FCC PART 15, SUBPART C
TEST METHOD: ANSI C63.4-1992
TEST REPORT

for

KEYFOB TRANSMITTERS
P/N(s): RFTXX-B-418 and RFTXX-B-433

OEM Manufacture:
Xilor Inc
1400 Liberty St.
Knoxville, TN 37909
(865) 546-9863

DATE: 8-24-2001

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REPORT SUMMARY

This is an electromagnetic emission test report. The test report is based on testing performed by Philips Testing Lab. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test are within the specification limits defined by CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231(a) (1).

Test Lab:	Philips Testing 3029 Gov. John Sevier Hwy. Knoxville TN 37914 FCC Reg.# 90875 (exp. 1/28/03) NVLAP# 200409-0 exp. (6/30/02) (DBA Philips Consumer Electronics)
Device(s) Tested:	Keyfob Transmitters
P/N(s):	RFTXX-B-418 (418MHz unit), RFTXX-B-433 (433.9MHz unit)
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Xilor Inc 1400 Liberty St. Knoxville TN 37909
Test Date:	6-27-2001
Test Specifications:	EMI requirements CFR Title 47, Part 15 Subpart C, Sections 15.205, 15.209, and 15.231
Test Procedure:	ANSI C63.4: 1992
Test Deviation:	The test procedure was not deviated from during testing.

SUMMARY OF TEST RESULTS	
Conducted RF Emissions	This test was not performed because the EUT runs off a 3-volt lithium coin cell only and cannot be powered by any device that runs off of the AC public mains.
Radiated RF Emissions	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.231 (a) (1)
END OF SUMMARY	

Radiated Emissions FCC Section 15.205 and 15.231 (a) (1)			
Report	# 11782-2	**Test Distance**	3 meters
Date	6/27/01	**Test Conditions**	Unit Flat
EUT	Remote Control Transmitter (DSC)		
Model	418 MHz Transmitter		
Mfg.	Xilor		
FCC ID	PNZ4XX		

Frequency (MHz)	Horiz dBuV	Vert dBuV	Antenna Factor dBuV	Duty Cycle Correction factor	Horiz dBuV	Vert dBuV	Limit dBuV	Horiz dBuV	Vert dBuV
418	60.2	44.9	20.9	-7.43	73.67	58.37	80.3	-6.63	-21.93
836	25	16.5	28	-7.43	45.57	37.07	60.3	-14.73	-23.23
1254	12.1	16.1	32.8	-7.43	37.47	41.47	60.3	-22.83	-18.83
1672	10.6	11.7	36.6	-7.43	39.77	40.87	54.0	-14.23	-13.13

Test Equipment Setup/Comments
RBW & VBW= 100 kHz (30 - 1000 MHz)
RBW & VBW= 1MHz (1 - 5 GHz)
MEASUREMENTS WERE TAKEN FROM 30 MHz UP TO THE 10TH HARMONIC
The above reading are Peak readings with the duty cycle correction factor applied.

Radiated Emissions FCC Section 15.205 and 15.231 (a) (1)			
Report	# 11782-2	**Test Distance**	3 meters
Date	6/27/01	**Test Conditions**	Unit on End
EUT	Remote Control Transmitter (DSC)		
Model	418 MHz Transmitter		
Mfg.	Xilor		
FCC ID	PNZ4XX		

Frequency (MHz)	Horiz dBuV	Vert dBuV	Antenna Factor dBuV	Duty Cycle Correction factor	Horiz dBuV	Vert dBuV	Limit dBuV	Horiz dBuV	Vert dBuV
418	51.2	59	20.9	-7.43	64.67	72.47	80.3	-15.63	-7.83
836	21.5	22.3	28	-7.43	42.07	42.87	60.3	-18.23	-17.43
1254	14.3	15.9	32.8	-7.43	39.67	41.27	60.3	-20.63	-19.03
1672	10.3	7.7	36.6	-7.43	39.47	36.87	54.0	-14.53	-17.13

Test Equipment Setup/Comments
RBW & VBW= 100 kHz (30 - 1000 MHz)
RBW & VBW= 1MHz (1 - 5 GHz)
MEASUREMENTS WERE TAKEN FROM 30 MHz UP TO THE 10TH HARMONIC
The above reading are Peak readings with the duty cycle correction factor applied.

