

High-Reliability Quartz Crystals Designed to Meet Requirements for Automotive TPMS

The XRQ crystal series is designed to be highly reliable in automotive applications and perform accurately in harsh conditions.

These parts are qualified to AEC-Q200, are PPAP capable, and are manufactured in IATF16949:2016 certified facilities. The parts cover three temperature ranges allowing them to support under-the-hood, passenger compartment hotspots, and general passenger compartment locations.

They are seam-seal devices, available in three sizes of ceramic packages:

XR32Q: 3.2mm x 2.5mm

XR25Q: 2.5mm x 2.0mm

XR20Q: 2.0mm x 1.6mm

The parts support frequencies from 12MHz to 66MHz.

The XRQ series meets the requirements of ultrasonic welding manufacturing process as well as the industry-standard drop test.



The Diodes Advantages

The XRQ series provides accurate timing for applications where high reliability is a must.

- **Three Seam-Seal Package Sizes with Wide-Frequency Coverage**
 XR32Q: 3.2mm x 2.5mm, 12MHz to 66MHz
 XR25Q: 2.5mm x 2.0mm, 16MHz to 66MHz
 XR20Q: 2.0mm x 1.6mm, 24MHz to 66MHz
- **Centrifugal Force Qualification to Meet SAE J2657 (2004) Sec. 4.1.15**
 Meets the requirement of TPMS
- **Qualified to AEC-Q200 in Diodes' IATF16949:2016 Certified Facilities**
 Grade 1: -40°C to +125°C
 Grade 2: -40°C to +105°C
 Grade 3: -40°C to +85°C
- **Rugged Mechanical Shock Capability Supports up to 8000G**
 Exceeds MIL-STD-202 Method 213 (Std.:1500G)

Applications

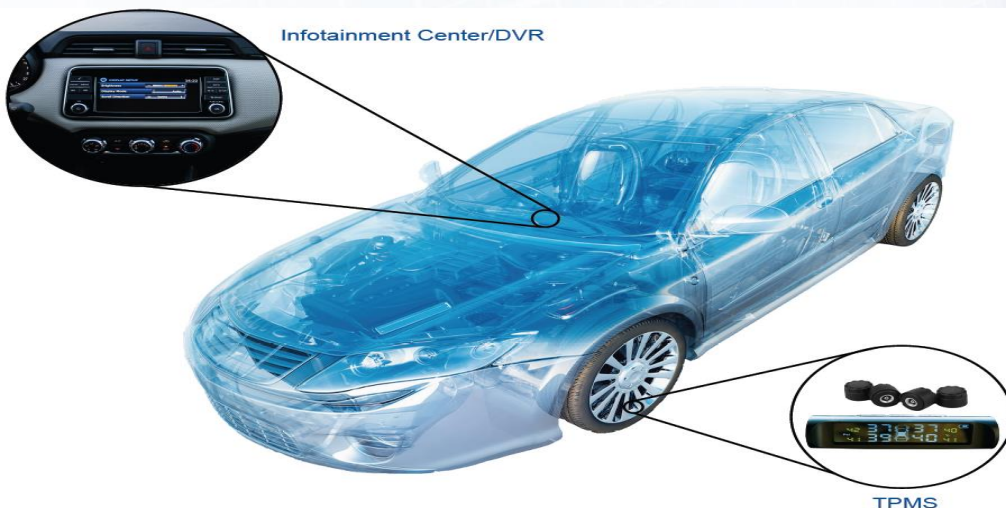
- Tire-Pressure Monitoring System (TPMS)
- Infotainment & Telematics
- Advanced Driver Assisted System (ADAS)



New Product Announcement

XRQ

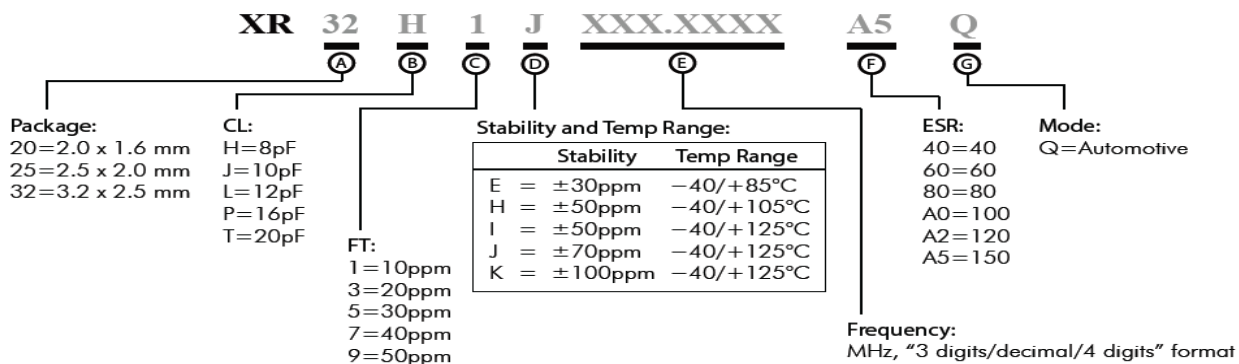
Focus Applications:



Why Diodes XRQ Crystals:

Customer Requirements/Concerns	Standards	Diodes XRQ	Benefit	
End System Manufacturing	Supports Ultrasonic Welding	N/A	1000W, 0.1 sec, and 30KHz	Use with ultrasonic welding lowers DPPM
Endurance in Dynamic Environment	Vibration	AEC-Q200 5G	20G	Tested beyond typical standards for additional robustness and durability, which ensure better reliability
	Mechanical Shock	MIL-STD-202 1500G	8000G	
	Drop Test	JIS-C0044 75cm Height	120cm	
	Centrifugal	SAE-J2657 1500G	1500G	

Ordering Information:



Please contact us for custom requirements for your specific application needs.