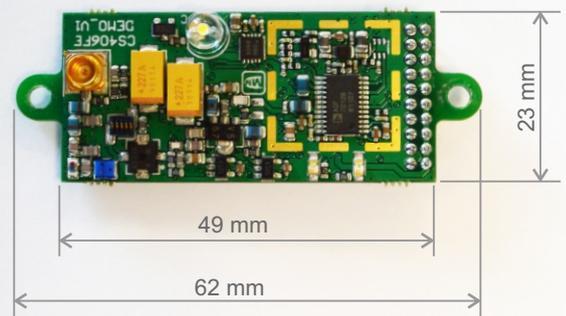
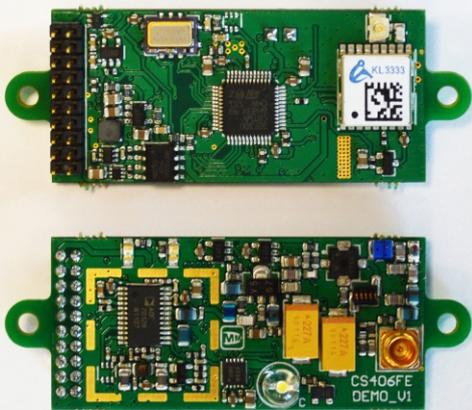
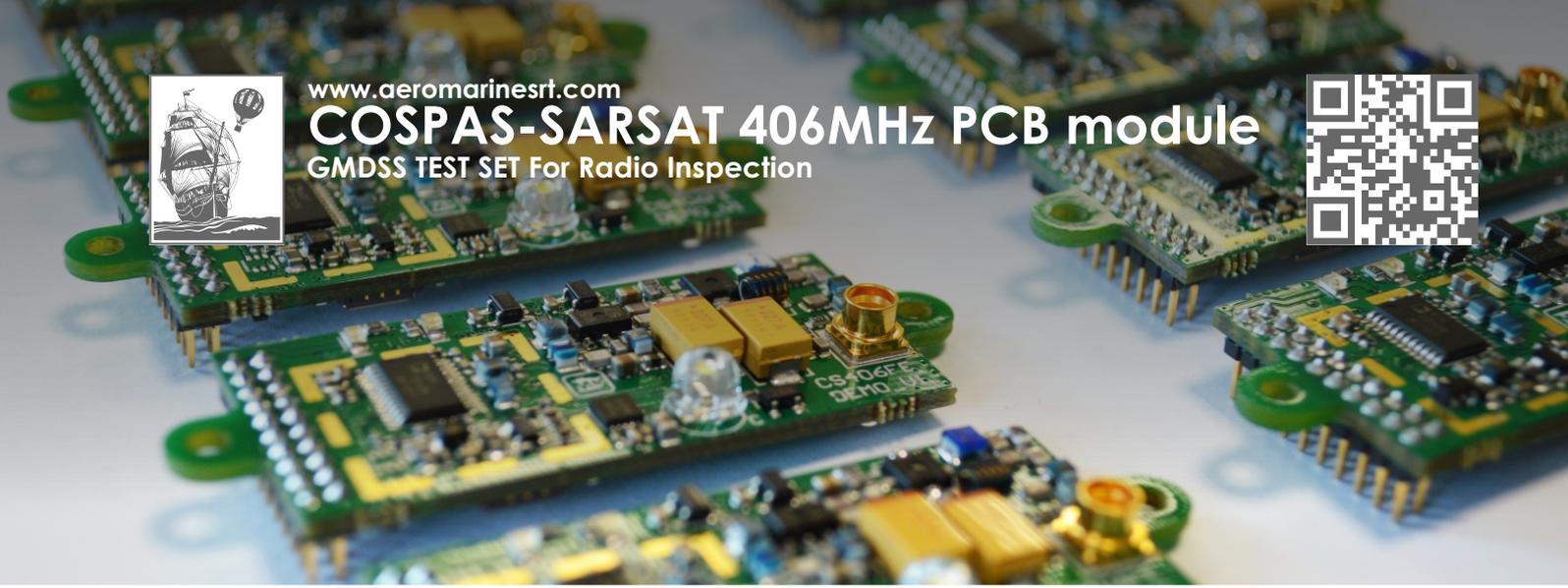




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COSPAS-SARSAT 406MHz PCB module

GMDSS TEST SET For Radio Inspection



COSPAS-SARSAT 406MHz PCB Card is designed for using in all types of Cospas-Sarsat devices, such as PLB, EPIRB, ELT; man over board solutions, MSLD devices (MSLD) and other device combinations according to RTCM 11901.1.

