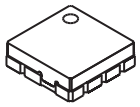
SONY

CXG1158K

Power Amplifier Module for JCDMA

10 pin LCC (Ceramic)



Description

The CXG1158K is the power amplifier module which operates at a single power supply. This IC is designed using the Sony's original p-Gate HFET process.

Features

- Single power supply operation:
  $V_{DD1} = V_{DD2}$ = 3.5V (High Power Mode),
  1.3V (Low Power Mode 1),
  1.0V (Low Power Mode 2),
  V_{GG} = 2.7V
- Ultrasmall package: 0.06cc (6.2mm × 6.2mm × 1.55mm)
- High efficiency:
  ηadd = 41%@P_{OUT} = 27.5dBm (High Power Mode),
  ηadd = 23%@P_{OUT} = 15dBm (Low Power Mode 1)
- Output power (high/low mode switching supported):
  P_{OUT} = 18 to 27.5dBm: High Power Mode,
  P_{OUT} = 15 to 18dBm: Low Power Mode 1,
  $P_{OUT} \leq$ 15dBm: Low Power Mode 2
- Gain: Gp = 29dB (@900MHz)

Applications

Power amplifier for JCDMA system cellular phones

Structure

p-Gate HFET module

Absolute Maximum Ratings

• Operating ambient temperature	Ta	–30 to +60	°C
• Operating case temperature	Tcase	–30 to +90	°C
• Storage temperature	Tstg	–30 to +125	°C
• Bias voltage	V_{DD1}, V_{DD2}	6	V
• Bias voltage	V_{GG}	3.3	V
		(@$V_{DD1} = V_{DD2} \leq$ 3.5V)	
• Input power	P_{IN}	8	dBm

Recommended Bias Voltage Conditions

- $V_{DD1} = V_{DD2}$ = 1.0 to 4.2V
- V_{GG} = 2.7V ± 1%

GaAs module is ESD sensitive devices. Special handling precautions are required.

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