



東莞偉特

DONGGUAN WITTIS
ELECTRONICS CO.,LTD.

PRODUCT
SPECIFICATION

MODEL
RF-VL3412AVS
DESCRIPTION
RF MODULATOR

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RF-VL3412AVS

RF MODULATOR WITH ANT ATT

Manufacturer: DONG GUAN WITTIS ELECTRONICS CO.,LTD	
PART NO.	RF-VL3412AVS
SPEC NO.	

CUSTOMER:	
PART NO.	
SPEC NO.	

Specifcations For Approval:

2001.11.29
6704R-N003A
201815
NTSC 3/40M
LV-RN5215

[Handwritten signature]
2001.11.22

APPROVAL	CHECKED	PRESENTED

B	Video Modulation Factor sa LG 80 %	2001.11.22	
A	Original Release		
REV.	DESCRIPTION	DATE	SIGN
DESCRIPTION RF MODULATOR		APPROVAL DATE 05-18-2001	CHECK DATE 05-18-2001
DRAWING NO.		DESIGN DATE 05-08-2001	
REVISIONS	PAGES TOTAL 4		



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DESCRIPTION
RF MODULATOR

1.0 Application

This specification applies to RF Modulator with an ANT ATT for the NTSC M system

2.0 Rating

2.1 Supply Voltage	MOD +B : 5.0 +/- 0.2 V
2.2 Output channel	3 Ch & 4 CH
2.3 Current Consumption	MOD: 30 mA max/ 21 mA typ.
2.4 RF I/O impedance	F jack connector 75 ohm unbalanced
2.5 Video input signal voltage	Statir step 1 Vp-p +/- 1%, V/S : 7/3 , APL = 50%
2.6 Audio input signal voltage	Sine wave of 1 KHz +/- 5% : -6dBs (1.1 Vp-p +/-2%)
2.7 Operating temporature range	0~ 60 deg-C
2.8 Operating humidity range	less than 85%
2.9 External shape	As per product specification drawing
2.10 Weight	29 +/-3 g
2.11 Storage Temperature range	-20 ~ 70 deg-C
2.12 Storage humidity range	Less than 90 %

3.0 Electrical specifications

3-1 Video Characteristics

No	ITEM	CONDITIONS	MIN	TYP	MAX	UNIT
3-1-1	Video Carrier Frequency	3 CH 61.25 MHz 4 CH 67.25 MHz	-100		+100	KHz
3-1-2	Video Carrier Level	on modulating	63.5	65.5	69.5	dBu
3-1-3	Video Input Impedance	Measurement: 0 to 5 MHz	0.7		1.3	K Ω
3-1-4	Video Modulation Factor	Input Signal : 1Vp-p White	78	88	98	%
3-1-5	V/S Ratio	Input Signal : 1Vp-p Stair Step V/S =7/3		7/3		
3-1-6	video Amplitude Frequeny Characteristics	Measurement Range : 0.5 to 5MHz Base on 1MHz	-2		+2	dB
3-1-7	Differential Gain	Input Signal :1Vp-p Stair Step APL 10 to 90%			+/-10	%
3-1-8	Differential Phase	Input Signal :1Vp-p Stair Step APL 10 to 90%			+/- 8	deg
3-1-9	Video S/N	Measure by video Noise Meter at the output of standard Demodulator Video Band Width : 10KHz to 4.2MHz 3.58MHz Trap ON	48			dB



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3-2 Audio Characteristics

No	ITEM	CONDITIONS	MIN	TYP	MAX	UNIT
3-2-1	Sound Carrier Frequency	4500KHz	-10		+10	KHz
3-2-2	P/S Ratio	Measure the difference between the picture carrier peak level and sound carrier level	12		18	dB
3-2-2	Audio Input Impedance	Measurement Range : 0.1 to 10 KHz	3			K Ω
3-2-3	Audio Modulation Factor	Input Signal : 1.1Vp-p,1KHz sin Wave. Modulation 100% =+/- 25KHz Condition of Spectrum Analyzer Frequency SPAN/ DIV : 10 KHz Resorution BW : 10KHz	65	80	95	%
3-2-4	Audio Amplitude Frequency Characteristics	Measurement Range : 0.1 to 10KHz The Value Difference From the Theoretical Curve of the Pre-emphasis (75u sec) is Measure. Base on the Level of 1KHz	-1.5		+1.5	dB
3-2-5	Audio S/N	Input Color Bar : CCIR (486-2) Filier	47			dB
3-2-6	Audio Distortion	Input Signal : -5dBs, 1KHz Sine Wave			2	%

3-3 ANT SW

3-3-1 Switching operation

ANT IN to TV OUT
MOD OUT to TV OUTOpen CT terminal
When +5V is applied across CT terminal

