

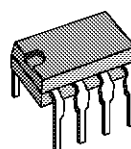
**PREAMPLIFIER FOR INFRARED
REMOTE CONTROL SYSTEMS**

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.

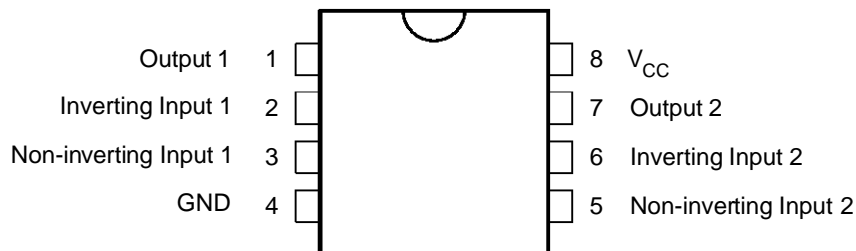
The TDA2320 is particularly intended to be used in conjunction with the M104 and M206 + M3870 remote control receivers.



N
DIP8
(Plastic Package)

ORDER CODE : TDA2320N

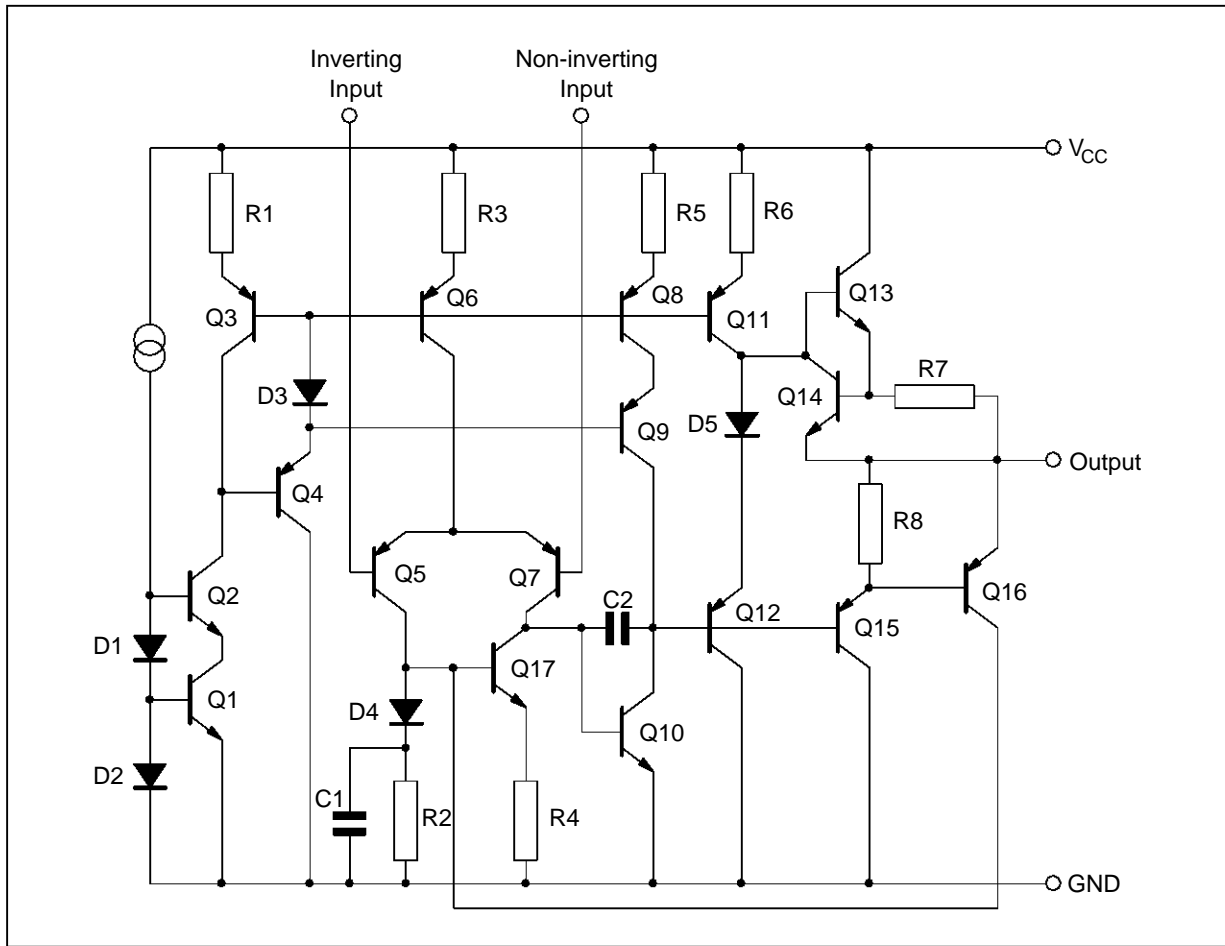
PIN CONNECTIONS (top view)



