

Declaration regarding RF Exposure

Federal Communication Commission
 Equipment Authorization Division, Application Processing Branch
 7435 Oakland Mills Road
 Columbia, MD 21048

July 24, 2012

TO WHOM IT MAY CONCERN

RF Exposure issue for any portable devices subject to 2.1093 routine evaluations regarding the following product:

<u>FCC ID Number</u>	<u>Product</u>	<u>Title/Model</u>
TVU-S820H		Gigaset S820H

Portable Part with one Longslot

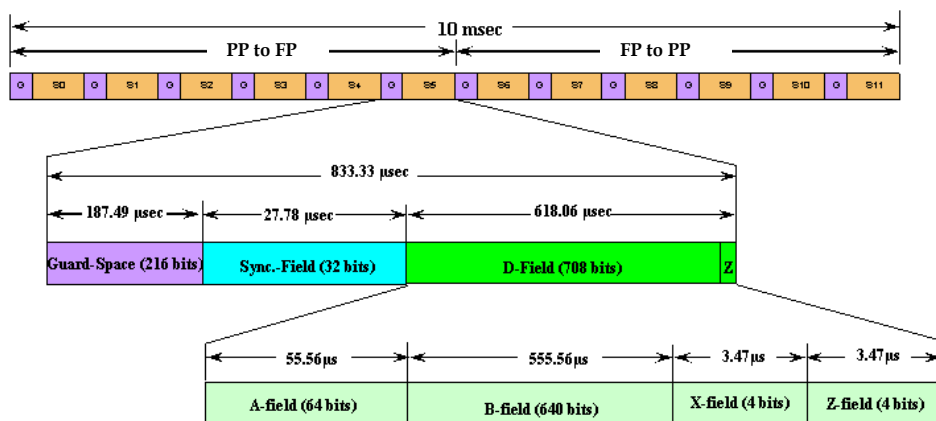
Slot length (S_L):656 us, frame length (F_L):10 ms, max. no. of slots per frame (N): 1

DECT 6.0

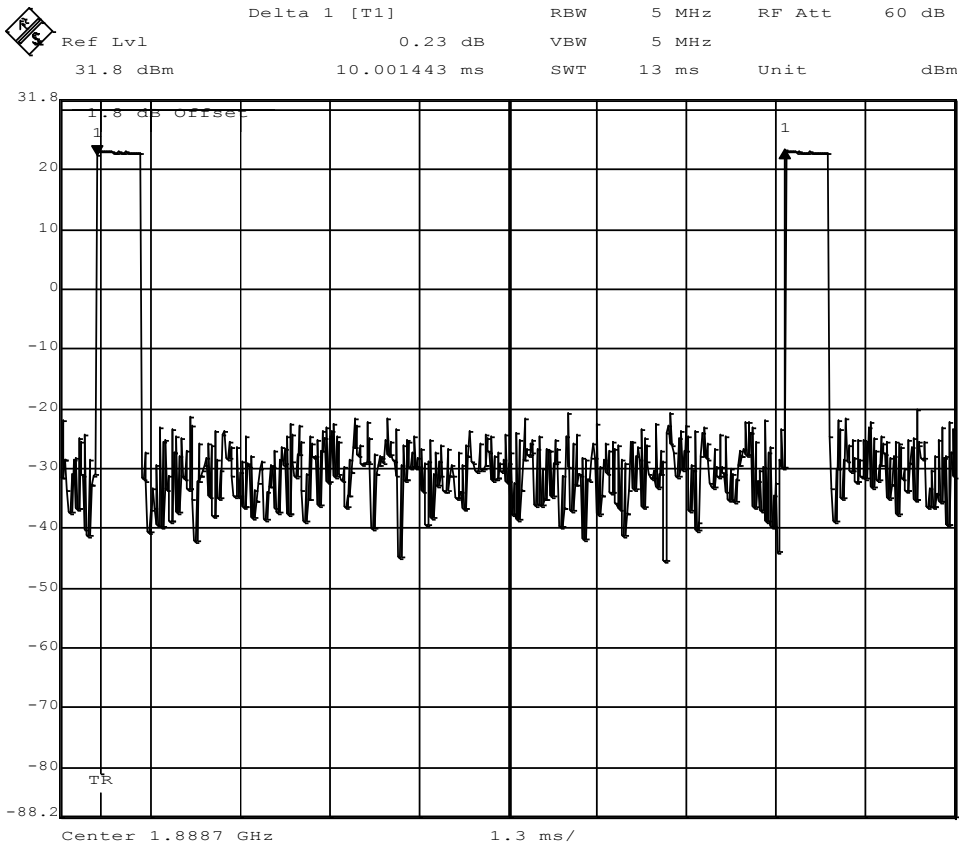
P_t – Transmitted output power (rms peak)	20.3	dBm	
dc – duty cycle / factor	0.0656		$S_{LX} N / F_L$
Production tuning range	19.5 ±1	dBm	

