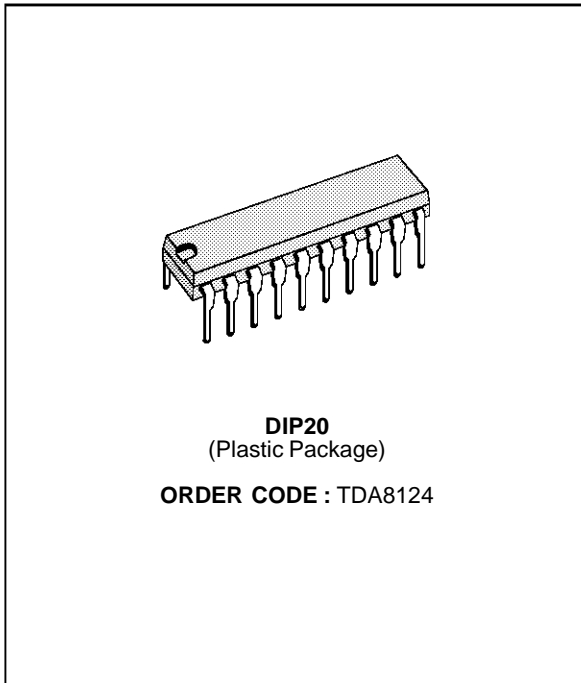


MULTISTANDARD VIDEO IF INTERFACE

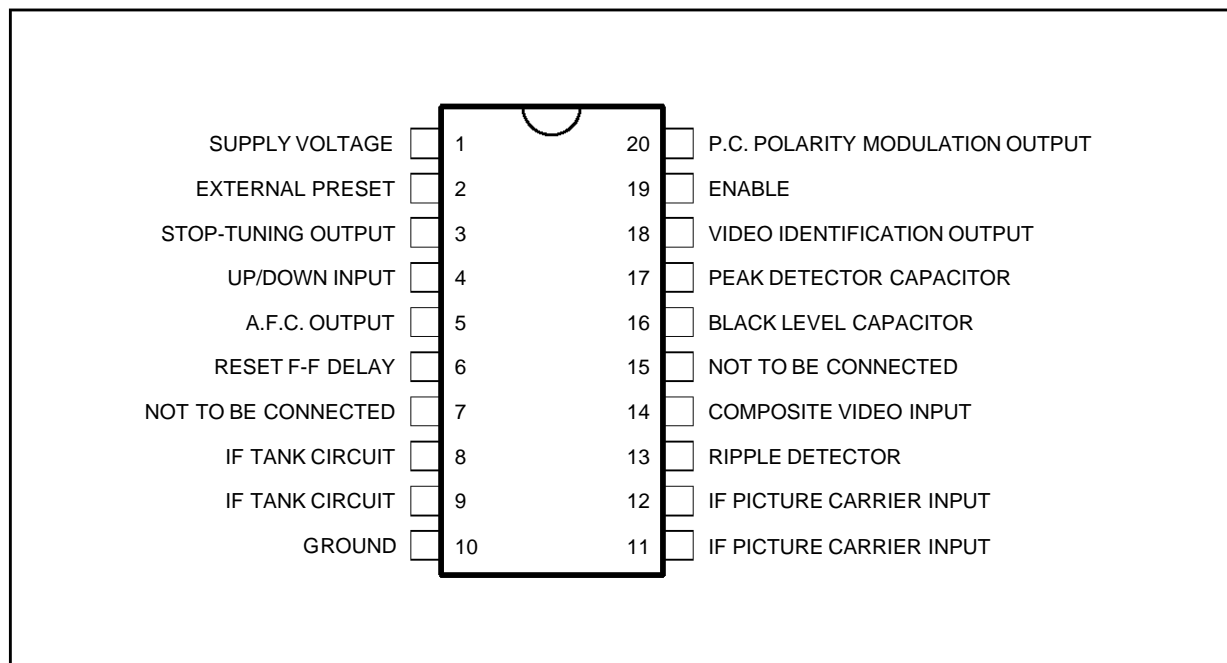
- AUTOMATIC IDENTIFICATION OF PICTURE CARRIER MODULATION POLARITY
- VIDEO SIGNAL IDENTIFICATION (FOR SOUND MUTING)
- ANALOG AND DIGITAL A.F.C. FOR STOP TUNING FUNCTION
- PICTURE CARRIER DETECTION IN A RANGE OF 1MHz AROUND THE IF-PICTURE CARRIER VALUE