2320-01.EPS

TDA2320

SCHEMATIC DIAGRAM (1/2 TDA2320)



ABSOLUTE MAXIMUM RATINGS

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

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ELECTRICAL CHARACTERISTICS

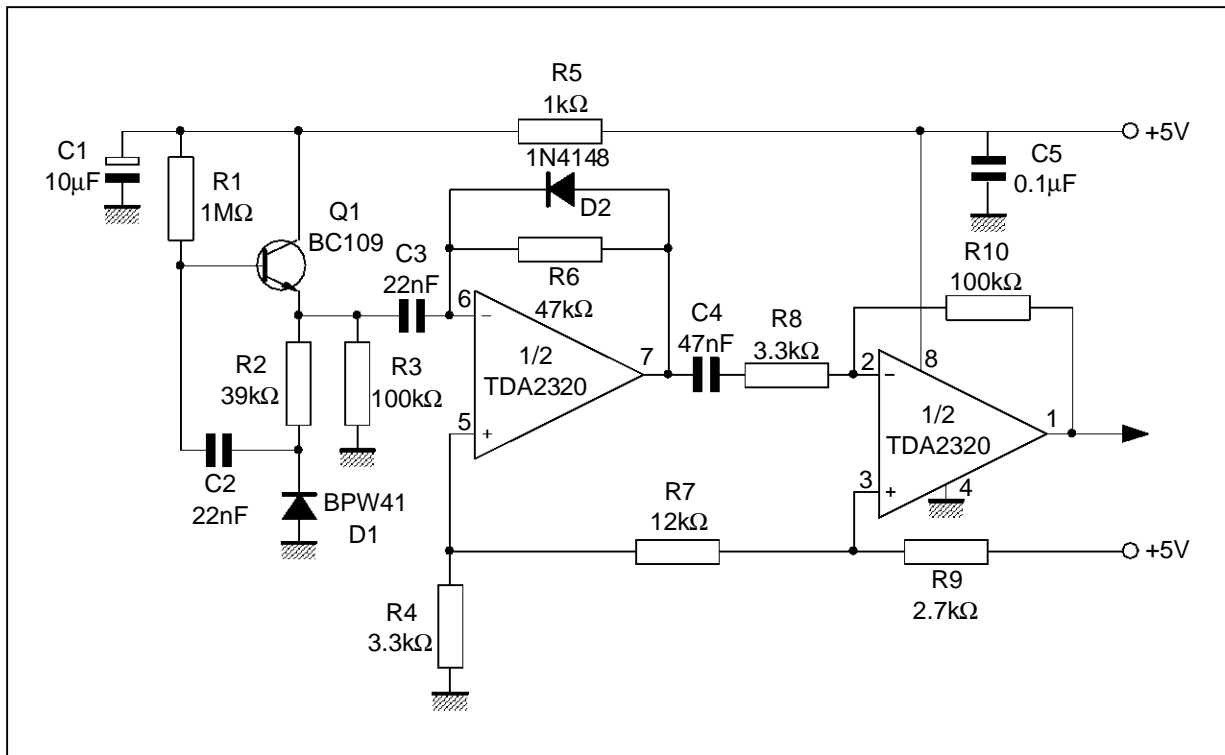
$V_{CC} = 5V$, $T_{amb} = 25^{\circ}C$ (unless otherwise specified) (refer to the test circuits)