No	ITEM	CONDITIONS	MIN	TYP	MAX	UNIT
3-3-2	Lnsertion Loss	ANT IN to TV OUT (CT : OPEN)			5	dB
		ANT IN to TV OUT (CT : +5V)	20			dB
3-3-3	VSWR	ANT IN (MOD OFF)			4	dB
		TV OUT (MOD ON)			3	dB
3-3-4	Noise Figure	Measure at 55 ~890 MHz			6	dB
3-3-5	Ant Isolation			5.5	7.5	dBuV

3-3-5 Cross modulation

f1 MHz	f2 MHz	f(IM) MHz	Input level at 50 Ω termination	Cross modulation (dB)
183	189	177	100 dBu	55 min
183	189	195	100 dBu	55 min

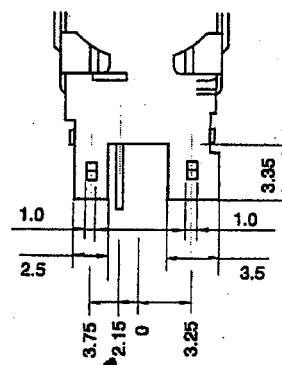
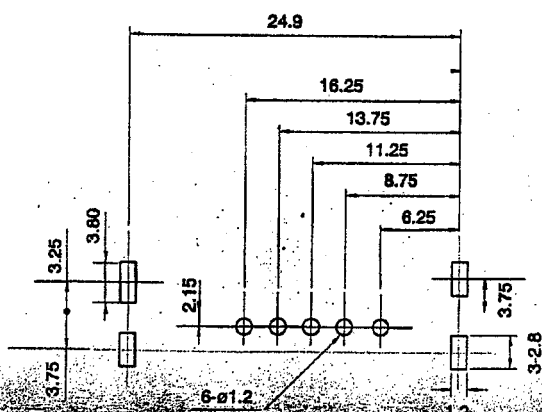
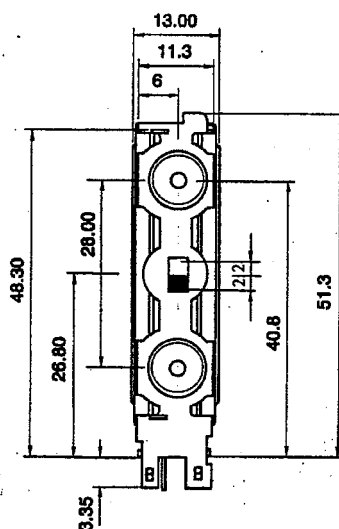
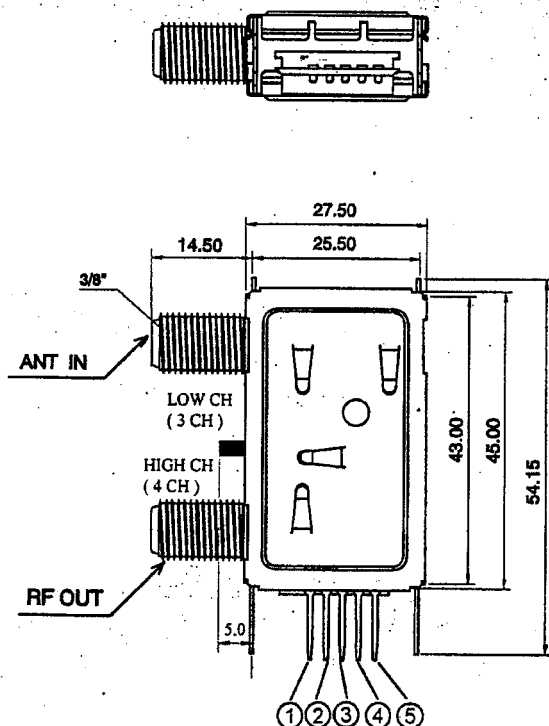