DESCRIPTION

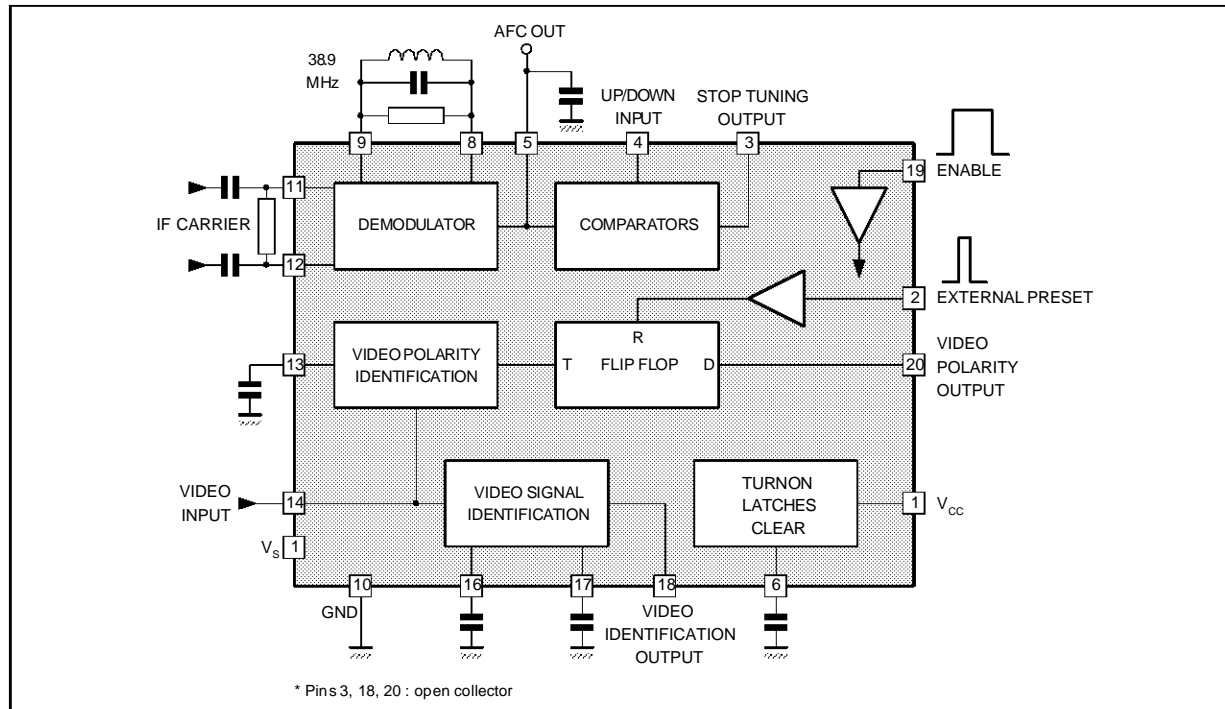
The TDA8124 has been developed in order to permit automatic standard switching and tuning when coupled with a multistandard VIDEO IF IC (for example TDA8120). It contains an A.F.C. synchronous demodulator and an A.F.C. comparator, a video polarity identification circuit with logic and a video signal identification system.

PIN CONNECTIONS



8124-01.EPS

BLOCK DIAGRAM



8124-02.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage (Pin 1)	15	V
T_{oper}	Operating Ambient Temperature Range	0 to + 70	°C
T_{stg}	Storage Temperature Range	- 20 to + 150	°C

8124-01.TBL

THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient Thermal Resistance	Max. 80	°C/W
$R_{th(j-c)}$	Junction-case Thermal Resistance	Max. 14	°C/W

8124-02.TBL

ELECTRICAL CHARACTERISTICS

$T_{AMB} = 25^{\circ}C$, $V_{CC} = 12V$ (unless otherwise specified)

- Positive video input signal $V_i = 3V_{PP}$ with top sync level = 3V
- Enable $\geq 2V$ on Pin 19

