

Reference Device	Variant Device	Key differences
Model: GAT ECO.Lock 7102 NW F/ISO FCC ID: NC4-LM100	Model: GAT ECO.Lock 7102 NW F/ISO ICLS FCC ID: NC4-LM100	Included HID's next generation single chip secure element (IC11)
	Model: LM100 FCC ID: NC4-LM100	Included Secure Element and Motor driver (IC5 and IC10)

Rule Part	Test item	Data Reference	Comments
DTS			
FCC 15.247 (a)	6 dB Bandwidth	Y	Pointer to 75856RRF.004
FCC 15.247 (b)	Maximum output power and antenna gain	Y	Pointer to 75856RRF.004
FCC 15.247 (c)	Band-edge emissions compliance (Transmitter)	Y	Pointer to 75856RRF.004
FCC 15.247 (d)	Power spectral density	Y	Pointer to 75856RRF.004
FCC 15.247 (e)	Emission limitations radiated (Transmitter)	N	Pointer to 75856RRF.007 for LM100 and 75856RRF.010 for GAT ECO.Lock 7102 NW F/ISO ICLS
DXX			
FCC 15.225 (a)	Field strength of emissions within the band 13.553 MHz -13.567 MHz	N	Pointer to 75856RRF.008 for LM100 and 75856RRF.011 for GAT ECO.Lock 7102 NW F/ISO ICLS
FCC 15.225 (b)	Field strength of emissions within the band 13.410 - 13.553 MHz and 13.567 – 13.710 MHz	N	Pointer to 75856RRF.008 for LM100 and 75856RRF.011 for GAT ECO.Lock 7102 NW F/ISO ICLS
FCC 15.225 (c)	Field strength of emissions within the band 13.110 - 13.410 MHz and 13.710 – 14.010 MHz	N	Pointer to 75856RRF.008 for LM100 and 75856RRF.011 for GAT ECO.Lock 7102 NW F/ISO ICLS
FCC 15.225 (d)	Field strength of emissions outside of the band 13.110 MHz -14.010 MHz	N	Pointer to 75856RRF.008 for LM100 and 75856RRF.011 for GAT ECO.Lock 7102 NW F/ISO ICLS
FCC 15.225 (e)	Frequency tolerance of the carrier signal	Y	Pointer to 75856RRF.005
COLOCATION			

FCC 15.31 (h), FCC 15.209 (a), 15.225 (d), 15.247 (d)	Emission limitations radiated (Transmitter)	N	Pointer to 75856RRF.009 for LM100 and 75856RRF.012 for GAT ECO.Lock 7102 NW F/ISO ICLS
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Acceptance Criteria for all test cases

FCC Part 15.247 (DTS)

For the same radiated test conditions, It has been taken the considered most critical range of harmonic emission of the carrier and compared the value of the first evaluable harmonic, with the difference between the reference and the variant being <3 dB.

The previous information can be confirmed by the reports number 75856RRF.004, and 75856RRF.007 and 75856RRF.010.

75856RRF.004, page 37

Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[3, 17]	2402.00000	4804.460	49.50	H	PK
[3, 17]		12008.860	51.86	V	PK
[3, 17]	2440.00000	4879.500	47.84	V	PK
[3, 17]		7319.140	51.70	H	PK
[3, 17]		12199.540	52.75	V	PK
[3, 17]	2480.00000	4959.440	51.34	H	PK
[3, 17]		7439.120	50.39	H	PK
[3, 17]		12401.000	52.75	V	PK

75856RRF.007

Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[3, 17]	2402.00000	4804.320	50.73	H	PK
		12008.720	51.54	H	PK
	2440.00000	4879.500	48.80	V	PK
		7319.280	51.91	H	PK
		12200.800	52.65	V	PK
	2480.00000	4959.440	49.84	V	PK
		7440.660	51.55	H	PK
		12398.480	52.17	V	PK

75856RRF.010

Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[3, 17]	2402.00000	4803.620	50.80	V	PK
[3, 17]		12011.380	51.42	H	PK
[3, 17]		14410.280 (*)	55.56	H	PK
[3, 17]	2440.00000	4879.500	50.66	V	PK
[3, 17]		7319.840	51.29	V	PK
[3, 17]		12198.700	52.11	V	PK
[3, 17]	2480.00000	4960.140	51.21	V	PK
[3, 17]		7439.260	53.97	H	PK
[3, 17]		12401.140	51.82	H	PK

FCC Part 15.225 (DXX)

For the same radiated test conditions, It has been evaluated the value of the carrier, with the difference between the reference and the variant being <3 dB.

The previous information can be confirmed by the reports number 75856RRF.005, and 75856RRF.008 and 75856RRF.011.

ISO A**75856RRF.005, page 17:**

Modulation: ISO 14443A

Results**- Band 13.553 -13.567 MHz**

Frequency (MHz)	Maximum field strength (dB μ V/m) measured at 3 m (quasi-peak detector)	Maximum field strength (dB μ V/m) extrapolated to 30 m (40 dB/decade)
13.560	18.96	-21.04

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Modulation: ISO 14443A

Results**- Band 13.553 -13.567 MHz**

Frequency (MHz)	Maximum field strength (dB μ V/m) measured at 3 m (quasi-peak detector)	Maximum field strength (dB μ V/m) extrapolated to 30 m (40 dB/decade)
13.560	17.88	-22.12

75856RRF.011, page 14

Modulation: ISO 14443A

Results

- Band 13.553 -13.567 MHz

Frequency (MHz)	Maximum field strength (dBµV/m) measured at 3 m (quasi-peak detector)	Maximum field strength (dBµV/m) extrapolated to 30 m (40 dB/decade)
13.560	18.23	-21.77

ISO V

75856RRF.005, page 20:

Modulation: ISO 15693

Results

- Band 13.553 -13.567 MHz

Frequency (MHz)	Maximum field strength (dBµV/m) measured at 3 m (quasi-peak detector)	Maximum field strength (dBµV/m) extrapolated to 30 m (40 dB/decade)
13.560	18.81	-21.19

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Modulation: ISO 15693

Results

- Band 13.553 -13.567 MHz

Frequency (MHz)	Maximum field strength (dBµV/m) measured at 3 m (quasi-peak detector)	Maximum field strength (dBµV/m) extrapolated to 30 m (40 dB/decade)
13.560	17.63	-22.37

75856RRF.011, page 14

Modulation: ISO 15693

Results

- Band 13.553 -13.567 MHz

Frequency (MHz)	Maximum field strength (dBμV/m) measured at 3 m (quasi-peak detector)	Maximum field strength (dBμV/m) extrapolated to 30 m (40 dB/decade)
13.560	16.33	-23.67