Radiated Emissions FCC Section 15.205 and 15.231 (a) (1)			
Report	# 11782-2	**Test Distance**	3 meters
Date	6/27/01	**Test Conditions**	Unit on Side
EUT	Remote Control Transmitter (DSC)		
Model	418 MHz Transmitter		
Mfg.	Xilor		
FCC ID	PNZ4XX		

Frequency (MHz)	Horiz dBuV	Vert dBuV	Antenna Factor dBuV	Duty Cycle Correction factor	Horiz dBuV	Vert dBuV	Limit dBuV	Horiz dBuV	Vert dBuV
418	59.1	49.5	20.9	-7.43	72.57	62.97	80.3	-7.73	-17.33
836	20.7	24.4	28	-7.43	41.27	44.97	60.3	-19.03	-15.33
1254	14.3	12.2	32.8	-7.43	39.67	37.57	60.3	-20.63	-22.73
1672	12.1	11.7	36.6	-7.43	41.27	40.87	54.0	-12.73	-13.13

Test Equipment Setup/Comments
RBW & VBW= 100 kHz (30 - 1000 MHz)
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The above reading are Peak readings with the duty cycle correction factor applied.

Radiated Emissions FCC Section 15.205 and 15.231 (a) (1)			
Report	# 11782-2	**Test Distance**	3 meters
Date	6/27/01	**Test Conditions**	Unit Flat
EUT	Remote Control Transmitter (DSC)		
Model	433.9 MHz Transmitter		
Mfg.	Xilor		
FCC ID	PNZ4XX		

Frequency (MHz)	Horiz dBuV	Vert dBuV	Antenna Factor dBuV	Duty Cycle Correction factor	Horiz dBuV	Vert dBuV	Limit dBuV	Horiz dBuV	Vert dBuV
433.9	59.1	46.7	21.3	-6.05	74.35	61.95	80.83	-6.48	-18.88
867.8	21.3	12.9	28.6	-6.05	43.85	35.45	60.83	-16.98	-25.38
1301.7	8.9	0	33.6	-6.05	36.45	27.55	54.0	-17.55	-26.45
1735.6	24	22.1	37.4	-6.05	55.35	53.45	60.83	-5.48	-7.38

Test Equipment Setup/Comments
RBW & VBW= 100 kHz (30 - 1000 MHz)
RBW & VBW= 1MHz (1 - 5 GHz)
MEASUREMENTS WERE TAKEN FROM 30 MHz UP TO THE 10TH HARMONIC
The above reading are Peak readings with the duty cycle correction factor applied.

Radiated Emissions FCC Section 15.205 and 15.231 (a) (1)			
Report	# 11782-2	**Test Distance**	3 meters
Date	6/27/01	**Test Conditions**	Unit on End
EUT	Remote Control Transmitter (DSC)		
Model	433.9 MHz Transmitter		
Mfg.	Xilor		
FCC ID	PNZ4XX		

Frequency (MHz)	Horiz dBuV	Vert dBuV	Antenna Factor dBuV	Duty Cycle Correction factor	Horiz dBuV	Vert dBuV	Limit dBuV	Horiz dBuV	Vert dBuV
433.9	49.2	58.85	21.3	-6.05	64.45	74.1	80.83	-16.38	-6.73
867.8	18.1	20	28.6	-6.05	40.65	42.55	60.83	-20.18	-18.28
1301.7	8.7	9.2	33.6	-6.05	36.25	36.75	54.0	-17.75	-17.25
1735.6	16.5	15.2	37.4	-6.05	47.85	46.55	60.83	-12.98	-14.28

Test Equipment Setup/Comments
RBW & VBW= 100 kHz (30 - 1000 MHz)
RBW & VBW= 1MHz (1 - 5 GHz)
MEASUREMENTS WERE TAKEN FROM 30 MHz UP TO THE 10TH HARMONIC
The above reading are Peak readings with the duty cycle correction factor applied.

