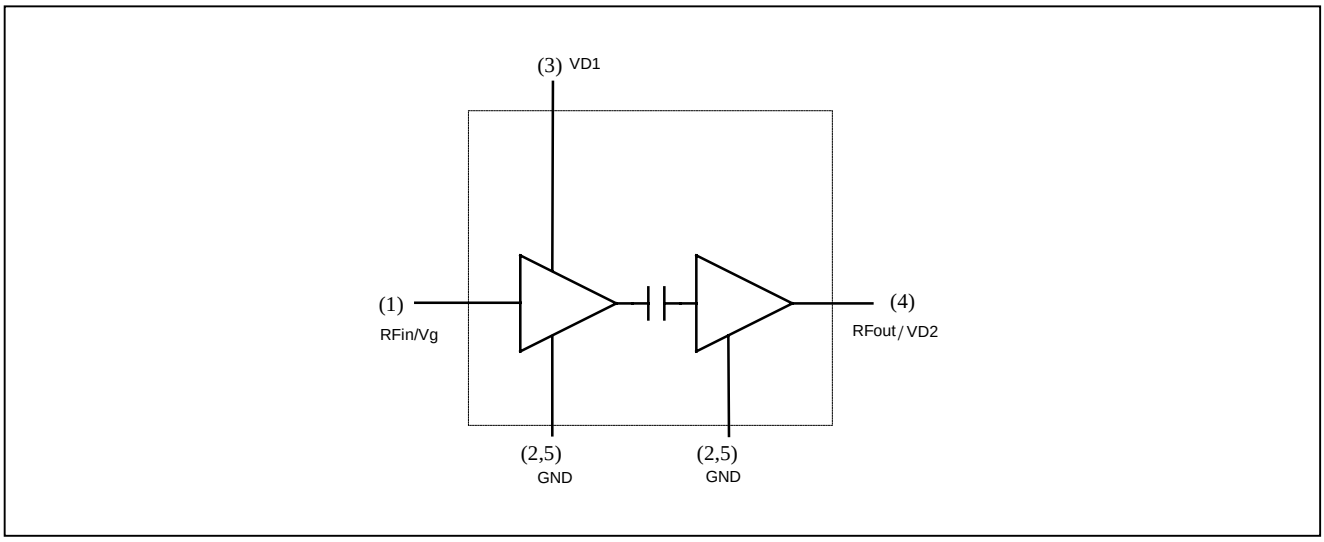
Maximum ratings

Characteristics	Symbol	max. Value	Unit
Positive supply voltage	V_D	6	V
Supply current stage 1	I_D	0.6	A
Supply current stage 2	I_D	1.8	A
Channel temperature	T_{Ch}	150	°C
Storage temperature	T_{stg}	-55...+150	°C
Total power dissipation *(Ts ≤ 81 °C)* *Ts: Temperature at soldering point*	P_{tot}	2.0	W
Pulse peak power	P_{Pulse}	4.0	W

Thermal Resistance

Characteristics	Symbol	max. Value	Unit
Channel-soldering point	R_{thChS}	35	K/W

Functional Block Diagram



Pin #		Configuration
1	**RFin/VG**	RF input power + Gate voltage
2	**GND**	RF and DC ground
3	**VD1**	Pos. drain voltage 1st stage
4	**RFout/VD2**	RF output power / Pos. drain voltage 2nd stage
5	**GND**	RF and DC ground

GSM-Operation

Electrical characteristics [Inside Application: PCB-Layout t.b.d.]
(T_A = 25°C, Z_S=Z_L=50 Ohm, duty cycle 12.5%, t_{on}=577us unless otherwise specified)