Symbol	Parameter	Pins	Test Conditions	Min.	Typ.	Max.	Unit
V_{CC}	Supply Voltage	1		10.8	12	13.2	V
I_s	Supply Current	1		14	24	32	mA
	Video Input Top Sync Level	14	• B/G standard : M = 100%, D = 90% • L/E standard : M = 100%, R \leq 6%		3		V
	Video Input Top White Level	14	• B/G standard : M = 100%, D = 90% • L/E standard : M = 100%, R \leq 6%		6		V
	Composite Video Input Voltage	14		1.5	3	3.3	V_{PP}
	Ripple Voltage across the 5.6nF External Capacitor	13	C13 = 5.6nF		400		mV

8124-03.TBL

ELECTRICAL CHARACTERISTICS (continued)

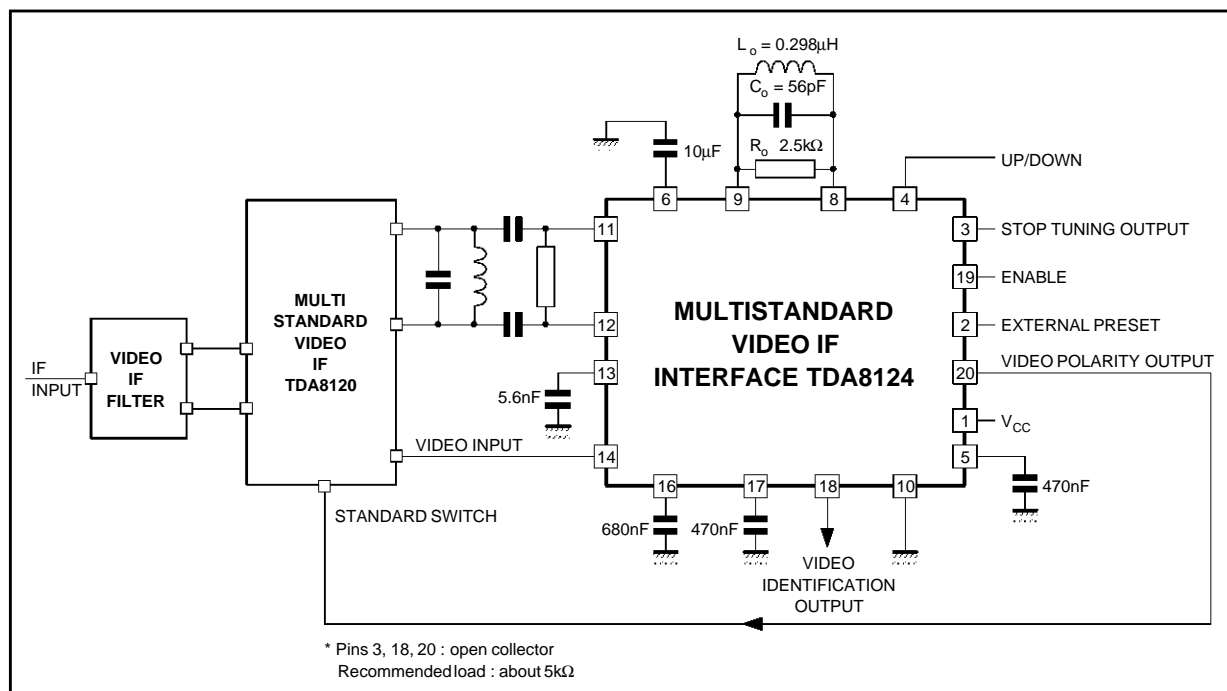
$T_{AMB} = 25^{\circ}C$, $V_{CC} = 12V$ (unless otherwise specified)

- Positive video input signal $V_i = 3V_{PP}$ with top sync level = 3V
- Enable $\geq 2V$