$P_{source\ based\ time\ average, max} = P_t\ dc = 7.03\ mW$
$60mW / f\ (GHz) = 31.25\ mW$

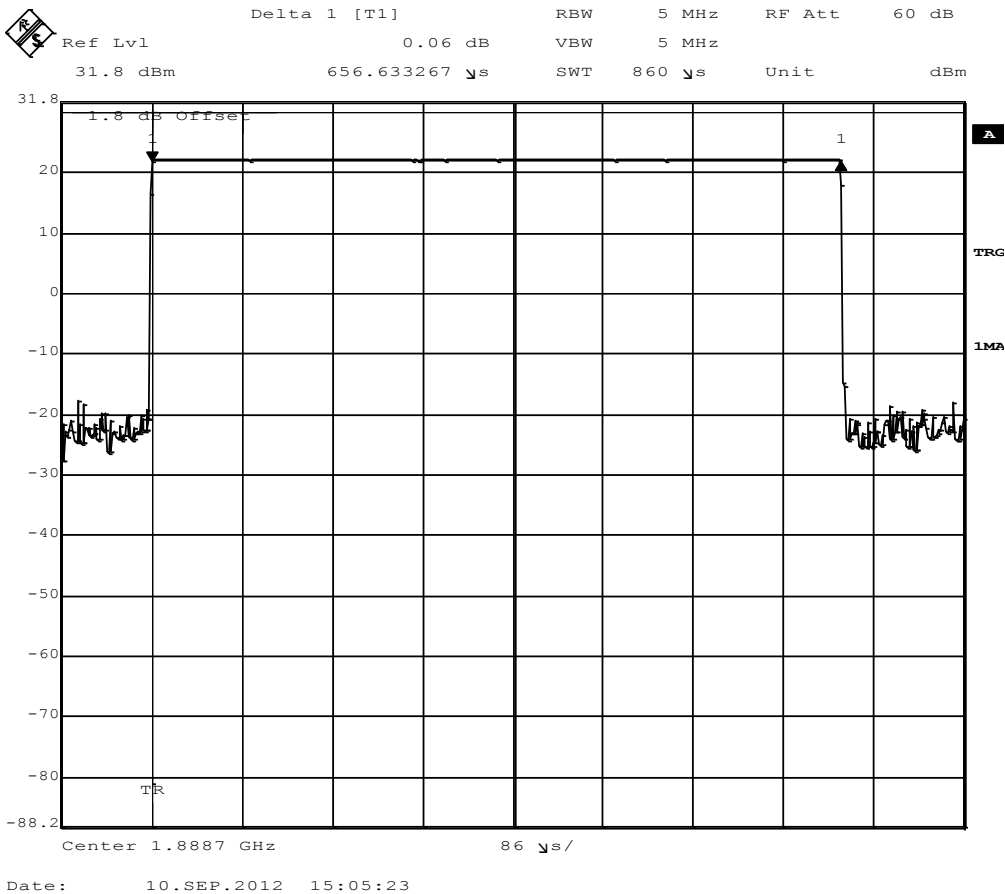
The handset is using 1 longslot out of total 12 (656us in 10ms frame) resulting in a duty-cycle of 6.56%. With a transmitted output power of 107.15mW (20.3dBm) the source-based time-averaged conducted output power is 7.03mW =< 60mW/f .



