

EXHIBIT 3

Technical Description

Para. 2.1033(b)(4)



Retlif Testing Laboratories

Test Report No. R-7530-1
FCC ID: ESV-0407-4

Technical Report 2.1033(b)(4)

Equipment Manufacturer

Detection Systems
130 Perinton Parkway
Fairport, NY 14450

FCC Identifier

ESV-0407-4

Operating Instructions

See Exhibit 5

Trade Name

Detection Systems

Model Number

RF280THS

Additional Model Numbers and Trade Names

Not Applicable



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FCC ID: ESV-0407-4

GENERAL INFORMATION OF THE RF280THS TRANSMITTER

The RF280THS is a battery powered smoke detector with a built in 304 MHz RF Transmitter. It is used in the DS Residential Security and Escort Security Systems.

As indicated in the Block Diagram of the RF280, once smoke is detected by the photo electric sensor the signal from the sensor is processed by PHOTOASIC. As a result, the detected smoke signal is converted into an input digital signal of the Microcontroller which also monitors cover tamper signal. Then the Microcontroller determines the tasks accordingly and sends the status to a receiver through the RF Transmitter. A supervisory signal is transmitted to a receiver every 65 minutes.

Frequency Control Devices Used:

1. One 800 kHz ceramic resonator used for the microcontroller's oscillator.
2. One 304 MHz SAW resonator used for the oscillator of the RF Transmitter.



Retlif Testing Laboratories

Test Report No. R-7530-1
FCC ID: ESV-0407-4

Test Method:		FCC Part 15 Subpart C Radiated Emissions Paragraph 15.231					
Customer:		Detection System, Inc.			Job No.		R-7530-1
Test Sample:		Pulsed RF Transmitter			FCC ID:		ESV-0407
Model No.:		RF280THS			Serial No.		N/A
Operating Mode:		Continuously Transmitting 304 MHz Signal					
Technician:		Dennis Cortes			Date:		October 16, 1998
Notes: Test Distance: 3 Meters Detector Function: Peak (except 608 MHz, measurements were made in Quasi-Peak)							
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Peak Limit
MHz	(H/V) / meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m
304.00	H/1.0	X	83.0	-4.3	78.7	8609.9	55800
304.00	H/1.0	Y	84.0	-4.3	79.7	9660.5	55800
304.00	H/1.0	Z	92.8	-4.3	88.5	26607.3	55800
304.00	V/1.3	X	90.7	-4.3	86.4	20893.0	55800
304.00	V/1.4	Y	92.3	-4.3	88.0	25118.9	55800
304.00	V/1.0	Z	78.8	-4.3	74.5	5308.8	55800
608.00	H/1.0	X	36.4	2.4	38.8	87.1QP	200QP
608.00	H/1.0	Y	37.0	2.4	39.4	93.3QP	200QP
608.00	H/1.0	Z	39.8	2.4	42.2	128.8QP	200QP
608.00	V/1.4	X	37.6	2.4	40.0	100.0QP	200QP
608.00	V/1.3	Y	42.6	2.4	45.0	177.8QP	200QP
608.00	V/1.3	Z	36.8	2.4	39.2	91.2QP	200QP
912.00	H/1.7	X	45.1	8.3	53.4	467.7	5580
912.00	H/1.0	Y	44.0	8.3	52.3	412.1	5580
912.00	H/1.0	Z	43.2	8.3	51.5	375.8	5580
912.00	V/1.0	X	42.9	8.3	51.2	363.1	5580
912.00	V/1.0	Y	46.1	8.3	54.4	524.8	5580
912.00	V/1.1	Z	47.6	8.3	55.9	623.7	5580
1216.00	H/1.5	X	55.1	-6.3	48.8	275.4	5000
1216.00	H/1.0	Y	52.9	-6.3	46.6	213.8	5000
1216.00	H/1.4	Z	54.5	-6.3	48.2	257.0	5000
1216.00	V/1.3	X	65.1	-6.3	58.8	871.0	5000
1216.00	V/1.1	Y	56.7	-6.3	50.4	331.1	5000
1216.00	V/1.3	Z	53.7	-6.3	47.4	234.4	5000
1520.00	H/1.5	X	51.8	-4.8	47.0	223.9	5000
1520.00	H/1.4	Y	48.6	-4.8	43.8	154.9	5000
1520.00	H/1.4	Z	48.4	-4.8	43.6	151.4	5000
1520.00	V/1.1	X	59.2	-4.8	54.4	524.8	5000
1520.00	V/1.1	Y	53.1	-4.8	48.3	260.0	5000
1520.00	V/1.7	Z	52.5	-4.8	47.7	242.7	5000
The frequency range was scanned from 30 MHz to 3.1 GHz. All emissions not recorded were more than 20dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							