Module can be used as emergency button on trucks or as lost containers tracking facility.

Module can be easily integrated in ready or new devices with minimum requirements and integration actions.

Features:

- Module allows sending the emergency alert with unique emergency identifier to the COSPAS- SARSAT satellite system on 406MHz channel.
- 121.5 MHz channel is optionally available.
- Module can be programmed by unique ID or MMSI by means of PC and available software
- Module should be connected to any 406MHz antenna by means of SMP-50 Ohms output
- Module can be connected to any passive GPS antenna by means of U.FI connector
- Under the terms of operation module can be used after integration in the case at a temperature range of -20oC to + 55oC and relative humidity 95%.
- The module should be powered by 5.8-7.2V external power source. For 24 hours of operation at -20C module requires at least 1000 mAh capacity with average consumption of 27mA and ability to support max. current up to 1.3A.
- Module has flashlight, required by C/S, placed directly on the board that it can be easily placed on the case by replacing it with any output with standard footprint 2.54 mm
- Module can operate separately as ready device (external case is required) or as a part controlled by external main board



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SAFETY SOLUTIONS

<http://aeromarinesrt.com/>
Tel: +38 0512 454045; Fax: +38 0512 584199
info@aeromarinesrt.com

Ukraine Reg. No. 31222777 , Ukraine VAT Reg. No. 312227727053



Quality Management System
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COSPAS-SARSAT 406MHz PCB module

GMDSS TEST SET For Radio Inspection



General Description and Specifications

- PCB Module emits signal on 406MHz frequency in range of 406.0MHz - 406.1Mhz that can be adjusted with 3kHz step
- 406MHz signal power is 37dBm +/-2dBm (5W)
- Signal modulation – phase modulation, 1.1 radian.
- Modulation type - digital with phase discretization - 0.00044 radians
- Spurious emission attenuation: not less than 40dB
- Bit rate: 400 Baud
- Power supply: 5.8 – 7.2 V
- Average current consumption: 27 mA
- Operation modes: emergency / self test / boot / service
- Self test includes: battery voltage test, output power, frequency capture, GPS source tests
- Operation temperature range: -20°C +55°C. (Required to be installed in the case)
- Module size: 23 mm x 49 mm x 7.5 mm (height is indicated with add-on components)
- Module weight: not more than 17 grams

Technical Standards

- C/S T.001 - The 406MHz Module is design under Cospas-Sarsat T.001 specifications for 406 MHz distress beacons.
- C/S T.007 – Module complies with Cospas-Sarsat T.007 406 MHz Distress Beacons Type Approval Standards.
- IEC 61097-2 – Module complies with IEC 61097-2 Operational and performance requirements, methods of testing and required test results
- US RTCM 11000 and RTCM 11010 standards for 406 MHz beacons
- Canadian RSS-287 - Radio Standard Specification
- European Telecommunication Standard - ETS 300 066

* The compliance is limited by integration requirements.

Integration

406MHz module can be integrated in ready or new device. It can operate separately as ready device or as a part controlled by external main board.

Minimum integration requirements.

- External case. The case should comply with minimum C/S requirements have separate emergency and test mode buttons and comply with device type – PLB, EPIRB or else. It should have enough space for PCB itself and power supply units.
- 406MHz antenna. 406MHz antenna should comply with CS-T-001-2014 item 2.3.3 and IEC61097-2 item.4.7.
- Antenna socket – SMP-50 Ohm. Cable connector: SMP Jack (example: Mouser P/N 538-73415-5032).
- GPS antenna. Any passive GPS antenna. Antenna socket – U.FL. Cable connector - Hirose U.FL-LP-066
- Power supply source. The module should be powered by 5.8-7.2V external power source. For 24 hours of operation at -20C module requires at least 1000 mAh capacity with average consumption of 27mA and ability to support max. current up to 1.3A.
- Direct connection to control buttons on the case. The PCB can be directly installed in the case and connected to buttons on the case to power on in one of the two operation modes: emergency or test.
- External control board. The PCB can be connected by means of main connector to any main board.
- Flashlight. Flashlight, required by C/S, is placed directly on the board but it can be easily placed on the case by replacing it with any output with standard footprint 2.54 mm.



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