Radiated Emissions FCC Section 15.205 and 15.231 (a) (1)			
Report	# 11782-2	**Test Distance**	3 meters
Date	6/27/01	**Test Conditions**	Unit on Side
EUT	Remote Control Transmitter (DSC)		
Model	433.9 MHz Transmitter		
Mfg.	Xilor		
FCC ID	PNZ4XX		

Frequency (MHz)	Horiz dBuV	Vert dBuV	Antenna Factor dBuV	Duty Cycle Correction factor	Horiz dBuV	Vert dBuV	Limit dBuV	Horiz dBuV	Vert dBuV
433.9	59.35	53	21.3	-6.05	74.6	68.25	80.83	-6.23	-12.58
867.8	15.1	21.8	28.6	-6.05	37.65	44.35	60.83	-23.18	-16.48
1301.7	7.9	7.9	33.6	-6.05	35.45	35.45	54.0	-18.55	-18.55
1735.6	18.7	20.3	37.4	-6.05	50.05	51.65	60.83	-10.78	-9.18

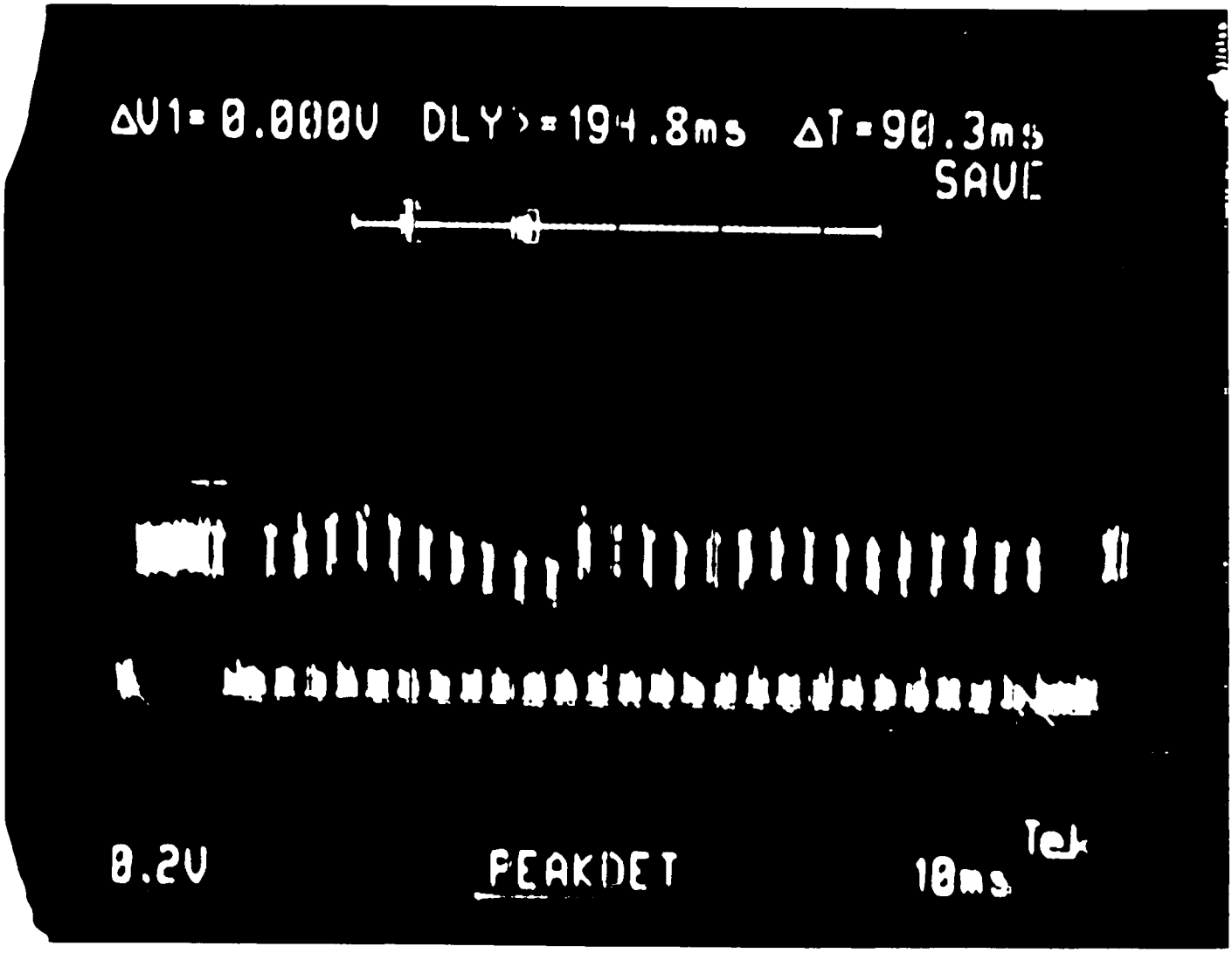
Test Equipment Setup/Comments
RBW & VBW= 100 kHz (30 - 1000 MHz)
RBW & VBW= 1MHz (1 - 5 GHz)
MEASUREMENTS WERE TAKEN FROM 30 MHz UP TO THE 10TH HARMONIC
The above reading are Peak readings with the duty cycle correction factor applied.

