

PRODUCT SUMMARY

SKYA22000 Power Amplifier Module for Automotive Applications – Quad-Band GSM / GPRS / EDGE

Applications

- Quad-band telematics boxes
- GSM Modulation
 - Class 4 GSM850/900
 - Class 1 DCS1800/ PCS1900
 - Class 12 GPRS multi-slot operation
- EDGE Modulation
 - Class E2 GSM850/900
 - Class E2 DCS1800/ PCS1900

Features

- High efficiency:
- Programmable bias for improved backed-off efficiency
- High linearity
- Low standby leakage
- Compatible with DC-DC converter
- Programmable Current Clamp
- Autonomous Over-voltage Protection
- Self-shielded
- Small, low profile package
 - 3.0 x 3.5 mm x 0.8 mm Max.
 - 12-pad configuration



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to Skyworks *Definition of Green™*, document number SQ04-0074.

Description

The SKYA22000 power amplifier module (PAM) is designed for 2G quad-band telematics boxes supporting fixed gain Gaussian Minimum-Shift Keying (GMSK) and fixed gain linear Enhanced Data for GSM Evolution (EDGE) modulation in the GSM850/900, DCS1800 and PCS1900 bands. Class12 General Packet Radio Service (GPRS) multi-slot operation is also supported.

The compact 3.0 mm x 3.5 mm x 0.8 mm module consists of GSM850/900 and DCS1800/PCS1900 power amplifier blocks, 50-ohm input and output matching circuitry, and a multi-function power amplifier control (MFC) block. The custom silicon CMOS MFC provides PA bias and product identification read-back capability and is fully programmable through the RF Front-End Mobile Industry Processor Interface (RFFE MIPI).

The heterojunction bipolar transistor (HBT) power amplifier blocks are fabricated onto a single InGaP die; one supports the GSM850/900 bands and the other supports the DCS1800/PCS1900 bands. Both PA blocks share two common power supply pads. The InGaP die, silicon die, and the passive components are mounted on a multi-layer laminate substrate. The entire assembly is encapsulated with plastic over mold.

Ordering Information

| Part Number | Part Description | Evaluation Board Part Number |
|-------------|--|------------------------------|
| SKYA22000 | Power Amplifier Module for Automotive Applications | SKYA22000EK1 |

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