DIGITAL
& COMMUNICATION
TECHNOLOGY

RF2050

EPM MOBILE TRANSCEIVER

mesit DICOM
MESIT Group

- **EPM technology (TRANSEC + COMSEC)**
- **Resistant to intentional jamming**
- **Encryption of communication (voice & data)**
- **Communication on the tactical command level**
- **Operates in multiple frequency bands (multiband)**
- **Multi-purpose application (multirole)**
- **Different operation modes (multimode)**
- **Data transmission via internal modem**

RF2050 EPM mobile multiband transceiver, belonging to the RF20 family of multiband tactical radios with increased resistance to radio-electronic warfare, is designed for installation into any kind of tracked or wheeled vehicles. Small dimensions, robust design and outstanding features add to its great utility. The built-in modem ensures data communication in tactical IP networks according to MIL-STD-188-220.

Technical parameters

Frequency range ..... 25.0000 MHz to 145.9875 MHz

Nominal input/output impedance ..... 50 Ω

Frequency ranges

HF ..... 25.000 MHz to 29.975 MHz
VHF I ..... 30.000 MHz to 108.000 MHz
VHF II ..... 117.975 MHz to 140.000 MHz
VHF III ..... 140.0250 MHz to 145.9875 MHz

Type of modulation

HF ..... FM (F3E)
VHF I ..... FM (F3E)
VHF II ..... AM (A3E)
VHF III ..... FM (F3E)

Channel spacing

HF ..... 25 kHz
VHF I ..... 25 kHz; 12.5 kHz; 6.25 kHz
VHF II ..... 25 kHz; 8.33 kHz
VHF III ..... 25 kHz; 12.5 kHz

Preset channels 10

Monitored channels in all special operation modes ..... 3 (two selectable, third fixed - 121.500 MHz)

Maximum number of programmable nets 6

Special operation modes (usable in 30 MHz to 88 MHz band)

FH ..... frequency hopping
DFF ..... digital fixed frequency
FCS ..... free channel search
MIX ..... mixed operation FH and FCS
SFH ..... secure frequency hopping
SDFF ..... secure digital fixed frequency
SFCS ..... secure free channel search
SMIX ..... mixed mode SFH and SFCS

Time to initial synchronization ..... max. 7 s

Time of autonomous synchronization holding ..... 48 h

Hopping rate ..... 100 hops/s

Data transmission

- for VHF I ..... according to MIL-STD-188-220
- for special operation modes ..... user rate data transmission (2400, 4800 and 7100) bps

Interface USB/RS232

POWER SUPPLY

Nominal supply voltage ..... 12 VDC or 24 VDC

Limit supply voltage ..... 10 VDC to 33 VDC

Current consumption:

- at supply voltage 24 V ..... max. 12 A
- at supply voltage 12 V ..... max. 25 A

Compatibility MIL-STD-1275B

TRANSMITTER PARAMETERS

Nominal transmitter power CW/PEP ..... 50 W

Harmonic suppression ..... min. 60 dB

Spurious suppression at Δf > 25 kHz ..... min. 70 dB

Suppression of wide-band noise spectrum

- without co-site filter ..... min. 140 dBc/Hz
- with co-site filter ..... min. 160 dBc/Hz

Time of continuous operation at +50 °C at duty cycle reception : transmission = 1 : 1 ..... without limit

RECEIVER PARAMETERS

Sensitivity ..... 0.5 μV at 12 dB SINAD

Level of acoustic pressure of the internal speaker ..... min. 85 dB

Range of effectively transmitted frequencies

- voice ..... 300 Hz to 3000 Hz
- data ..... 10 Hz to 11000 Hz

ENVIRONMENTAL SPECIFICATION

Operating temperature range ..... -30 °C to +60 °C

EMC ..... according to MIL-STD-461E

MECHANICAL SPECIFICATION

Dimensions ..... W 202 mm x H 231 mm x D 186 mm

Weight

- without co-site filter ..... max. 8.5 kg
- with co-site filter ..... max. 9.0 kg

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