



GATES FINAL TEST DATA  
HARRIS TRANSMITTER  
MODEL GATES ONE

SOLD TO  
CUSTOMER NAME; KTUE

SHIP TO  
CALL/LOCATION; TULIA, TX.

CUSTOMER NUMBER; 4400220

PRODUCT PART NUMBER; 994-9202-002

OUTPUT IMPEDANCE 50 Ohms

AUDIO INPUT; 600 Ohms

FREQUENCY; 1260 kHz

POWER OUTPUT KW      1.0 High 0.5 Med 0.053 Low

LINE;            240 VOLTS    1 PHASE      60 HERTZ

ORDER NUMBER; F1R00101

SERIAL NUMBER; MP02016000002

RELEASE FOR SHIPMENT

TESTED BY JDW                      Date 1/16/01

TEST TECH Joseph D. Ward                      DATE 1/16/01

MANUFACTURING [Signature]                      DATE 1/16/01

ADDITIONAL SIGNATURES (If Required)

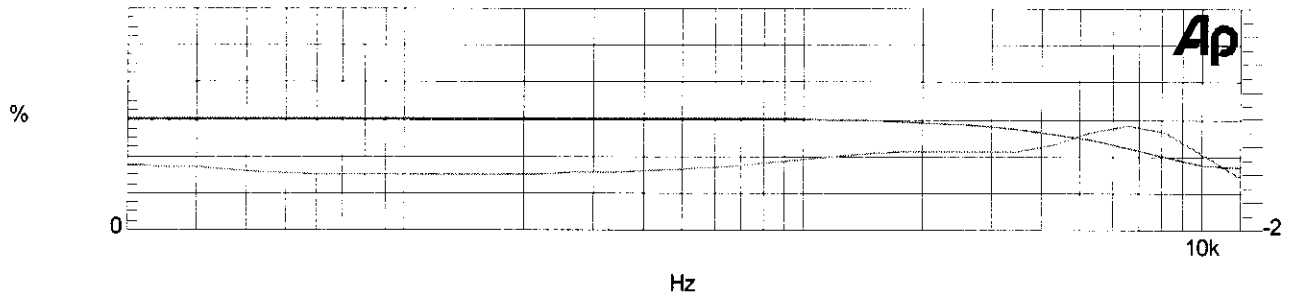
ENGINEERING \_\_\_\_\_ DATE \_\_\_\_\_

CUSTOMER \_\_\_\_\_ DATE \_\_\_\_\_



High Power THD vs. Response  
THD+N Ratio vs FREQUENCY

Audio Precision



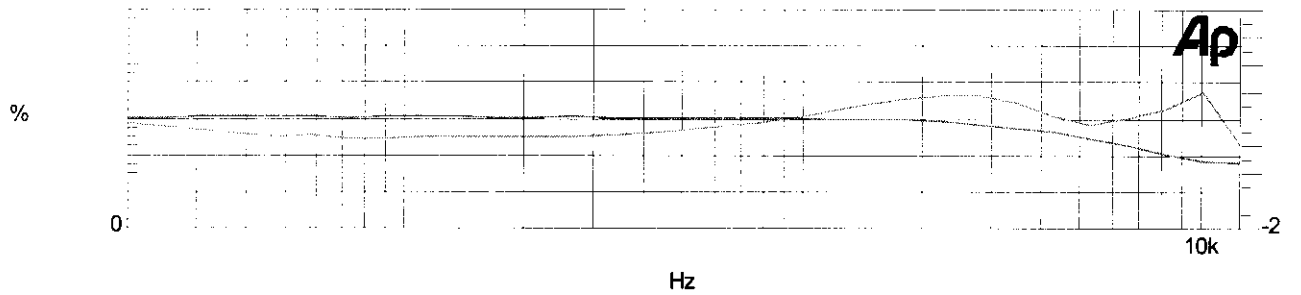
Color	Line Style	Thick	Data	Axis
Cyan	Solid	1	Anlr.TH+D+N Ratio	Left
Green	Solid	1	Anlr.Level A	Right

