

On Air 2 sec Limit per Hour Calculation

YMY-030263 / 9157A-030263

Calculation to meet requirements according to FCC §15.231(a)(3) and RSS-210 A1.2.(c)

Calculated for part number 030263, 030318, 030206, 030359, 030319, 516007694, 960 733 001 0, 960 733 000 0

Normal Case Calculation for 2 sec Limit

The calculation is intended to verify that in **normal case** situations the Limit of 2 seconds on air transmission per hour is not violated.

The scenario below describes a vehicle that is initially parking and then starting to drive continuously.

Vehicle Condition	Sensor State	Duration (min)	Transmission Cycle (sec)	Number of Transmissions (counts)	Transmission time (ms)
Parking	Active Mode	15	40	22,5	225
Rolling	Active Mode	2	40	3	30
Driving	Beginning of Drive Mode	4	10	24	240
Driving	Active Mode	39	40	58,5	585
Total		60			1080

-> Result: within 60 minutes, the sensor transmits 1080 ms -> within FCC limit of 2000 ms

Worst Case Calculation for 2 sec Limit

The calculation is intended to verify that in **worst case** situations the Limit of 2 seconds on air transmission per hour is not violated.

The scenario below describes a vehicle that has multiple stop and go traffic, causing many entries of the Beginning of Drive Mode with highest data transmission.

Vehicle Condition	Sensor State	Duration (min)	Transmission Cycle (sec)	Number of Transmissions (counts)	Transmission time (ms)
Parking	Active Mode	15	40	22,5	225
Rolling	Active Mode	2	40	3	30
Driving	Beginning of Drive Mode	4	10	24	240
Rolling	Active Mode	2	40	3	30
Parking	Active Mode	15	40	22,5	225
Rolling	Active Mode	2	40	3	30
Driving	Beginning of Drive Mode	4	10	24	240
Rolling	Active Mode	2	40	3	30
Parking	Active Mode	15	40	22,5	225
Rolling	Active Mode	2	40	3	30
Driving	Beginning of Drive Mode	4	10	24	240
Rolling	Active Mode	2	40	3	30
Parking	Active Mode	8	40	12	120
Total		60			1440

-> Result: within 60 minutes, the sensor transmits 1440 ms -> within FCC limit of 2000 ms

Calculation to meet requirements according to FCC §15.231(a)(3) and RSS-210 A1.2.(c)

Calculated for part number 1556645

Normal Case Calculation for 2 sec Limit

The calculation is intended to verify that in **normal case** situations the Limit of 2 seconds on air transmission per hour is not violated.

The scenario below describes a vehicle that is initially parking and then starting to drive continuously.

Vehicle Condition	Sensor State	Duration (min)	Transmission Cycle (sec)	Number of Bursts (counts)	Transmission time (ms)
Parking	Active Mode	15	120	8	75
Rolling	Active Mode	2	40	3	60
Driving	Beginning of Drive Mode	40	65	37	1292
Driving	Active Mode	3	120	2	68
Total		60			1495

-> Result: within 60 minutes, the sensor transmits 1495 ms -> within FCC limit of 2000 ms

Worst Case Calculation for 2 sec Limit

The calculation is intended to verify that in **worst case** situations the Limit of 2 seconds on air transmission per hour is not violated.

The scenario below describes a vehicle that has multiple stop and go traffic, causing many entries of the Beginning of Drive Mode with high data transmission.

Vehicle Condition	Sensor State	Duration (min)	Transmission Cycle (sec)	Number of Bursts (counts)	Transmission time (ms)
Parking	Parking Mode	15	120	8	75
Rolling	Rolling Mode	2	40	3	60
Driving	Beginning of Drive Mode	4	65	4	129
Rolling	Rolling Mode	2	40	3	60
Parking	Parking Mode	15	120	8	75
Rolling	Rolling Mode	2	40	3	60
Driving	Beginning of Drive Mode	4	65	4	129
Rolling	Rolling Mode	2	40	3	60
Parking	Parking Mode	15	120	8	75
Rolling	Rolling Mode	2	40	3	60
Driving	Beginning of Drive Mode	4	65	4	129
Rolling	Rolling Mode	2	40	3	60
Parking	Parking Mode	8	120	4	40
Total		60			878

-> Result: within 60 minutes, the sensor transmits 878 ms -> within FCC limit of 2000 ms