



NO.	ITEM	SOECUFUCATION	NOTES											
1-1	Input frequency range	900.0MHz~2150.0MHz	SP5055 (Plessey) TA8804F											
1-2	One input connector	F female												
1-3	Nominal input impedance	75 OHM												
1-4	Tuning circuit	Built in .PLL												
1-5	IF frequency	479.50 MHz center												
1-6	IF bandwidth	18/27 MHz nominal (selectable)												
1-7	Demodulation	Phase locked loop												
1-8	Vedio output polarity	Positive going												
1-9	Operating voltage	+28V(+/-5%)(tuing) +5v (+/-5%)(B+)												
1-10	Operating temprature	-10°C~+60°C												
1-11	Operating humidity	Less than 80% R.H. (at 40°C)												
1-12	Storage temperature	-20°C~+70°C												
1-13	Storage humidity	Less than 95% R.H. (at 40°C)												
1-14	Input level	-60~-30dBm												
2.	Standard test condition	Test for electrical specification shall be preformed at following condition unless otherwise specified.												
2-1	Ambient condition	Temperature 25°C+/-2°C Humidity 65°C+/-5°C If no doubt on test results temperature +5°C~+30°C and humidity 45%~80% R.H could be applied.												
2-2	Measurement to start	30 minutes after DC power supplied.												
2-3	Power supply	<table border="1"> <thead> <tr> <th>Terminal</th> <th>Supply voltage</th> </tr> </thead> <tbody> <tr> <td>LNB power</td> <td></td> </tr> <tr> <td>+5V</td> <td>+5V(+/-)0.1V</td> </tr> <tr> <td>+28V</td> <td>+28V(+/-)0.1V</td> </tr> <tr> <td>SDA</td> <td>specified tuning</td> </tr> <tr> <td>SCL</td> <td>pulse</td> </tr> </tbody> </table>		Terminal	Supply voltage	LNB power		+5V	+5V(+/-)0.1V	+28V	+28V(+/-)0.1V	SDA	specified tuning	SCL
Terminal	Supply voltage													
LNB power														
+5V	+5V(+/-)0.1V													
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SDA	specified tuning													
SCL	pulse													



NO.	ITEM	Specification				NOTES
3.	Current consumption	Terminal	MIN.	TYP.	MAX.	
		+5V	190	240	290	mA
		+28V	0.5	1.0	3.0	mA
4.	Absolute maximum voltage	Terminal	MAX. Supply voltage			
		LNB power	DC +25V			
		+5V	DC +5.25V			
		+28V	DC +30V			
		SDA,SCL	0V to the same voltage as +5V terminal			
		Terminal	Max. take off current			
		LNB power	500mA			
		B.B output	0.5mA			
5.	Electrical specification	Under standard test condition test channel:DBS 20 CH input level :-45dBm unless otherwise specified.				
		Condition		MIN.	TYP.	MAX.
5-1.	Input VSWR	900MHz~2150MHz			2.0	3.0
5-2.	Noise figure	900.0 MHz ~2150 MHz			8.0	12.0
		AGC fullgain dB				
5-3.	Local leakage at input terminal	900MHz~1750MHz 1750MHz~2630MHz			-70 -70	-63 -50
		dBm				
5-4.	Tuning voltage curve	900 MHz		1.6		
		950 MHz		2.2		
		1150 MHz		4.0		
		1250 MHz		5.0		
		1450 MHz		7.0		
		1650 MHz		9.2		
		1850 MHz		12.1		
		2050 MHz		15.9		
		2150 MHz		21.0	26.6	
		V				



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		Condition	MIN.	TYP.	MAX.	
5-5.	Local oscillator +B shift	Tuning voltage shift with +B +/-5%		+10		MHz
5-6.	Local oscillator temperature drift	Tuning voltage shift with -10°C~+60°C		+10		MHz
5-7.	IF 3dB bandwidth	I ² C Bus Port 6		27 18		MHz
5-8.	AFT output (2 bit output)					MHz
		Condition	MIN.	TYP.	MAX.	
		Center Frequency Error(f0)	-1		+1	MHz
5-9.	B.B output characteristics (1) Video output level	Video waveform white 100% pal frequency deviation 16MHz p-p without pre-emphasis				Vp-p
		White to sync.	0.55	0.75	0.95	
	(2) Gain-frequency response	Test modulation frequency :60Hz~8MHz without energy dispaal modulation reference freq. 100KHz IF BW 27MHz				dB
		Freq. response		+1	+3	
(3) Group delay response	Test frequency :60Hz~8MHz without energy dispaal modulation reference freq. 100KHz IF BW 27MHz				nsec	
	Group		+10	+50		



NO	ITEM	Specification	NOTES
	(4) DG/DP	10 step staircase 16MHz p-p PAL without energy dispasal modulation positive video amplifier with de-emphasis should be applied IF BW 27MHz	
		DG (APL 50%)	2 2 %
		DP (APL 50%)	2 5.0 °
	(5) SN RATIO	Input C/N =14dB (noise BW 27MHz) white 100% video 16MHz p-p PAL with audio subcarrier modulation 3.4MHz p-p DEV. @6.5MHz positive video amplifier with de-emphasis should be applied 100Hz~5MHz unweighted SN POR:power on reset indicator	
		SN	34.0 36.0 dB
		LT 0V LT 5V	6.0 8.0 3.0 4.0 dB
7-1.	Signal level out voltage	(V) Signal level out -30 -45 -60 -80 INPUT LEVEL (dBm)	47K OHM loaded
7-2.	I ² C BSU (1) SDA,SCL Input voltage	Under standard test condition	
		Condition	MIN. TYP. MAX.
		High voltage	3 5
		Low voltage	0 1.5
	(2) Address	C2 (on write data format)	V
	(3) SDA,SCL Input impedance	SDA/SCL are in the high impedance and there should be no reliability problem with 5V continually on the SDA/SCL,if power supply is switched off.	

(4) Data format

	MSB					LSB				
Address	1	1	0	0	0	MA1	MA0	0	A	BYTE1
programmable divider		14	13	12	11	10	9	8		
	0	2	2	2	2	2	2	2	A	BYTE2
Programmable divider	7	6	5	4	3	2	1	0		
	2	2	2	2	2	2	2	2	A	BYTE3
Charge pump and test								(0)		
	1	CP	T1	T0	1	1	1	OS	A	BYTE4
I/O port control bits										
	P7	P6	P5	P4	P3	P2	P1	P0	A	BYTE5

Table 1 write data format (MSB is transmitted first)

Address	1	1	0	0	0	MA1	MA0	0	A	BYTE1
Status byte	POR	FL	I2	I1	I0	A2	A1	A0	A	BYTE2

Table 2 read data format

A:acknowledge bit.

MA1,MA0;voltage address bits.

CP:charge pump current select.

T1:test mode selection.

T0:charge pump disable.

OS:varactor drive output disable switch.

P7,P6,P5,P4,P3,P2,P1,P0:control output states.

POR:power on reset indicator

FL:phase lock detect flag.

I2,I1,I0:digital information from ports P7,P5 and P4

A2,A1,A0:5 level ADC data from P6.

