

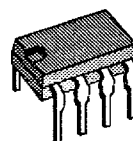
**PREAMPLIFIER FOR INFRARED
REMOTE CONTROL SYSTEMS**

DESCRIPTION

The TDA2320 is a monolithic integrated circuit in Dip package specially designed to amplify the IR signal in remote controlled TV or radio sets. It directly interfaces with the digital control circuitry.

The TDA2320 incorporates a two-stage amplifier with excellent sensitivity and high noise immunity. It can work with a single 5V supply voltage and flash or carrier transmission modes as provided for example by the M709A/M710A/MOS transmitters.

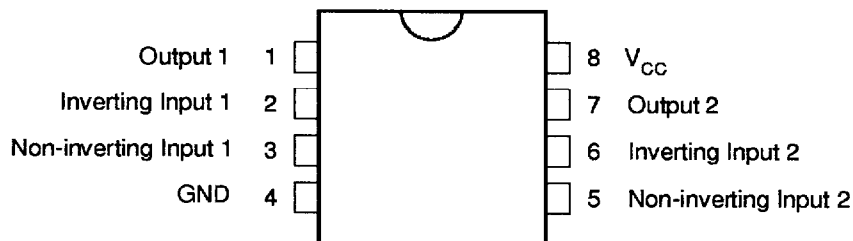
The TDA2320 is particularly intended to be used in conjunction with the M104 and M206 + M3870 remote control receivers.



N
DIP8
(Plastic Package)