Thd and Response Waveform

Thd\_Res.at1

Medium Power THD vs Response  
THD+N Ratio vs FREQUENCY

Audio Precision



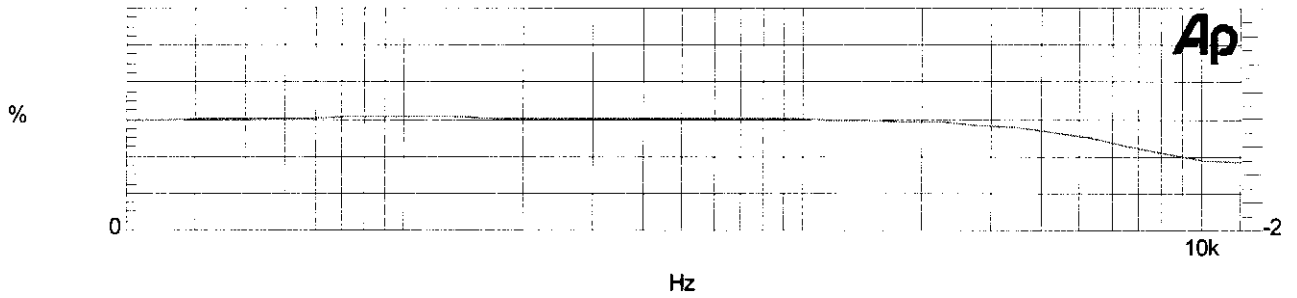
Color	Line Style	Thick	Data	Axis
Cyan	Solid	1	Anlr.TH+D+N Ratio	Left
Green	Solid	1	Anlr.Level A	Right

Thd and Response Waveform

Thd\_Res.at1

Low Power THD vs Response  
THD+N Ratio vs FREQUENCY

Audio Precision



Color	Line Style	Thick	Data	Axis
Cyan	Solid	1	Anlr.TH+D+N Ratio	Left
Green	Solid	1	Anlr.Level A	Right

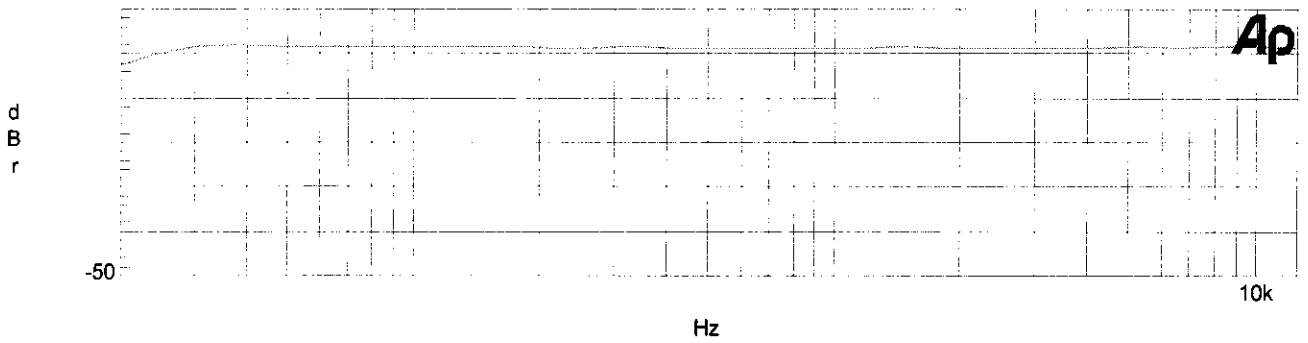
Thd and Response Waveform

Thd\_Res.at1

Audio Precision

IQM

IQM Sweep



Color	Line Style	Thick	Data	Axis
Cyan	Solid	1	Anlr.Ampl	Left

IQM Sweep

IQM.at1



AUDIO INPUT (for 100% modulation) 10.0 Dbm (at 1000 Hz)

CARRIER SHIFT (Reference: 100 % 1000 Hz modulation)

0.0 % (1% maximum)

INTERMODULATION DISTORTION (60 Hz/7 kHz at High Power 95 % modulation)

