Electrical Characteristics; (T_A=25°C, V_{CC}=12V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
D.C Voltage Difference Between any demod. output	E17−E16	Voltage at Pin 17 −Voltage at Pin 16	−0.3	0	0.3	V
D.C Voltage Difference Between any demod. output	E16−E15	Voltage at Pin 16 −Voltage at Pin 15	−0.3	0	0.3	V
D.C Voltage Difference Between any demod. output	E15−E17	Voltage at Pin 15 −Voltage at Pin 17	0.3	0	0.3	V
Blanked Output Voltage	V_{BO}	S1=1,S2=3,S3=2,S4=2,S5=1, S6=1,V23=8.9V	10.1	11.1	—	V
Blanking Input Level	V_{BI}	S1=1,S2=3,S3=2,S4=2,S5=2, S6=1	0.6	0.7	0.8	V
Total Consumption Current	I_{CC}	S1=2,S2=3,S3=2,S4=2,S5=3, S6=2 Sync. in, No Input	35	50	62	mA
Tint Center Voltage	V_{TI}	S1=2,S2=3,S3=1,S4=2,S5=3,S6=1 Sync. in, Chroma Input: Burst=100mV_{p-p}/100mV_{p-p}, Pin12 Open	3.6	4.0	4.4	V
Pedestal Clamp Voltage	V_{25}	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1	9.2	9.9	10.3	V
Max. Chroma output	$E_{C\ max}$	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 Sync. in, Chroma Input: Burst/Chroma=100mV_{p-p}/100mV_{p-p}	0.50	0.65	0.80	V_{p-p}
ACC Range (1)	E_{A1}	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=10mV_{p-p}/10mV_{p-p}	0.4	0.53	0.67	V_{p-p}
ACC Range (2)	E_{A2}	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 Sync. Inc, Chroma Input: Burst/Chroma=200mV_{p-p}/200mV_{p-p}	0.5	0.66	0.85	V_{p-p}
Killer Current (Color)	I_{KC}	S1=1,S2=2,S3=1,S4=1,S5=3,S6=1 Sync. In, Chroma Output: Burst/Chroma=100mV_{p-p}/100mV_{p-p}	60	150	200	μA
Killer Current (B/W)	I_{KB}	S1=1,S2=2,S3=1,S4=1,S5=3,S6=1 Sync. In, No I/P	−46	−25	−4	μA
Killed chroma output voltage	E_{KL}	S1=1,S2=1,S3=1,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=100mV_{p-p}/100mV_{p-p}	—	—	30	$mV_{(rms)}$
Min Gain Chroma O/P Voltage	E_{CL}	S1=3,S2=3,S3=1,S4=1,S5=3,S6=1 Sync. In, Chroma Input: V2=4V Burst/Chroma=100mV_{p-p}/100mV_{p-p}	—	—	30	$mV_{(rms)}$
Killer Sensitivity	E_K	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=100mV_{p-p}/100mV_{p-p}	−55	−40	−30	dB