DECT frame and slot structure (longslot)



Handset transmission: 10 ms frame



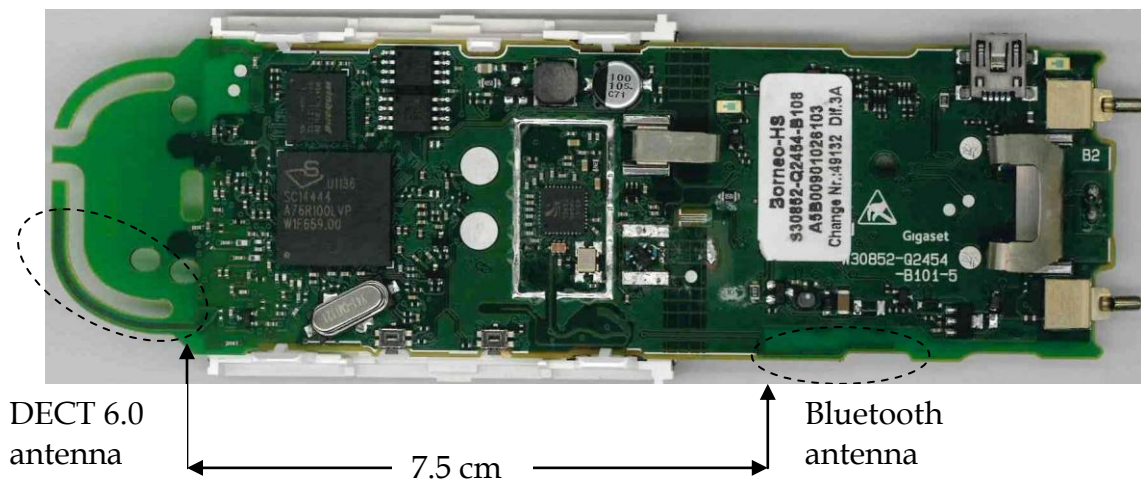
Handset transmission: 656 us burst (incl. 10us burst rise/fall time)

Bluetooth:

P_t - Transmitted power (rms peak)	2.5	dBm
G_t - Antenna gain	2	dBi
dc - duty cycle / factor	0.764	

$$P_{source \text{ based time average}} = P_t \text{ dc} = 1.36\text{mW}$$

Due to the fact that the DECT and Bluetooth transmissions are not radiated via one antenna it can be assumed that both patterns do not superimpose and therefore can be assessed separately.



Remarks:

1. High TX power: this usually is seen in 5 GHz or other range-driven designs:

Comment: $P_t = 107.15$ mW included in calculation

2. Reduce or dynamic number of time slots: this is usually seen in a system where intercom is not supported or the number of supported handsets is less than 6.

Comment: Max. number of timeslots in the base station= 6

The slot and frame structure is defined by the DECT standard resulting in a maximum transmit long-slot number of 6 and 1 long-slot for a handset with one active call.

The timing control is based on a state machine within the baseband controller programmed by dedicated software which handles the system requirements.

3. Handset with roaming capability: this is seen in designs where repeaters or multiple base configurations are supported.

Comment: No roaming capability

4. Handset with multi-line capability: this is typical in an office Wireless PBX design.

Comment: No multi-line capability

5. Special features requiring multiple time slot transmission are supported such as call waiting (toggle between multiple calls on multiple lines) and wireless repeater.

Comment: multiple time slot transmissions are supported and considered in the calculation (d_c)

(signed)



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