

OCCUPIED BANDWIDTH

(FOR 12.5 kHz CHANNELIZATION)

Method of Measurement Per Data on Occupied Bandwidth is presented in the form of a spectrum analyzer plot which illustrates the transmitter sidebands. A plot is taken of the carrier sideband modulated with a 2500 Hz tone at a level 16 dB greater than that required to produce 50 percent modulation. (The spectrum analyzer grid indicates the reference level of the carrier unmodulated in all exhibits.)

Section B3,B4,C3,C4
Voice

$$B_n = 2M + 2DK \text{ where}$$
 $M = 3000 \text{ Hz}$ $D = 2200 \text{ Hz}$ $K = 1 \text{ (assumed)}$
$$B_n = 10400 \text{ Hz}$$

Therefore, Emission Designator = 10K4F3E

OCCUPIED BANDWIDTH

(FOR 25 kHz CHANNELIZATION)

Method of Measurement Per 2.989 (c,1) Data on Occupied Bandwidth is presented in the form of a spectrum analyzer plot which illustrates the transmitter sidebands. A plot is taken of the carrier sideband modulated with a 2500 Hz tone at a level 16 dB greater than that required to produce 50 percent modulation. (The spectrum analyzer grid indicates the reference level of the carrier unmodulated in all exhibits.)

SECTION 3B,C
Telephony

$$B_n = 2M + 2DK \text{ where}$$
 $M = 3000 \text{ Hz}$ $D = 4400 \text{ Hz}$ $K = 1 (\text{assumed})$
$$B_n = 144000 \text{ Hz}$$

Therefore, Emission Designator = 14K4F3E

DESCRIPTION

2.983 (c) This transceiver is being prepared for quantity production.

2.983 (d) Transmitter Description

This transmitter is a microcomputer synthesized FM transceiver operating in the 403 to 512 MHz band.

From 1 to 16 channels may be programmed for use as determined by a EEPROM directing the microcomputer.

Features and Options are available as follows:

- A. 16 Channels
- B. Dual Priority Scan
- C. Transmit High/Low RF power
- D. CTCSS Channel Guard encode/decode with or without STE
- E. CDCSS Digital Channel Guard encode/decode with STE
- F. Type 99 decode (Ericsson or Motorola formats)
- G. GE-STAR encode (Standard or Emergency format)
- H. Home Channel operation (Stand alone or with Emergency GE-STAR)
- I. Carrier Control Timer
- J. Switchable bandwidth: 12.5 kHz or 25.0 kHz channel spacing
- K. Microprocessor XTAL frequency shift for Tx or Rx modes
- L. DTMF encode with Auto-Dial feature (KH-600 models only)

DESCRIPTION

2.983 (d)

(1)

Type of Emission:
14K4F3E, 10K4F3E

(2)

Frequency Range and Band Splits and Frequency Stability:

<u>Band</u>	<u>Band Splits</u>	<u>Frequency Stability</u>
(403 - 512 MHz)	(403.0 - 440.0 MHz)	+/- 2.5 ppm
	(440.0 - 470.0 MHz)	+/- 2.5 ppm
	(470.0 - 512.0 MHz)	+/- 2.5 ppm

(3)

Range of Operating Power:

The power amplifier consists of PA Module IC7.

The RF power output is regulated by sensing variations in the forward power that is fed to the antenna from the final RF power amplifier and adjusting the voltage on an earlier stage of the PA module to hold the forward power constant. Output power is as follows:

(403 - 512 MHz)	4 watts rated power (high RF power mode)
	1 watt rated power (low RF power mode)

2.983 (d)
(continued)

(4)

Maximum Power Rating: 4.0 Watts

Input Maximum	15 Watts
Output	4 Watts

(5)

Final Amplifier Voltage and Currents in Normal Operation:

Power Supply Voltage	7.5 Volts
Current	2 Amps