PEAK TO AVERAGE CORRECTION FACTOR

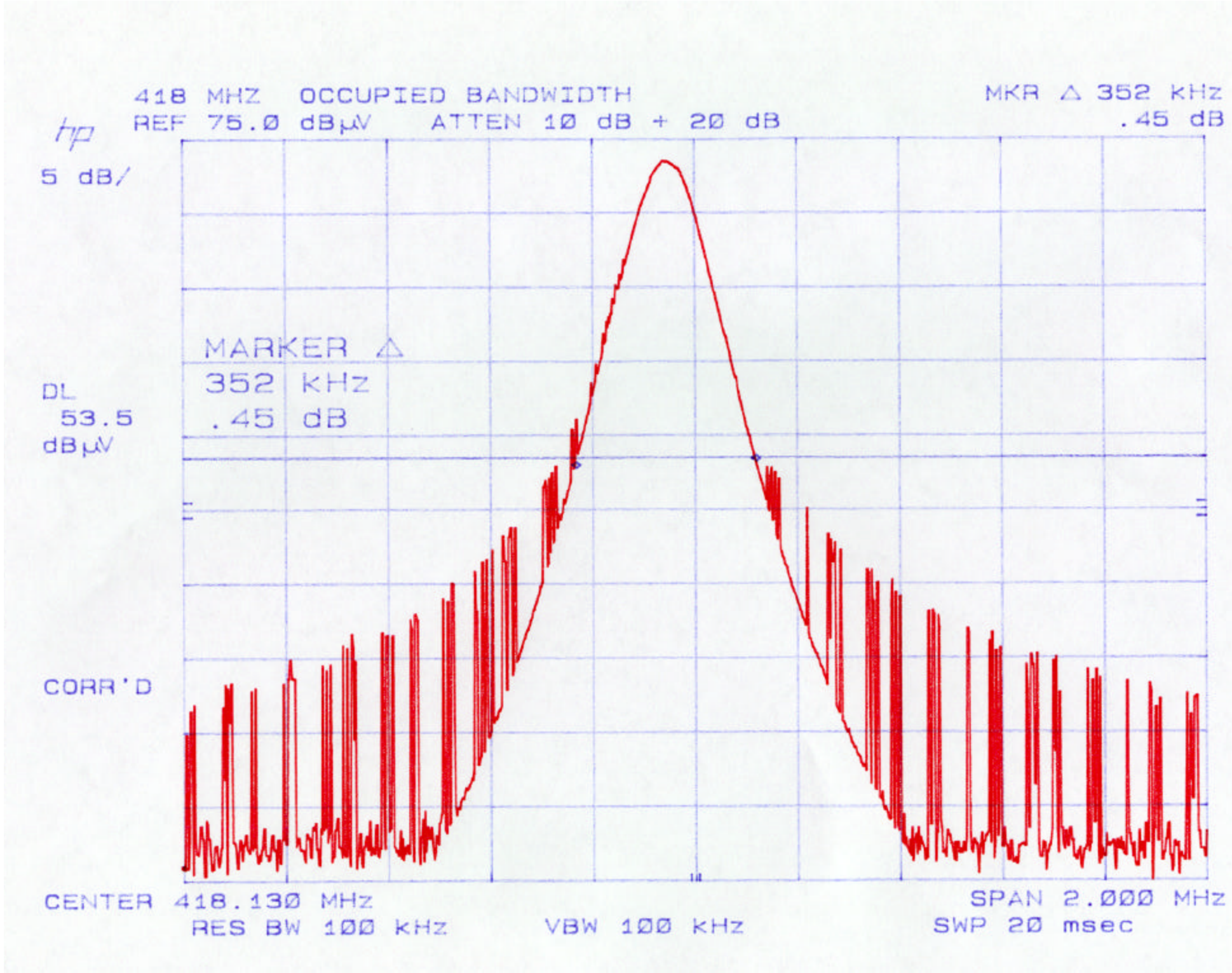
Frequency 418 MHz

Pulse Width (mS)	Number of Pulses	ON Time (mS)
1.1	9	9.9
1.2	4	4.8
1.3	11	14.3
9.4	1	9.4
		0
		0
		0

