

# R-Gage RF Emissions

1/28/16

## Scope

This document applies to all QT50R, Q120R, Q130RA, and Q240R Series R-Gage™ Radar Sensors.

## Operational Specifications

<i>Specification</i>	<i>QT50R/Q130RA</i>	<i>Q120RA</i>	<i>Q240RA (FCC, China)</i>	<i>Q240RA(ETSI/CE)</i>
Frequency Band	K-Band, ISM Region	K-Band, ISM Region	K-Band, ISM Region	K-Band, ISM Region
Operating Frequency				
-EU, -KR, -CN, -SG	24.050 – 24.250GHZ	24.050 – 24.250GHZ	24.050 – 24.250GHZ	24.050 – 24.250GHZ
-US, -TW	24.075 – 24.175GHZ	24.075 – 24.175GHZ	24.075 – 24.175GHZ	24.075 – 24.175GHZ
Others	T.B.D.	T.B.D.	T.B.D.	T.B.D.
Modulation	FM-CW	FM-CW	FM-CW	FM-CW
Channels	1	1	1	1
Duty Cycle	100%	100%	100%	100%
Antenna Type	Internal, Planar	Internal, Planar	Internal, Planar	Internal, Planar
Antenna Area	20x10mm (TX, RX)	60x30mm (TX, RX)	120x60mm (TX, RX)	120x60mm (TX, RX)
Antenna Gain	15dBi	17.5dBi	22dBi	22dBi
Antenna Pattern	45° (Azimuth)	12° (Azimuth)	5.5° (Azimuth)	5.5° (Azimuth)
	38° (Elevation)	25° (Elevation)	6.5° (Elevation)	6.5° (Elevation)
Side Lobe	13dB (Azimuth)	15dB (Azimuth)	35dB (Azimuth)	35dB (Azimuth)
Suppression	13dB (Elevation)	15dB (Elevation)	35dB (Elevation)	35dB (Elevation)
Output Power (Max)	3.3mW(erp)	3.3mW(erp)	3.3mW(erp)	0.9mW(erp)
	100mW(eirp)	100mW(eirp)	358mW(eirp)	100mW(eirp)
	5dBm(erp)	5dBm(erp)	5dBm(erp)	-0.5dBm(erp)
	20dBm(eirp)	20dBm(eirp)	25.5dBm(eirp)	20dBm(eirp)
Field Strength (Max)	88-20log(m) dBuA/m	88-20log(m) dBuA/m	88-25.5log(m) dBuA/m	88-20log(m) dBuA/m
	24-20log(m)	24-20log(m)	24-25.5log(m)	24-20log(m)
	dBmW/m2	dBmW/m2	dBmW/m2	dBmW/m2

## **Consulted Bodies**

- Nemko USA
- Rheintech
- Temco
- CETECOM ICT Services GmbH
- Northwest EMC