4:1 Ratio 0.87 % (1.5% maximum);)

BESSEL FILTER RESPONSE (12.5 Khz roll-off at High Power)

1.71 (1.8 +/- 0.5 dB)

CARRIER NOISE (Reference: 100 % 1000 Hz modulation)

HIGH PWR -65 db (-60 db or better);



## PANEL METERS

	Carrier	High Power 100% Mod 1khz	Med Power 100% Mod 1khz	Low Power 100% Mod 1khz
PA VOLTS	97.0	92.3	69.0	28.0
PA AMPS	12.9	12.4	9.2	3.9
FWR PWR	1100	1010	510	60
REF PWR	0.0	0.0	0.0	0.0
PA EFF	87.9			

CONTINUOUS RUN HOURS 16 (12 MINIMUM)

## MULTIMETER POSITION

PARAMETER	High Power	Med Power	Low Power
PDM LEVEL	6.3	4.7	1.9
PA SUPPLY VDC	240	244	250
SUPPLY CURRENT	5.1	3.1	0.9
RF DRIVE	7.7	7.7	7.5
VSWR DETECTOR NULL	0.0	0.0	0.0
VSWR DETECTOR NULL SET	5.1	5.1	5.1
UNDER DRIVE SET	6.3	4.7	1.9
CURRENT SET	8.7	8.7	8.7
VOLTAGE SET	298	298	298
BATTERY	9.7	9.7	9.7



**PA MODULE (A1) FREQUENCY DETERMINED COMPONENTS:**

**DRIVER COMBINER**

SYMBOL	QTY	VALUE	PART#
CAPACITORS			
C10,15,20,25,30,35,40,45	0		
RESISTORS			
R13,14,23,24,33,34,43,44	16	92 OHM	546-0305-000
INDUCTORS			
L14,15,24,25,34,35,44,45	0		
TRANSISTORS			
Q11-Q14, Q21-24, Q31-Q34, Q41-Q44	16		380-0681-000

<b>OutPut Monitor</b>	QTY	VALUE	PART#
A18L2	0		
A18L3	1	18 UH	494-0401-000
A18L4	1	#20 BUSS JUMPER	
A18C9	1	#20 BUSS JUMPER	
A18C10	1	750 PF	500-0841-000

**IPA (A5 & A26) FD Components**

A5L1	0		
A5L2	0		
A26T1	1	20 TURN	929-8305-546
A26C1A	1	100 PF	516-0204-000
A26C1B	3	200 PF	516-0819-000

**RF Drive Phase Shift**

A1				
R13 Ref	R14 0	R23 0	R24 0	
R33 0	R34 0	R43 +1	R44 0	



### OUTPUT NETWORK

SYMBOL	QTY	VALUE	PART#
A21C1A	1	3300 PF	504-0419-000
A21C1B	0		
A21C1C	0		
A21C2A	1	8200 PF	504-0430-000
A21C2B	1	5600 PF	504-0372-000
A21C2C	0		
A21C3	1	1200 PF	504-0410-000
A21C4	1	1600 PF	504-0466-000
TUNING L2/L3 TAP SET AND L1 SET		4 1/4 Active Turns	
A21L1 Shorting Strap		NO ?	
L2/L3 Taps Locked		YES ?	
Drive Level Set to		26.0 Vp-p	

LOADING: COMBINER LOAD SET TO 6.97@-25.9 OHMS/DEGREES  
SPARK GAP SET TO 0.020 INCHES

### POWER SETS

	Power Out (Watts)	PDM Level
High(6)	1000	6.3
5	800	5.7
4	600	5.0
3	500	4.7
2	250	3.5
1	53	1.9

## HARMONICS

1 <sup>st</sup> 0	2 <sup>nd</sup> -85.9	3 <sup>rd</sup> -81.0
4 <sup>th</sup> -95.4	5 <sup>th</sup> -86.6	6 <sup>th</sup> -94.0
7 <sup>th</sup> -90.5	8 <sup>th</sup> -89.6	9 <sup>th</sup> -88.7
10 <sup>th</sup> -91.4		