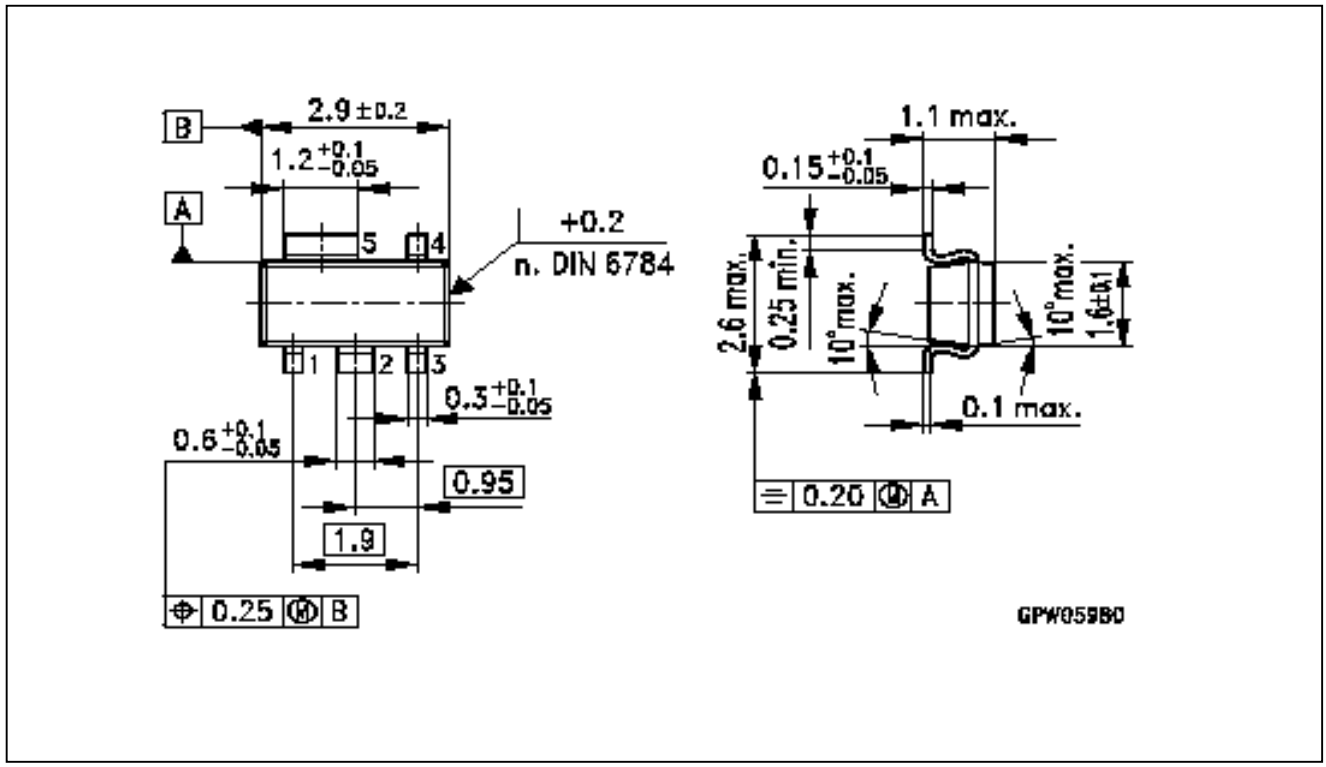
Characteristics	Symbol	min	typ	max	Unit
Frequenzy range	*f*	880	-	915	MHz
Supply current *VD=3.5V; Pin = +12 dBm*	I_{DD}	-	1.6	-	A
Power Gain *VD=3.5V; P_{in} = +12 dBm*	*G*		23		dB
Output Power *VD=3.5V; P_{in} = +12 dBm*	P_O		35.0		dBm
Overall Power added Efficiency *VD=3.5V; P_{in} = +12 dBm*	*PAE*		55	-	%
Harmonics $2f_0$ $3f_0$	- -	- -	-42 -42	- -	dBc
Input VSWR V*D=3.5V or Vd=4.8V*	-	-	2 : 1	-	-
Load mismatch *Pin=10dBm , VD≤4.6V , Z_S=50 Ohm,* *Load VSWR = 20:1 for all phase,*		No module damage for 10 sec.			
Stability *Pin=10dBm, VD=4.6V, Z_S=50 Ohm,* *Load VSWR = 3:1 for all phase*		All spurious output more than 70 dB below desired signal level			

PCN(DCS1800)-Operation

Electrical characteristics [Inside Application: PCB-Layout t.b.d.]

(T_A = 25°C, Z_S=Z_L=50 Ohm, duty cycle 12.5%, t_{on}=577us unless otherwise specified)

Characteristics	Symbol	min	typ	max	Unit
Frequenzy range	*f*	1710		1785	MHz
Supply current *VD=3.5V; Pin = +15 dBm*	I_{DD}	-	1.6	-	A
Power Gain *VD=3.5V; P_{in} = +15 dBm*	*G*		19		dB
Output Power *VD=3.5V; P_{in} = +15 dBm*	P_O		34.0		dBm
Overall Power added Efficiency *VD=3.5V; P_{in} = +15 dBm*	*PAE*		45	-	%
Harmonics $2f_0$ $3f_0$	- -	- -	-42 -42	- -	dBc
Input VSWR V*D=3.5V or Vd=4.8V*	-	-	2 : 1	-	-
Load mismatch *Pin=10dBm , VD≤4.6V , Z_S=50 Ohm,* *Load VSWR = 20:1 for all phase,*		No module damage for 10 sec.			
Stability *Pin=10dBm, VD=4.6V, Z_S=50 Ohm,* *Load VSWR = 3:1 for all phase*		All spurious output more than 70 dB below desired signal level			



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