Surface Mount IR Receivers

A new series of miniaturized, surface-mount infrared receiver modules that feature a 30-meter (98-foot) reception range has been announced by Vishay Intertechnology. The highly sensitive Vishay Telefunken TSOP52xx family is designed for use in remote controls for automotive keyless entry systems, set-top boxes, camcorders, cameras, televisions, car stereos, and portable audio equipment.

Devices in the new series combine a photodetector and preamplifier in a package that can be mounted in either a top-view or side-view orientation to printed circuit boards. With a footprint of 7.5 mm by 5.3 mm and a 4 mm height profile, compact TSOP52xx devices will enable manufacturers to save on component costs by incorporating a single receiver module in a variety of product designs, as well as saving space wherever they are used.

In addition to their small size and extended distance range, devices in the TSOP52xx series conserve battery life by consuming minimal power &#151 typically 6 mW when operating from a 4.5 V to 5.5 V supply voltage.

Enhanced automatic gain control circuitry suppresses interference from sunlight, energy-saving lamps, and other light disturbances, while an external metal shield protects against EMI. Additional features include an internal band filter for PCM frequency operation, and TTL and CMOS compatibility. To further simplify designs, devices in the TSOP52xx series have a demodulated output signal that can be directly decoded by a microprocessor.

The new devices support all major transmission codes and are available with carrier frequencies of 30 kHz (TSOP5230), 33 kHz (TSOP5233), 36 kHz (TSOP5236), 36.7 kHz (TSOP5237), 38 kHz (TSOP5238), 40 kHz (TSOP5240), and 56 kHz (TSOP5256).

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