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Min. Chroma Output	$E_{C\ min}$	S1=1,S2=3,S3=1,S4=1,S5=3,S6=3 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p\text{-}p}/100mV_{p\text{-}p}$	—	0.19	—	$V_{p\text{-}p}$
Contrast Range of Chroma Output	R_C	20 log (E_C min/E_C max)	−13.6	−11.1	−10.1	dB
A.P.C Pull-In Range (+)	f_{P+}	S1=1,S2=S3=1,S4=1,S5=3,S6=3 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p\text{-}p}/100mV_{p\text{-}p}$	−300	—	—	Hz
A.P.C Pull-In Range (−)	f_{P-}	S1=1,S2=S3=1,S4=1,S5=3,S6=3 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p\text{-}p}/100mV_{p\text{-}p}$	—	—	300	Hz
OSC Output Level	V_{OSC}	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 No Input:	1.2	1.8	2.4	$V_{p\text{-}p}$
OSC. Free Run Frequency	$f_{OSC.}$	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 No Input:	—	—	±250	Hz
Detection Sensitivity of APC Det.	U	$U = \frac{f_P}{\sqrt{2m} \times \frac{180}{\pi} \times \beta}$ m=0.042	—	24	—	mV/Deg.
VCO. Controlling Sensitivity	β	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1	—	1.53	—	Hz/mV
Stability of VCO. Freq. vs Supply Voltage	f_{OV}	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 V_{CC}=12V±1V	0	10	20	Hz
Tint Control Range (1)	R_{T1}	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p\text{-}p}/100mV_{p\text{-}p}$ V13=1V, Pin 12 Open	−69	−55	−41	Deg.
Tint Control Range (2)	R_{T2}	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p\text{-}p}/100mV_{p\text{-}p}$ V13=7V, Pin 12 Open	41	60	74	Deg.
Max. (B-Y) Output	$E_{B\ max}$	S1=1,S2=3,S3=1,S4=1,S5=3,S6=1 Demo. I/P (BNC 7): Sine Wave with Amplitude=$1.2V_{p\text{-}p}$ & Freq.=3578545±5Hz	4.5	6.2	—	$V_{p\text{-}p}$
Demod. Conversion Gain	$E_{R\text{-}Y}$	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 Demod. I/P (BNC 7): Sine Wave with Amplitude=$0.2V_{p\text{-}p}$ & Freq.=3578545 ± 5Hz	6.5	7.8	—	
Matrix Ratio (1)	$\frac{E_{R\text{-}Y}}{E_{B\text{-}Y}}$	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 Demod. I/P (BNC 7): Sine Wave with Amplitude=$0.2V_{p\text{-}p}$ & Freq.=3578545±5Hz	0.7	0.8	0.95	

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Matrix Ratio (2)	$\frac{E_{G-Y}}{E_{B-Y}}$	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 Demod. I/P (BNC 7): Sine Wave with Amplitude=$0.2V_{p-p}$ & Freq.=3578545±5Hz	0.22	0.30	0.38	
Relative Demod. output Phase of R-Y to B-Y	$\frac{\angle(R-Y)}{\angle(B-Y)}$	S1=3,S2=3,S3=1,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p-p}/100mV_{p-p}$ Connect 33pF from Pin 12 to GND	100	115	130	Deg.
Relative Demod. output Phase of G-Y to B-Y	$\frac{\angle(G-Y)}{\angle(B-Y)}$	S1=3,S2=3,S3=1,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p-p}/100mV_{p-p}$ Connect 33pF from Pin 12 to GND	240	255	270	Deg.
Residual carrier Voltage at Demod. output	θ_{car}	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p-p}/100mV_{p-p}$	—	—	0.2	V_{p-p}
Supply Voltage Coefficient of Demod. D.C. of Voltage	$\frac{\partial V_O}{\partial V_{CC}}$	S1=1,S2=3,S3=1,S4=2,S5=3,S6=1 $\frac{[\text{Demod. O/P } (V_{CC}=13.8V) - \text{Demod. O/P } (V_{CC}=10.2V)]}{13.8-10.2V}$	—	0.5	—	V/V
Auto Flesh Control Center	P_C	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p-p}/100mV_{p-p}$	285	295	305	Deg.
Auto Flesh Control Range	P_R	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p-p}/100mV_{p-p}$	±30	±40	±50	Deg.
Auto Flesh Control Gain	P_G	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 Sync. In, Chroma Input: Burst/Chroma=$100mV_{p-p}/100mV_{p-p}$	±20	±30	±40	Deg.
Video Amp. Voltage Gain(1)	V_G	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 V23=8.9V , V26=12V Video Input: Sine Wave with Amplitude= $0.3V_{p-p}$ & Freq.=0.1MHz	9.2	11	12.8	
Contrast Range of Video Amp. Voltage Gain (1)	R_V	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 V23=8.9V, Video Input: Sine Wave with Amplitude=$0.3V_{p-p}$& Freq.=0.1MHz	−14.2	−13.2	−12.2	dB
Video Amp. freq. Response	f_C	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 V23=8.9V, Pin 23 Open	5	—	—	MHz
Peaking Ratio	R_P	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 $\frac{\text{Video O/P at f=6MHz}}{\text{Video O/P at f=0.1MHz}}$	2.2	2.8	3.4	
Video Amp. Voltage Gain(2)	G_{VIR}	S1=1,S2=3,S3=2,S4=2,S5=3,S6=1 V23=8.9V Video Input: Sine Wave with Amplitude =$0.3V_{p-p}$ & freq.=0.1MHz	3.5	4.5	5.2	

Test Circuit