Test Method:	FCC Part 15 Subpart C Radiated Emissions Paragraph 15.231						
Customer:	Detection System, Inc.				Job No.	R-7530-1	
Test Sample:	Pulsed RF Transmitter				FCC ID:	ESV-0407	
Model No.:	RF280THS				Serial No.	N/A	
Operating Mode:	Continuously Transmitting 304 MHz Signal						
Technician:	Dennis Cortes				Date:	October 16, 1998	
Notes:	Test Distance: 3 Meters Detector Function: Peak (except 608 MHz, measurements were make in Quasi-Peak)						
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Peak Limit
MHz	(H/V) / meters	X / Y / Z	dBuV	dB	dBuV/m	uV/m	uV/m
1824.00	H/1.6	X	51.0	-2.7	48.3	260.0	5580
1824.00	H/1.4	Y	46.5	-2.7	43.8	154.9	5580
1824.00	H/1.0	Z	45.7	-2.7	43.0	141.3	5580
1824.00	V/1.5	X	51.0	-2.7	48.3	260.0	5580
1824.00	V/1.3	Y	47.8	-2.7	45.1	179.9	5580
1824.00	V/1.3	Z	50.6	-2.7	47.9	248.3	5580
2128.00	H/1.3	X	49.0	-1.3	47.7	242.7	5580
2128.00	H/2.0	Y	58.2	-1.3	56.9	699.8	5580
2128.00	H/1.3	Z	48.1	-1.3	46.8	218.8	5580
2128.00	V/1.1	X	56.9	-1.3	55.6	602.6	5580
2128.00	V/1.2	Y	52.3	-1.3	51.0	354.8	5580
2128.00	V/1.0	Z	56.3	-1.3	55.0	562.3	5580
2432.00	H/1.1	X	47.0	-0.4	46.6	213.8	5580
2432.00	H/1.4	Y	44.8	-0.4	44.4	166.0	5580
2432.00	H/1.4	Z	46.6	-0.4	46.2	204.2	5580
2432.00	V/1.4	X	44.9	-0.4	44.5	167.9	5580
2432.00	V/1.3	Y	45.4	-0.4	45.0	177.8	5580
2432.00	V/1.2	Z	44.0	-0.4	43.6	151.4	5580
2736.00	H/1.0	X	*42.6	1.1	43.7	153.1	5000
2736.00	H/1.0	Y	*42.6	1.1	43.7	153.1	5000
2736.00	H/1.0	Z	*42.6	1.1	43.7	153.1	5000
2736.00	V/1.0	X	*42.6	1.1	43.7	153.1	5000
2736.00	V/1.0	Y	*42.6	1.1	43.7	153.1	5000
2736.00	V/1.0	Z	*42.6	1.1	43.7	153.1	5000
3040.00	H/1.0	X	*43.0	3.1	46.1	201.8	5580
3040.00	H/1.0	Y	*43.0	3.1	46.1	201.8	5580
3040.00	H/1.0	Z	*43.0	3.1	46.1	201.8	5580
3040.00	V/1.0	X	*43.0	3.1	46.1	201.8	5580
3040.00	V/1.0	Y	*43.0	3.1	46.1	201.8	5580
3040.00	V/1.0	Z	*43.0	3.1	46.1	201.8	5580
The frequency range was scanned from 30 MHz to 3.1 GHz. All emissions not recorded were more than 20dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							
* = Noise Floor Measurements (Minimum System Sensitivity)							

Test Method:	FCC Part 15 Subpart C Radiated Emissions Paragraph 15.231						
Customer:	Detection System, Inc.			Job No.	R-7530-1		
Test Sample:	Pulsed RF Transmitter			FCC ID:	ESV-0407		
Model No.:	RF280THS			Serial No.	N/A		
Operating Mode:	Continuously Transmitting 304 MHz Signal						
Technician:	Dennis Cortes			Date:	October 16, 1998		
Notes:	Test Distance: 3 Meters (608 MHz was measured with a Quasi-Peak Detector) Detector Function: Peak Worst Case Duty Cycle: 10.0% (-20.0 dB Duty Cycle Correction Factor)						
Test Freq.	Antenna Pol./Height	EUT Orientation	Peak Corrected Reading	Duty Cycle Corr. Factor	Corrected Average	Converted Average	Average Limit
MHz	(H/V) / meters	X / Y / Z	dBuV/m	dB	dBuV/m	uV/m	uV/m
304.00	H/1.0	X	78.7	-20.0	58.7	861.0	5580
304.00	H/1.0	Y	79.7	-20.0	59.7	966.1	5580
304.00	H/1.0	Z	88.5	-20.0	68.5	2660.7	5580
304.00	V/1.3	X	86.4	-20.0	66.4	2089.3	5580
304.00	V/1.4	Y	88.0	-20.0	68.0	2511.9	5580
304.00	V/1.0	Z	74.5	-20.0	54.5	530.9	5580
608.00	H/1.0	X	38.8	0.0	38.8	87.1QP	200QP
608.00	H/1.0	Y	39.4	0.0	39.4	93.3QP	200QP
608.00	H/1.0	Z	42.2	0.0	42.2	128.8QP	200QP
608.00	V/1.4	X	40.0	0.0	40.0	100.0QP	200QP
608.00	V/1.3	Y	45.0	0.0	45.0	177.8QP	200QP
608.00	V/1.3	Z	39.2	0.0	39.2	91.2QP	200QP
912.00	H/1.7	X	53.4	-20.0	33.4	46.8	558
912.00	H/1.0	Y	52.3	-20.0	32.3	41.2	558
912.00	H/1.0	Z	51.5	-20.0	31.5	37.6	558
912.00	V/1.0	X	51.2	-20.0	31.2	36.3	558
912.00	V/1.0	Y	54.4	-20.0	34.4	52.5	558
912.00	V/1.1	Z	55.9	-20.0	35.9	62.4	558
1216.00	H/1.5	X	48.8	-20.0	28.8	27.5	500
1216.00	H/1.0	Y	46.6	-20.0	26.6	21.4	500
1216.00	H/1.4	Z	48.2	-20.0	28.2	25.7	500
1216.00	V/1.3	X	58.8	-20.0	38.8	87.1	500
1216.00	V/1.1	Y	50.4	-20.0	30.4	33.1	500
1216.00	V/1.3	Z	47.4	-20.0	27.4	23.4	500
1520.00	H/1.5	X	47.0	-20.0	27.0	22.4	500
1520.00	H/1.4	Y	43.8	-20.0	23.8	15.5	500
1520.00	H/1.4	Z	43.6	-20.0	23.6	15.1	500
1520.00	V/1.1	X	54.4	-20.0	34.4	52.5	500
1520.00	V/1.1	Y	48.3	-20.0	28.3	26.0	500
1520.00	V/1.7	Z	47.7	-20.0	27.7	24.3	500
The frequency range was scanned from 30 MHz to 3.1 GHz. All emissions not recorded were more than 20dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							