Max on Time (mS)	**38.4**
Period (mS)	**90.3**
Duty Cycle (Max on Time / Period)	**0.425249**
Correction Factor (dB) 20Log(Duty Cycle)	**-7.427**



418 MHz

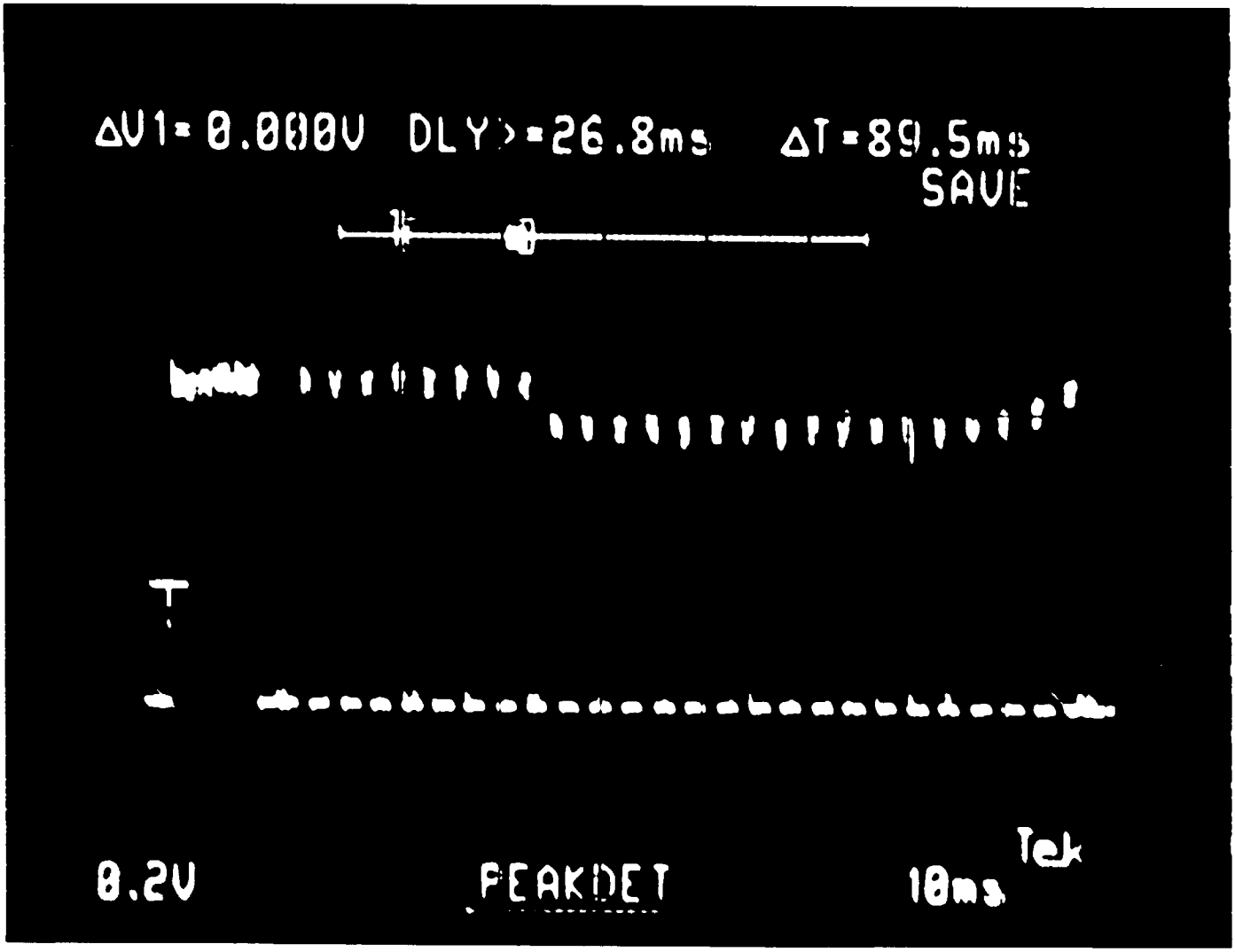

418 MHZ OCCUPIED BANDWIDTH
MKR Δ 352 kHz
REF 75.0 dBμV ATTEN 10 dB + 20 dB
.45 dB
hp
5 dB/
MARKER Δ
352 kHz
.45 dB
DL
53.5
dBμV
CORR'D
CENTER 418.130 MHz
SPAN 2.000 MHz
RES BW 100 kHz
VBW 100 kHz
SWP 20 msec