Symbol	Parameter	Pins	Test Conditions	Min.	Typ.	Max.	Unit
	Peak Detector Threshold Voltage	17			4.5		V
	Video Identification Current Capability	18				10	mA
	Minimum Sync Amplitude for Video Identification	14		450			mV _{PP}
	External Preset up/down and Enable Switch Voltages	2, 4 19		0 2		0.8 V_{CC}	V V
	External Preset, up/down, Enable Pins Input Impedance	2, 4 19		35	50		k Ω
	Video Polarity Out Voltage	20	Enable $\geq 2V$, P.C. IF = 38.9MHz • L/E (positive modulation) • B/G (negative modulation)		V_{CC}	0.5	V V
	Video Identification Out Voltage	18	• no video signal • with video signal		V_{CC}	0.5	V V
	IF Picture Carrier Input Voltage	11, 12	P.C. IF = 38.9MHz	50			mV _{PP}
	A.F.C. Output Slope	5	$Q_{LC} = 80$, $C_O = 56pF$, $L_O \cong 0.298\mu H$, $R_O = 2.5k\Omega$	0.5		0.85	$\frac{V}{100kHz}$
	V_{11-12} DC Voltage	11, 12			3.8		V
	V_{8-9} DC Voltage	8, 9			3.65		V
	Stop/Tuning Output Voltage	3	• No picture carrier or 39.4MHz < IF < 38.4MHz • With picture carrier IF _{PC} $\geq 38.9MHz$ IF _{PC} $\leq 39.4MHz$		0		V V
	Stop/Tuning Output Bandwidth	3		1.1	1.3	1.5	MHz

8124-04.TBL

TYPICAL APPLICATION (with TDA8120)

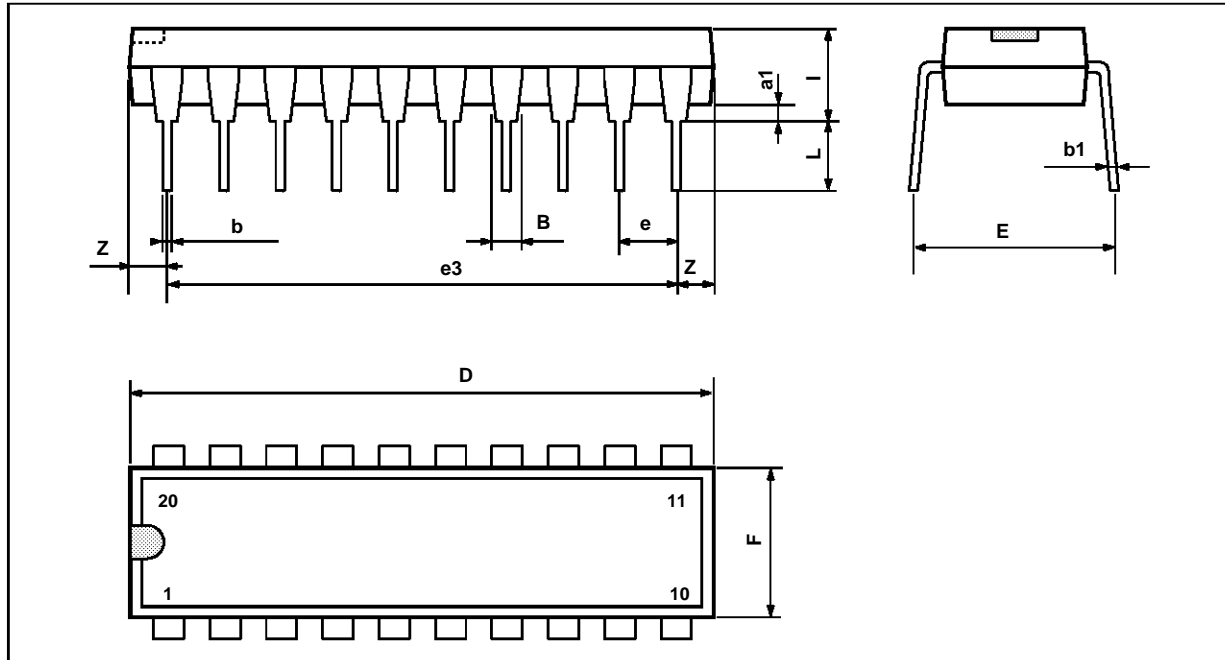


8124-03.EPS

TDA8124

PACKAGE MECHANICAL DATA

20 PINS - PLASTIC DIP



PM-DIP20.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.254			0.010		
B	1.39		1.65	0.055		0.065
b		0.45			0.018	
b1		0.25			0.010	
D			25.4			1.000
E		8.5			0.335	
e		2.54			0.100	
e3		22.86			0.900	
F			7.1			0.280
i			3.93			0.155
L		3.3			0.130	
Z			1.34			0.053

DIP20.TBL

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