

HONEYWELL SECURITY & CUSTOM ELECTRONICS		EXHIBIT 5-3C MAX RADIATED EMISSIONS
2 Corporate Center Drive		FCC ID: CFS8DL5816ST
Melville, NY 11747		IC: 573F-5816ST
EXHIBIT 5-3C		

Per §15.231(b)(2)

Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. As an alternative, compliance with the limits in the above table may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in §15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of harmonics (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	1,250 to 3,750	125 to 375
174-260	3,750	375
260-470	3,750 to 12,500	375 to 1250
Above 470	12,500	1,250

TEST NAME: RADIATED EMISSIONS

The 5816ST contains a 345MHz transmitter. To verify that the level of radiation was not significant, the device underwent radiated emissions at an external test laboratory.

With the transmitter in the ON state, peak emissions were checked at the fundamental frequency and the harmonics. The duty factor is used to calculate average emissions.

The device is tested for the product variations with and without a terminating cable. The lab generated a report for each case. The worst case emissions for each frequency are used for calculations.

Tested By: Rhein Tech Laboratories, Herndon, VA, USA (see separate test reports from Rhein Tech)

Test Sample (model): 5816ST (with and without terminal block populated).

Test Method: ANSI C63.10-2012 6.5.6.6

WORST CASE EMISSIONS VALUES

The worst case emission at each frequency is shown in the table below. The worst case is taken from the two lab reports for the variant with and without the terminal block. Measurements for the variant with the terminal block were done with a 1M cable attached to the terminal block as per test requirements.

Freq (MHz)	Harmonic	Rhein Tech Emission Measurements (dBuV/M)		
		5816ST no TB	5816ST TB + cable	Worst
345.0	1.0	90.2	91.7	91.7
690.0	2.0	61.5	69.4	69.4
1035.0	3.0	56.0	58.2	58.2
1380.0	4.0	63.3	63.9	63.9
1725.0	5.0	75.5	71.8	75.5
2070.0	6.0	74.0	76.2	76.2
2415.0	7.0	68.8	71.0	71.0
2760.0	8.0	63.6	64.7	64.7
3105.0	9.0	69.6	69.8	69.8
3450.0	10.0	58.1	59.9	59.9

COMPARING WORST CASE RADIATED EMISSIONS TO LIMITS

The worst case emission in the table above is used in the average calculations below.

Freq. (MHz):	Harmonic Number	Worst Reading from Above (dBuV/M)	Duty Cycle (%):	Corr. Reading (dBuV/M) :	Corr. Reading (uV/M):	Limit @ 3M (uV/M):	Limit @ 3M (dBuV/M):	Margin (dB)
345.00	1	91.7	10.0%	71.7	3845.9	7,292	77.3	-5.6
690.00	2	69.4	10.0%	49.4	295.1	729	57.3	-7.9
1,035.00	3	58.2	10.0%	38.2	81.3	500	54.0	-15.8
1,380.00	4	63.9	10.0%	43.9	156.7	500	54.0	-10.1
1,725.00	5	75.5	10.0%	55.5	595.7	729	57.3	-1.8
2,070.00	6	76.2	10.0%	56.2	645.7	729	57.3	-1.1
2,415.00	7	71.0	10.0%	51.0	354.8	729	57.3	-6.3
2,760.00	8	64.7	10.0%	44.7	171.8	500	54.0	-9.3
3,105.00	9	69.8	10.0%	49.8	309.0	729	57.3	-7.5
3,450.00	10	59.9	10.0%	39.9	98.9	729	57.3	-17.4