PEAK TO AVERAGE CORRECTION FACTOR

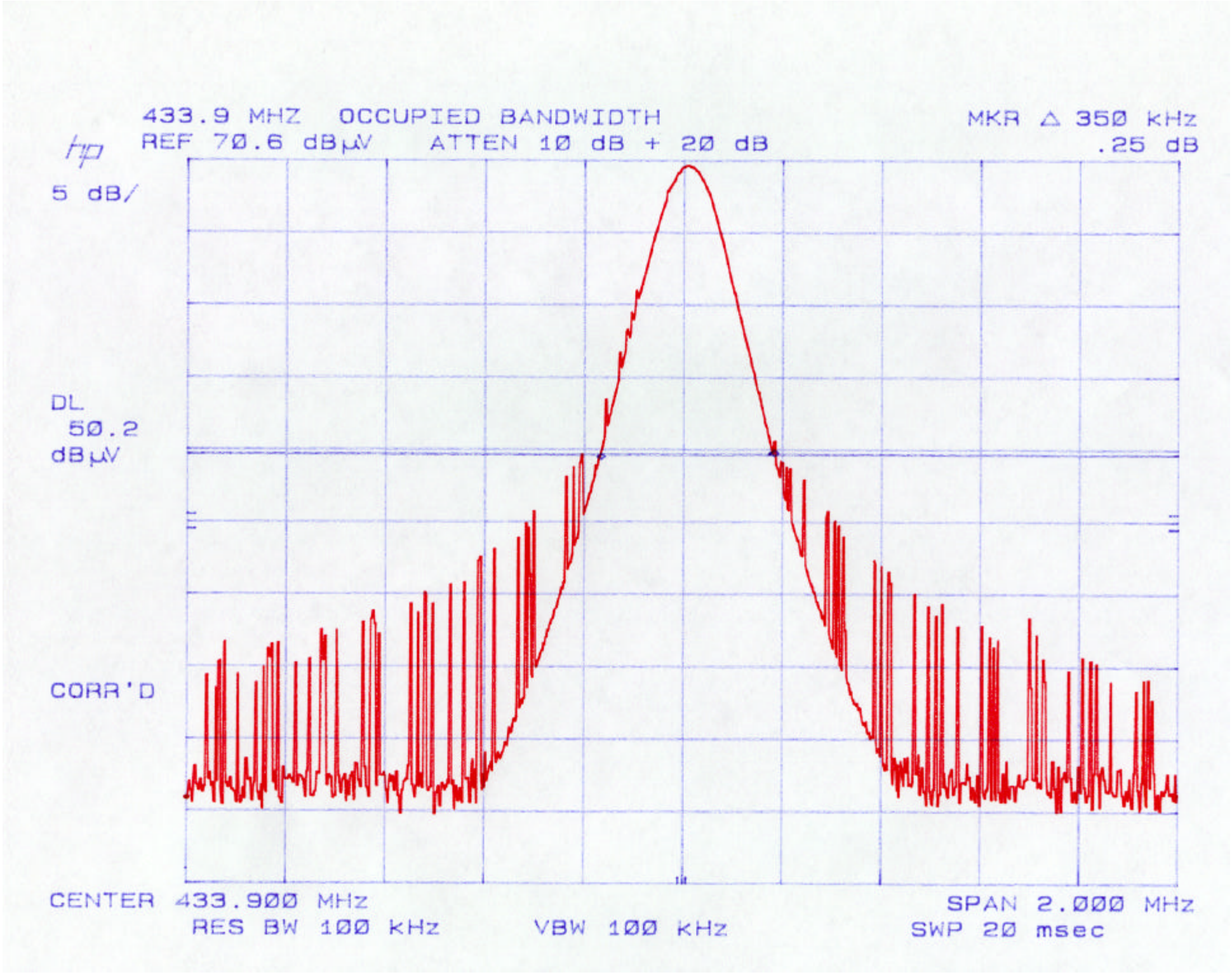
Frequency 433.9MHz

Pulse Width (mS)	Number of Pulses	ON Time (mS)
1.2	1	1.2
1.3	9	11.7
1.4	6	8.4
1.5	6	9
1.6	2	3.2
1.8	1	1.8
9.3	1	9.3

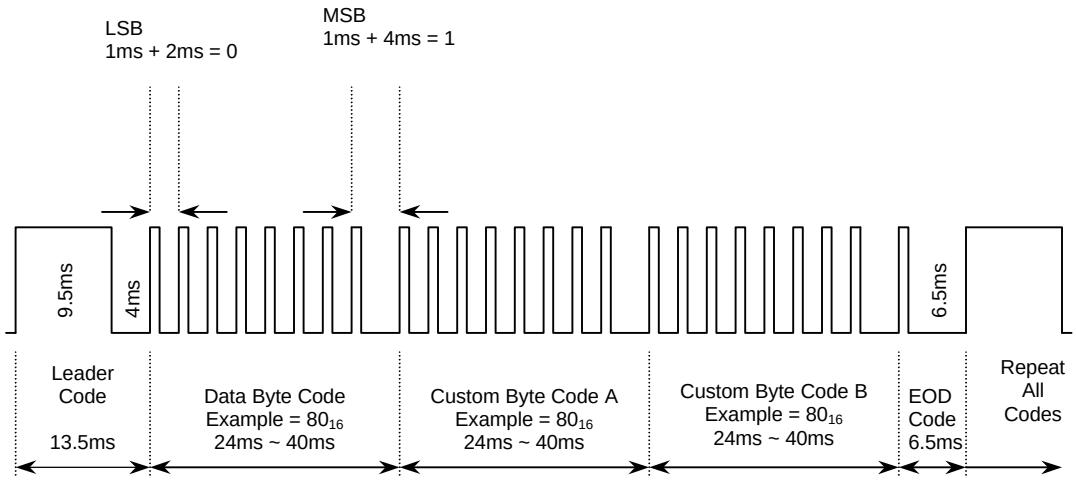
Max on Time (mS)	**44.6**
Period (mS)	**89.5**
Duty Cycle (Max on Time / Period)	**0.498324**
Correction Factor (dB) 20Log(Duty Cycle)	**-6.05**



433.9 MHz


433.9 MHZ OCCUPIED BANDWIDTH
MKR Δ 350 kHz
REF 70.6 dBµV ATTEN 10 dB + 20 dB
.25 dB
hp
5 dB/
DL
50.2
dBµV
CORR'D
CENTER 433.900 MHz
SPAN 2.000 MHz
RES BW 100 kHz
VBW 100 kHz
SWP 20 msec

E154xAR 1-8 Channel Encoder IC
BASEBAND DATA FORMAT AND TIMING
(RF oscillation/emission ONLY during high pulse duration)



Notes:
EOD=End of Data
Custom byte code A&B used for 16 bit serial number on stock devices.

Example = 80_{16} is in serial transmitted form with the LSB to the left.

Philips Testing Service						
PCEC Asset #	**Description**	**Model**	**S/N**	**Mfg.**	**Cal Date**	**Cal Due**
T29655	Spectrum Analyzer	8568B	2314A02597	HP	03-28-01	03-28-02
T33179	Oscilloscope	2230	25795	Tektronix	04-23-01	07-30-02
T33858	Antenna	3102	9003-2790	EMCO	05-26-01	05-28-02
EX1523	Antenna	3110B	9304-1679	EMCO	08-02-00	11-02-01
EX1664	Antenna	3146	9502-3974	EMCO	08-02-00	11-02-01
T33167	RF Preselector	85685A	2724A00627	HP	12-29-00	12-28-01
T37815	Spectrum Analyzer	8566B	3014A06612	HP	05-17-01	05-17-02
T33168	Quasi Peak Adapter	85650A	2521A01001	HP	12-13-00	12-013-01