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Model No.:	RF280THS			Serial No.	N/A		
Operating Mode:	Continuously Transmitting 304 MHz Signal						
Technician:	Dennis Cortes			Date:	October 16, 1998		
Notes:	Test Distance: 3 Meters Detector Function: Peak Worst Case Duty Cycle: 10.0% (-20.0 dB Duty Cycle Correction Factor)						
Test Freq.	Antenna Pol./Height	EUT Orientation	Peak Corrected Reading	Duty Cycle Corr. Factor	Corrected Average	Converted Average	Average Limit
MHz	(H/V) / meters	X / Y / Z	dBuV/m	dB	dBuV/m	uV/m	uV/m
1824.00	H/1.6	X	48.3	-20.0	28.3	26.0	558
1824.00	H/1.4	Y	43.8	-20.0	23.8	15.5	558
1824.00	H/1.0	Z	43.0	-20.0	23.0	14.1	558
1824.00	V/1.5	X	48.3	-20.0	28.3	26.0	558
1824.00	V/1.3	Y	45.1	-20.0	25.1	18.0	558
1824.00	V/1.3	Z	47.9	-20.0	27.9	24.8	558
2128.00	H/1.3	X	47.7	-20.0	27.7	24.3	558
2128.00	H/2.0	Y	56.9	-20.0	36.9	70.0	558
2128.00	H/1.3	Z	46.8	-20.0	26.8	21.9	558
2128.00	V/1.1	X	55.6	-20.0	35.6	60.3	558
2128.00	V/1.2	Y	51.0	-20.0	21.0	35.5	558
2128.00	V/1.0	Z	55.0	-20.0	35.0	56.2	558
2432.00	H/1.1	X	46.6	-20.0	26.6	21.4	558
2432.00	H/1.4	Y	44.4	-20.0	24.4	16.6	558
2432.00	H/1.4	Z	46.2	-20.0	26.2	20.4	558
2432.00	V/1.4	X	44.5	-20.0	24.5	16.8	558
2432.00	V/1.3	Y	45.0	-20.0	25.0	17.8	558
2432.00	V/1.2	Z	43.6	-20.0	23.6	15.1	558
2736.00	H/1.0	X	*43.7	-20.0	23.7	15.3	500
2736.00	H/1.0	Y	*43.7	-20.0	23.7	15.3	500
2736.00	H/1.0	Z	*43.7	-20.0	23.7	15.3	500
2736.00	V/1.0	X	*43.7	-20.0	23.7	15.3	500
2736.00	V/1.0	Y	*43.7	-20.0	23.7	15.3	500
2736.00	V/1.0	Z	*43.7	-20.0	23.7	15.3	500
3040.00	H/1.0	X	*46.1	-20.0	26.1	20.2	558
3040.00	H/1.0	Y	*46.1	-20.0	26.1	20.2	558
3040.00	H/1.0	Z	*46.1	-20.0	26.1	20.2	558
3040.00	V/1.0	X	*46.1	-20.0	26.1	20.2	558
3040.00	V/1.0	Y	*46.1	-20.0	26.1	20.2	558
3040.00	V/1.0	Z	*46.1	-20.0	26.1	20.2	558
The frequency range was scanned from 30 MHz to 3.1 GHz. All emissions not recorded were more than 20dB below the specified limit. Emissions from the EUT do not exceed the specified limits.							