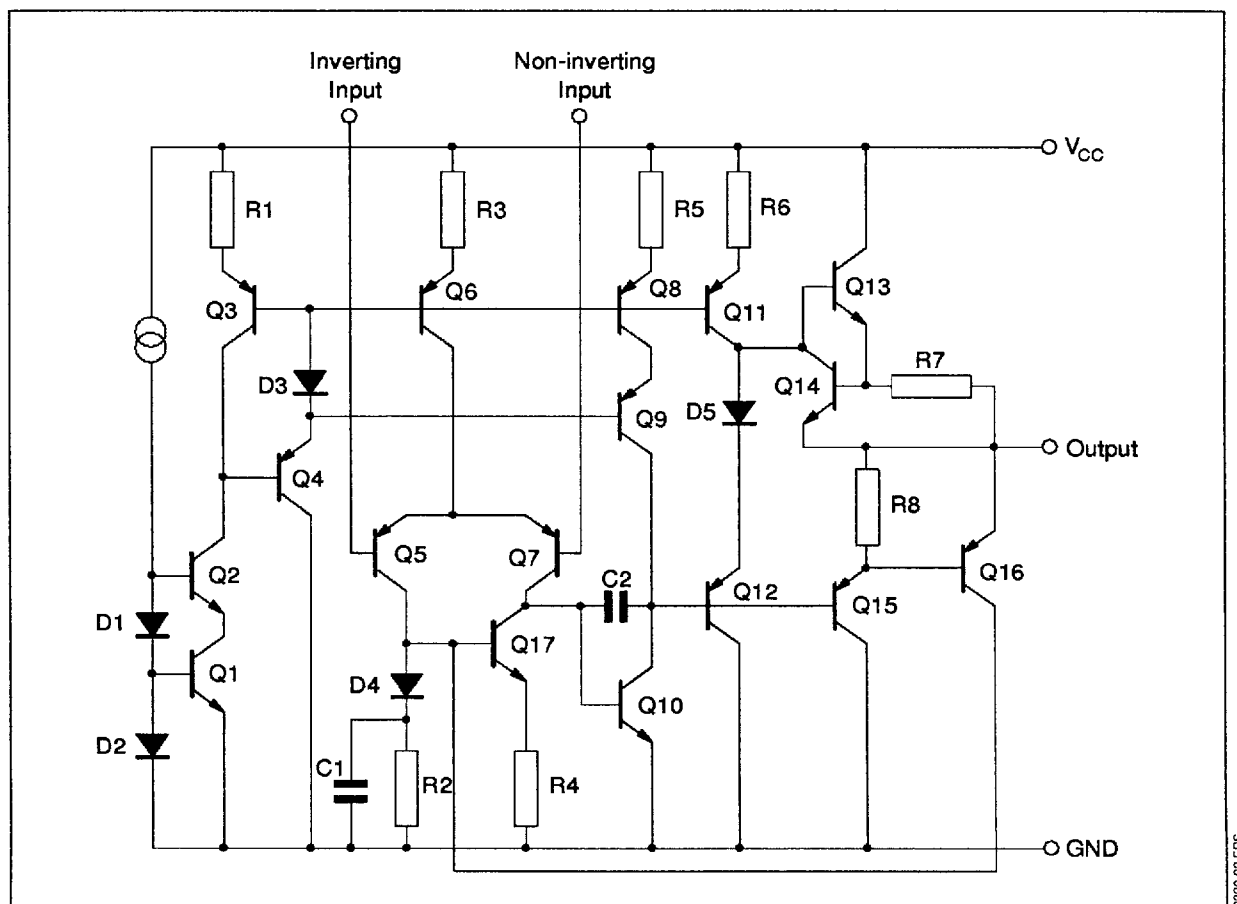
ORDER CODE : TDA2320N

PIN CONNECTIONS (top view)



2320-01 EPS

SCHEMATIC DIAGRAM (1/2 TDA2320)



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	20	V
P_{tot}	Total Power Dissipation at $T_{amb} = 70^{\circ}\text{C}$	400	mW
T_{stg}, T_j	Storage and Junction Temperature	-40 to 150	$^{\circ}\text{C}$

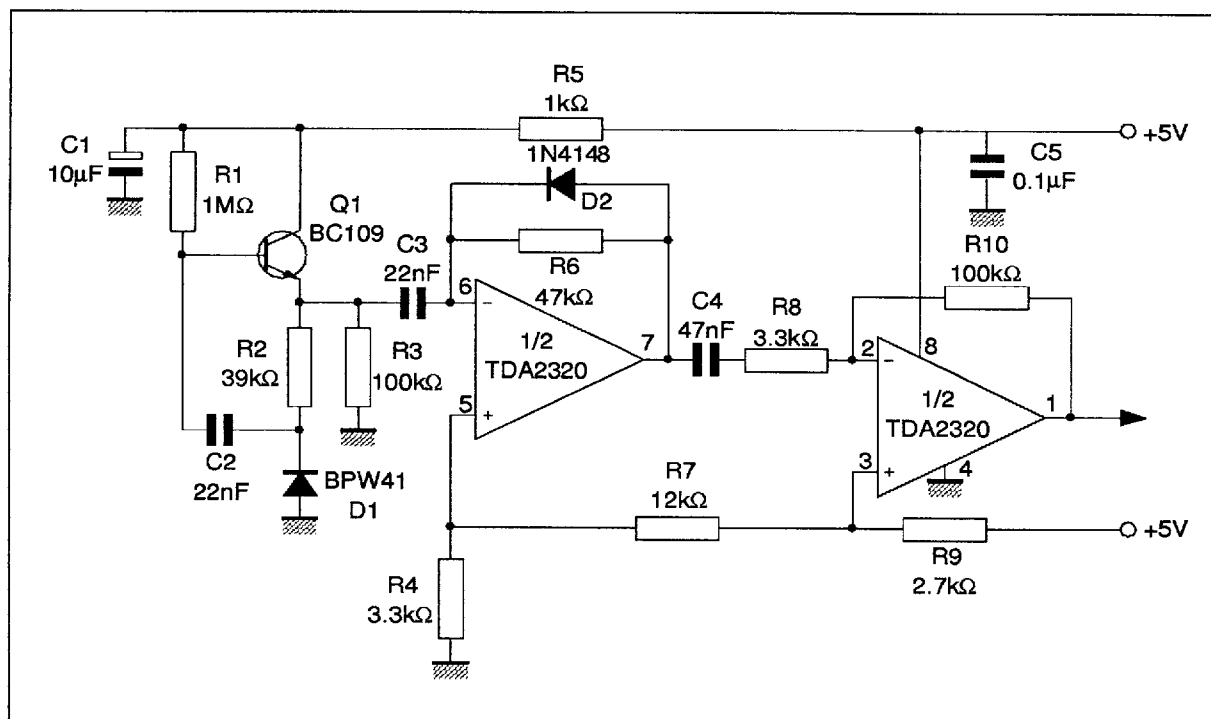
2320-01 TBL

ELECTRICAL CHARACTERISTICS

$V_{CC} = 5V$, $T_{amb} = 25^{\circ}C$ (unless otherwise specified) (refer to the test circuits)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{CC}	Supply Voltage	4		20	V
I_{CC}	Supply Current $V_{CC} = 20V$		0.8	2	mA
I_{ib}	Input Bias Current		100	500	nA
V_{io}	Input Offset Voltage $R_s < 10k\Omega$		0.5		mV
I_{io}	Input Offset Current		15		nA
A_{vd}	Large Signal Voltage Gain $f = 1kHz$ $f = 100kHz$	64	70 30		dB
V_{OPP}	DC Output Voltage Swing		2.5		V
GBP	Gain-bandwidth Product $f = 100kHz$	1.5	3		MHz
SR	Slew Rate $R_L = 2k\Omega$		1.5		V/ μs
e_n	Equivalent Input Noise Voltage $f = 40kHz$ $R_s = 10k\Omega$		20		$\frac{nV}{\sqrt{Hz}}$
SVR	Supply Voltage Rejection Ratio $f = 100Hz$		80		dB

