
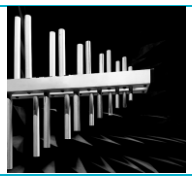
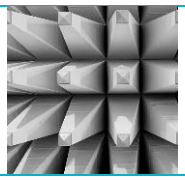

CTC advanced
member of RWTÜV group

Bundesnetzagentur

BNetzA-CAB-02/21-102

DAkkS Deutsche Akkreditierungsstelle D-PL-12076-01-03

Maximum Permissible Exposure (MPE) & Exposure evaluation

(FCC / IC)

Report identification number: 1-3812/17-01-07

Certification numbers and labeling requirements	
Kind of product: DECT Base Station **Product name: 8379 DECT IBS** - 8379 DECT IBS INTEGRATED ANTENNAS - 8379 DECT IBS FOR EXTERNAL ANTENNAS (H+S 1319.19.0005, H+S 1319.19.0004, MA430X12) - 8379 DECT IBS OUTDOOR EXTERNAL ANTENNAS	
contains the module with the following certification numbers	
FCC ID	OL38379
IC number	1737D-8379
HVIN (Hardware Version Identification Number)	3BN76020BA; 3BN76020CA; 3BN76020DA
PMN (Product Marketing Name)	8379 DECT IBS INTEGRATED ANTENNAS 8379 DECT IBS FOR EXTERNAL ANTENNAS 8379 DECT IBS OUTDOOR EXTERNAL ANTENNAS
FVIN (Firmware Version Identification Number)	v51.04
HMN (Host Marketing Name)	-/-

This report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Document authorized:

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EUT technologies:

Technologies:	Max. power conducted: (AVG)	Max. antenna gain*:	Min. pathloss:
DECT	Declared: max 19 dBm	8.0 dBi	0 dB (if applicable)

)* worst case of all antenna types (internal, external, H+S 1319.19.0005, H+S 1319.19.0004, MA430X12)

Conducted test results see CTC advanced test report 1-3812/17-01-20

Prediction of MPE limit at given distance - FCC

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S = PG / 4\pi R^2$

where: S = Power density
P = Power input to the antenna
G = Antenna gain
R = Distance to the center of radiation of the antenna
PG = Output Power including antenna gain

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled “Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure”

Frequency Range (MHz)	Power Density (mW/cm^2)	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

Prediction: worst case

	Technology	DECT	
	Frequency	1900	MHz
P	Declared max power input to the antenna	19	dBm
R	Distance	20	cm
G	Antenna gain	8	dBi
S	MPE limit for uncontrolled exposure	1.0000	mW/cm^2
	Calculated Power density:	0.0998	mW/cm^2
	Calculated percentage of limit:	9.98%	

This prediction demonstrates the following:

The power density levels for FCC at a distance of 20 cm are below the maximum levels allowed by regulations.

Prediction of MPE limit at given distance - IC

RSS-102, Issue 5, 2.5.2

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2}\ f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

Prediction: worst case

		0.3 - 6	GHz
	Technology	DECT	
	Frequency	1900	MHz
P	Max power input to the antenna	19	dBm
R	Distance	20	cm
G	Antenna gain	8	dBi
	Maximum EIRP	501.2	mW
	Exclusion Limit from above:	2.28	W

Conclusion: RF exposure evaluation is not required.
For applications where minimum distance to radiating element is 20cm Annex C of RSS-102 should be filled out.