

ATTACHMENT K – OPERATIONAL DESCRIPTION

Operational Description

FCC ID:AEZSCP-6K

Model:SCP-6000

SANYO SCP-6000 is a Single-Band PCS Only Mode digital CDMA phone. It is designed to comply with Part 15 and Part 24 of the CFR.

PCS Band (CDMA):

TX Frequencies: 1851.25MHz - 1908.75MHz

RX Frequencies: 1931.25MHz - 1988.75MHz

LO Frequencies: 1720.87MHz - 1778.37MHz

TCXO Frequency: 19.68MHz

CDMA Max. Conducted Output Power : +23.7dBm (0.235W)

Battery voltage: 3.7V Nominal, 3.4 Min., V Li-ion (Supplied with phone)

Frequency Stabilization

A voltage controlled temperature compensated crystal oscillator (VCTCXO) is utilized as a frequency reference for all of the transceiver local oscillators. This crystal oscillator is specified to a frequency stability of $\pm 2.5\text{ppm}$ over temperature and voltage variations. The synthesizer lock status is constantly monitored by the microprocessor and transmission is disabled whenever an out of lock condition is detected. The mobile is locked to the base station during operation. The mobile receiver constantly monitors the received signal from the base station and makes necessary frequency adjustments on the VCTCXO to correct any frequency errors between the mobile and the base station.

Suppression of Spurious Radiation

Spurious and harmonic suppression is achieved by proper design with various filters and sufficient use of EMI shields. Rigorous testing at the factory ensures continuous compliance.

Limiting Power

Each mobile is individually calibrated at the factory to ensure Max. power of no more than +25.2dBm for PCS CDMA and +24.9dBm for AMPS by employing a proper frequency and temperature compensation schemes for both the TX and RX automatic gain control (AGC) amplifiers. There are also hardware circuitries to monitor TX power and software reset limits to limit maximum TX power.

Limiting Modulation

The audio input is sampled, digitally limited, and then filtered to amplitude and frequency limit the signal applied to the modulator. The device supports AMPS standards and ANSI J-STD-008 for CDMA operation. The device has an operating temperature range of –30 to +60C. The functions include Compandor, PLL lock detector for received SAT, filtering of received data, and audio signal filtering for signals.