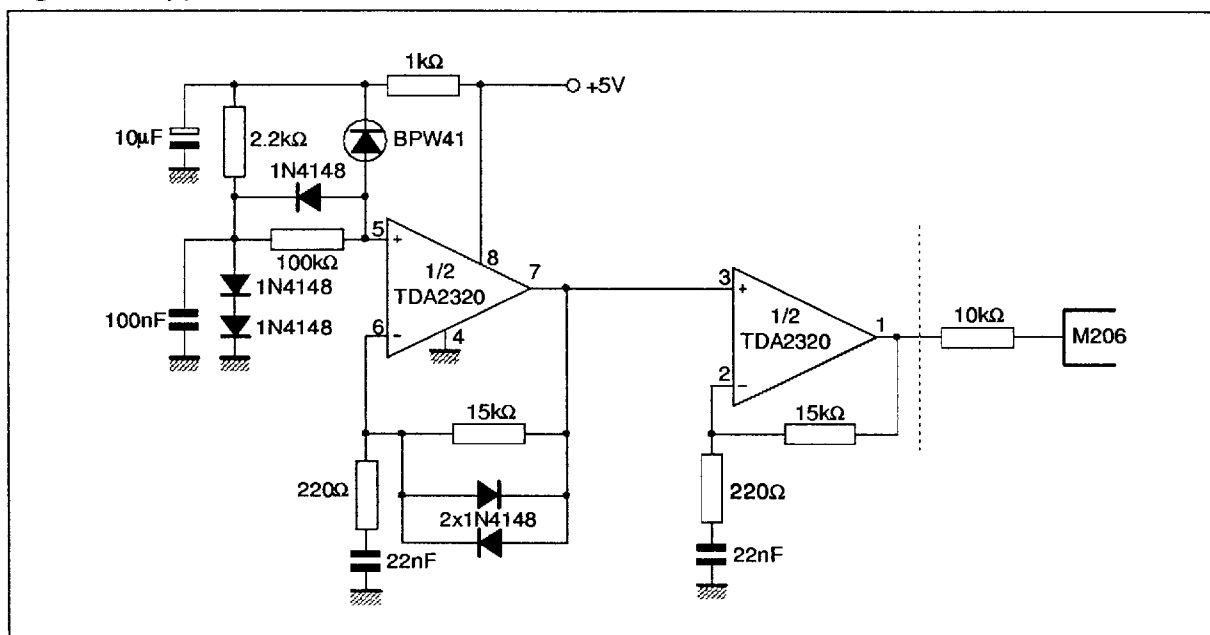
2320-02.TBL

APPLICATION CIRCUIT**FLASH MODE PREAMPLIFIER**

2320-03.EPS

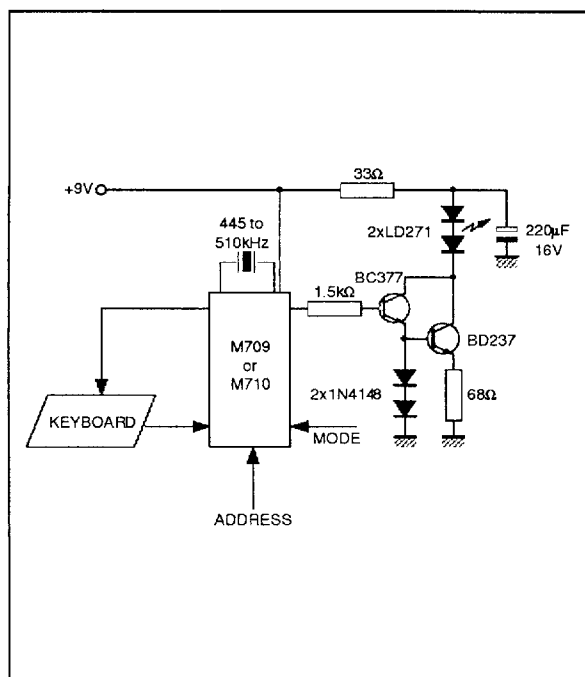
APPLICATION INFORMATION

Figure 1 : Application Circuit for Carrier Transmission Mode



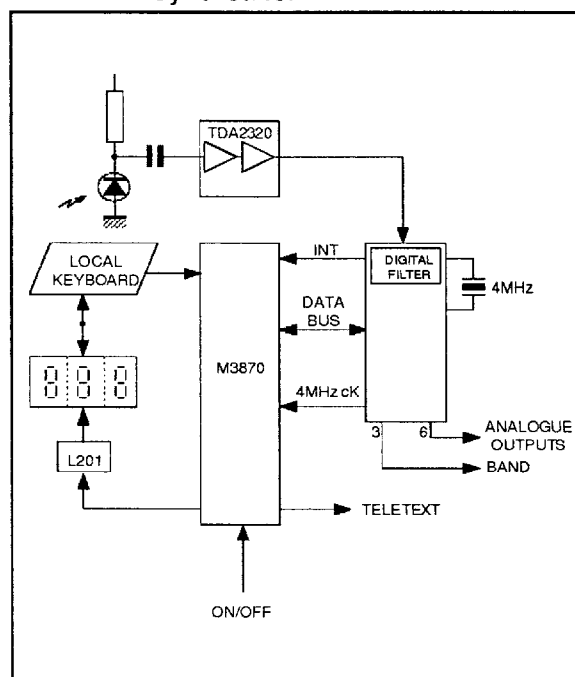
2320-04.EPS

Figure 2 : IR Transmitter Using M709 or M710



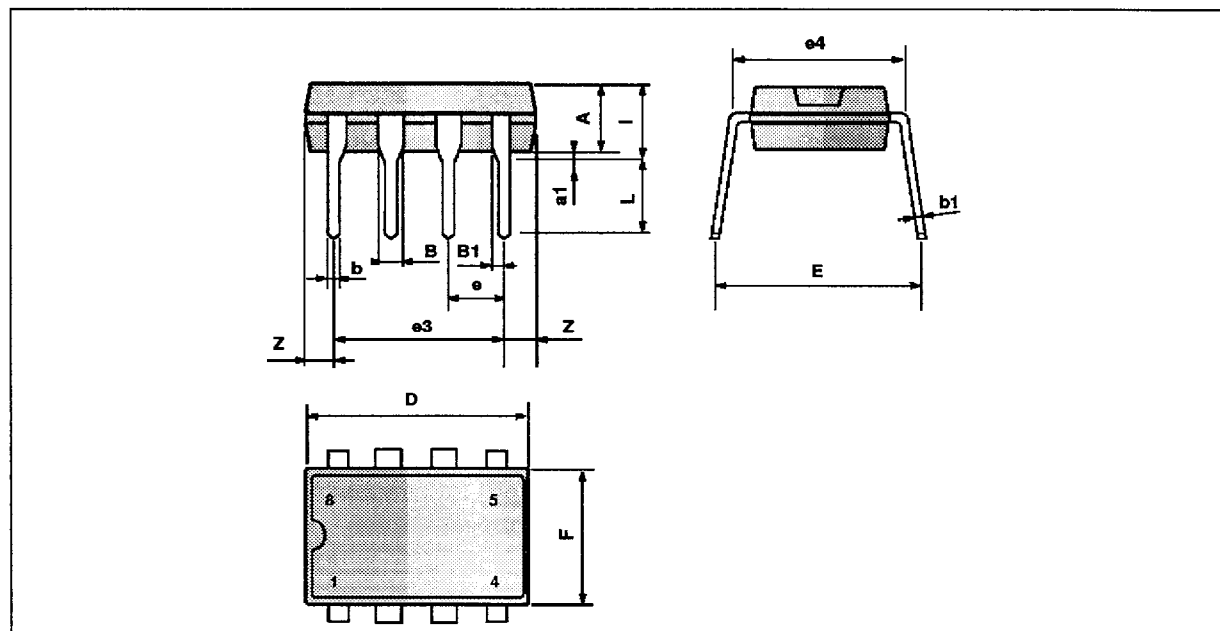
2320-05.EPS

Figure 3 : MMC II - PLL TV Frequency Synthesizer



2320-06.EPS

PACKAGE MECHANICAL DATA **8 PINS - PLASTIC DIP**



PM-DIP8ERS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0.260
i			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060

DIP8-TBL

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No licence is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.

ORDER CODE :

SGS-THOMSON
MICROELECTRONICS

5/5

7929237 0074809 T08