

Wireless Support Modules

five connectivity options in small packages

Aimed at automotive use, the LBEL6Z2TXC wireless combination module employs an AEC-Q100-compliant chipset. The module provides support for wireless LAN (WLAN), Bluetooth, Bluetooth Low Energy (BLE) communications. This is in addition to providing an FM radio receiver and GPS receiver. The module, from Murata, is compact; it measures just 24.6x18x3mm. The WLAN feature is IEEE 802.11 b, g and n -compliant and also supports WiFi Direct. Bluetooth 4.0 class 2-compliant support and support for the H4 protocol is standard. According to the company, combining five wireless functions in a single package allows designers to simplify designs and save board space. Another advantage is that it eases procurement as the engineer does not have to select multiple modules from other suppliers. It is also claimed to speed time to market as the modules are pre-qualified. Interfaces are a UART, PCM, SDIO, I²S and audio. Power requirements are +3.3 and +1.8V DC. The module operates across a range of operating temperatures from -40 to +85°C. Typical applications include car infotainment, parking assistance, telematics, driver assist and internet-in-car.

Electronica 2012: Hall B5 - 107

MURATA

www.epn-online.com/search?search_keyword=48921



High-Frequency Options

combat the threats of EMI, EMP and TEMPEST

On its stand in Munich, MPE is showcasing its higher current EMC and EMP filters and feedthrough capacitors which protect against conducted EMI in high-frequency vehicle equipment and communications facilities. The EMC filters for high-frequency EMI / RFI suppression have a coupled circuit design which allows easier inspection and maintenance in a compact unit, which measures approximately a quarter of the size of conventional systems. Solderless capacitor assembly avoids heat damage to the non-conductive plastic dielectric. The company is also showing power line, data line, telephone line and control line filters to provide EMP (electromagnetic pulse) protection for fixed or mobile, digital or analogue, equipment. Secondary protection is provided by a transient suppressed filter to clean up and reduce the remaining pulse voltage. To provide delay to the incoming pulse, the filter is either mounted at a distance from the primary protector or separated by a discrete inductor. Also at the show the company is showing its HEMP (high-altitude EMP) filters to meet the pulse current injection (pci) requirements of MIL-STD 188-125. Here, secondary and tertiary suppressors protect cable entry points. Finally, visitors to the stand can see power line filters which support the highest level of TEMPEST (transient EMP emanation standard) hardening.

Electronica 2012: Hall B6 - 362

MPE

www.epn-online.com/search?search_keyword=48895

PRECISION

think Greenray

Greenray precision OCXOs and TCXOs provide exceptional Frequency Stability, Vibration, Shock, and Acceleration Sensitivity performance for the most demanding Communications, Aerospace, and Test & Measurement applications.

SATCOM STRATUM3E SARSAT STRATUM3 GPS
RADAR FEMTOCELL WiMAX SMART MUNITIONS

See them all at e2012
Hall B6 Booth 368

New T70 Series



Frequency 10 - 50 MHz
Attributes Ultra-tight Stability
High Shock & Vib., Lo-Power
Best Stability to ± 0.1 ppm
Output HCMOS, Clipped Sine
Size 5 x 7mm, SMT
3 x 5mm also available

YH1420



Frequency 10 - 100 MHz
Attributes Small Size
Low Phase Noise
Best Stability $\pm 5 \times 10^{-8}$
Output CMOS, Sine wave
Size 20.32 x 12.70 x 9.14
0.8 x 0.5 x 0.36 in., DIP

T1215



Frequency 10 - 800 MHz
Attributes Hermetic Pkg.
Best Stability ± 0.3 ppm
Output CMOS, Sine wave
LVPECL
Size 9.0 x 7.0 x 2.8
0.35 x 28 x 0.11 in., SMT

YH1460



Frequency 10 - 100 MHz
Attributes Compact Pkg.
Best Stability $\pm 1 \times 10^{-8}$
Output CMOS, Sine wave
Size 25.4 x 25.4 x 13.46
1.0 x 1.0 x 0.53 in.



Made in the USA

GREENRAY

www.greenrayindustries.com