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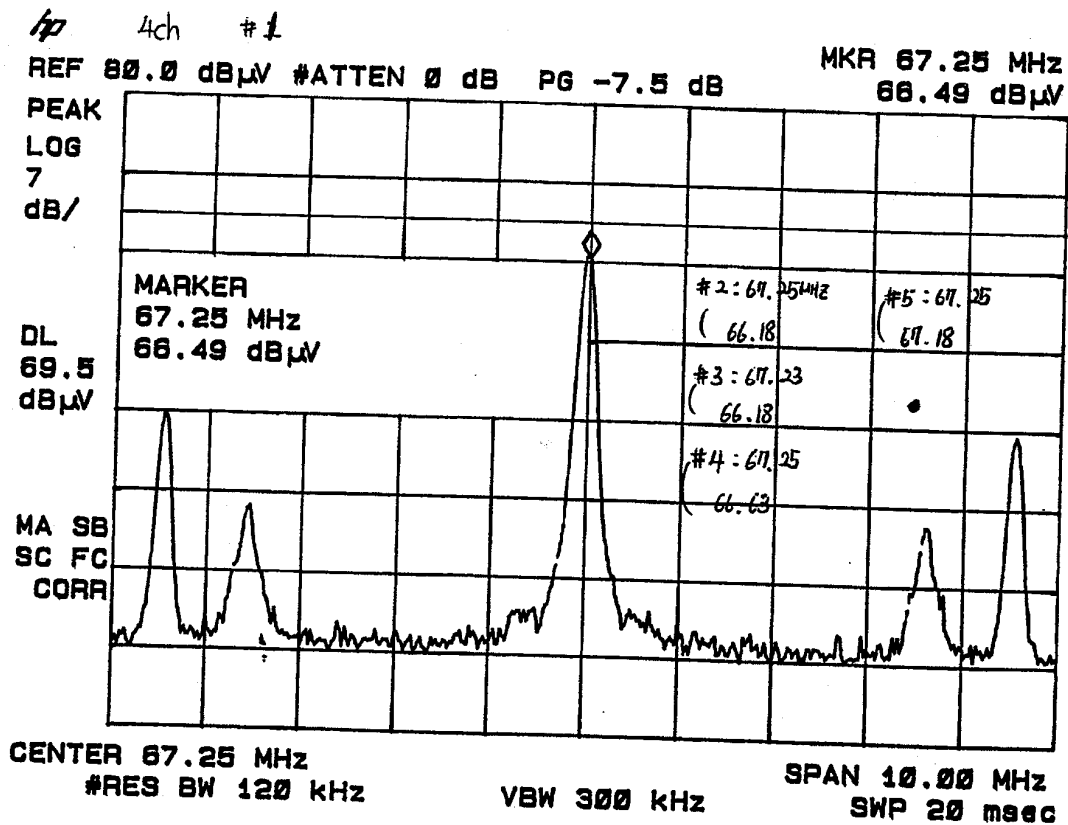
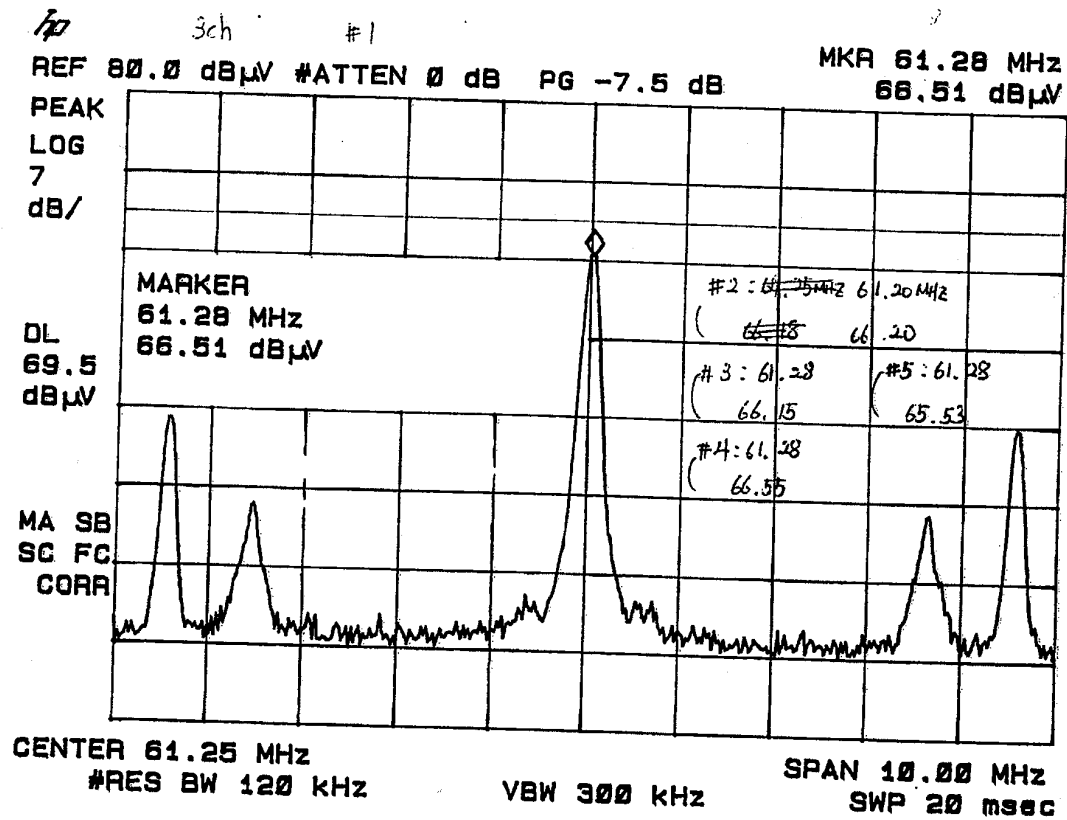


NO.	FUNCTION
1	AUDIO IN
2	NG
3	+B : 5V
4	CT
5	+5V : MOD ON/OPEN : MOD OFF
	* VIDEO IN

MODEL - Modulator (with 75) #1, #2, #3, #4, #5

Date: 2001. 11. 6

<RF OUT LEVEL>



MODEL: Modulator (wittis) #1, #2, #3, #4, #5

Date: 2001. 11. 6

<Isolation>