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

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APPLICATION CIRCUIT

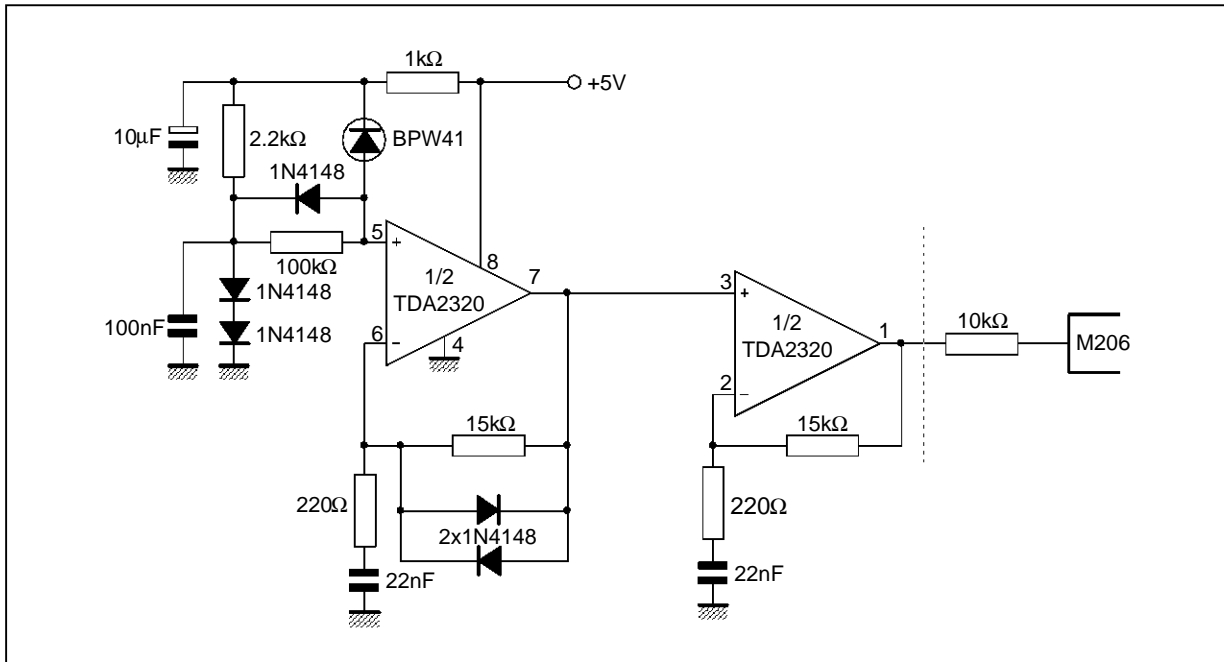
FLASH MODE PREAMPLIFIER



2320-03.EPS

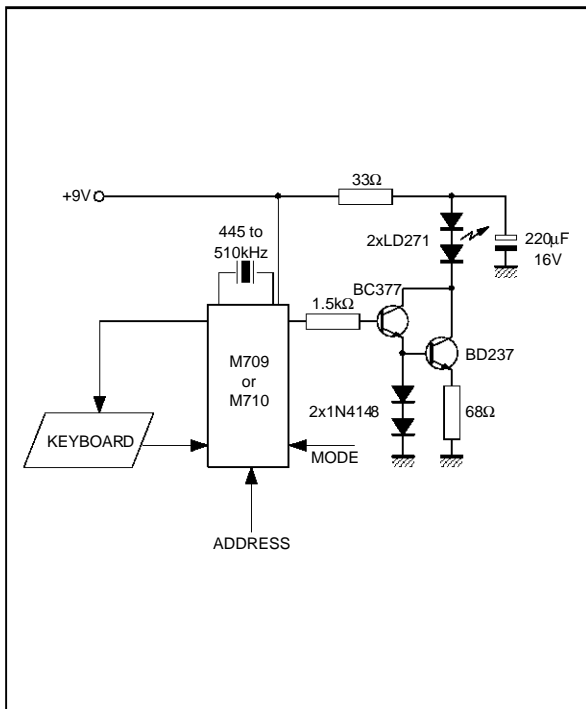
APPLICATION INFORMATION

Figure 1 : Application Circuit for Carrier Transmission Mode



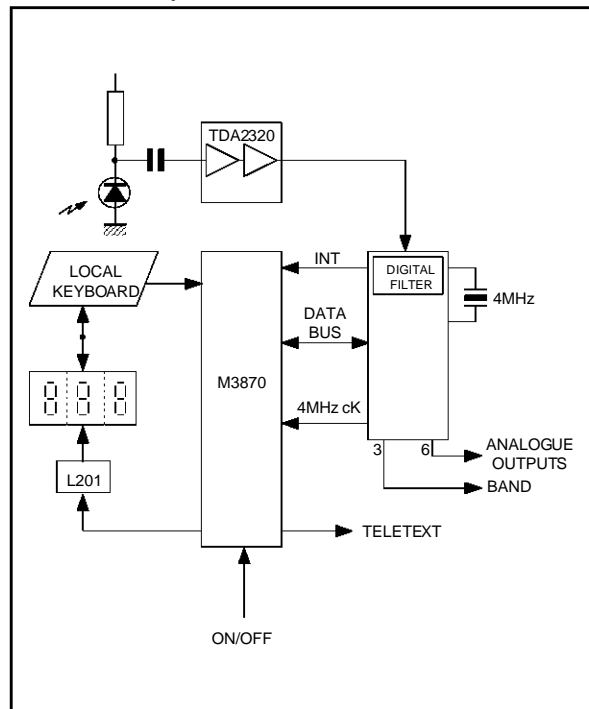
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Figure 2 : IR Transmitter Using M709 or M710



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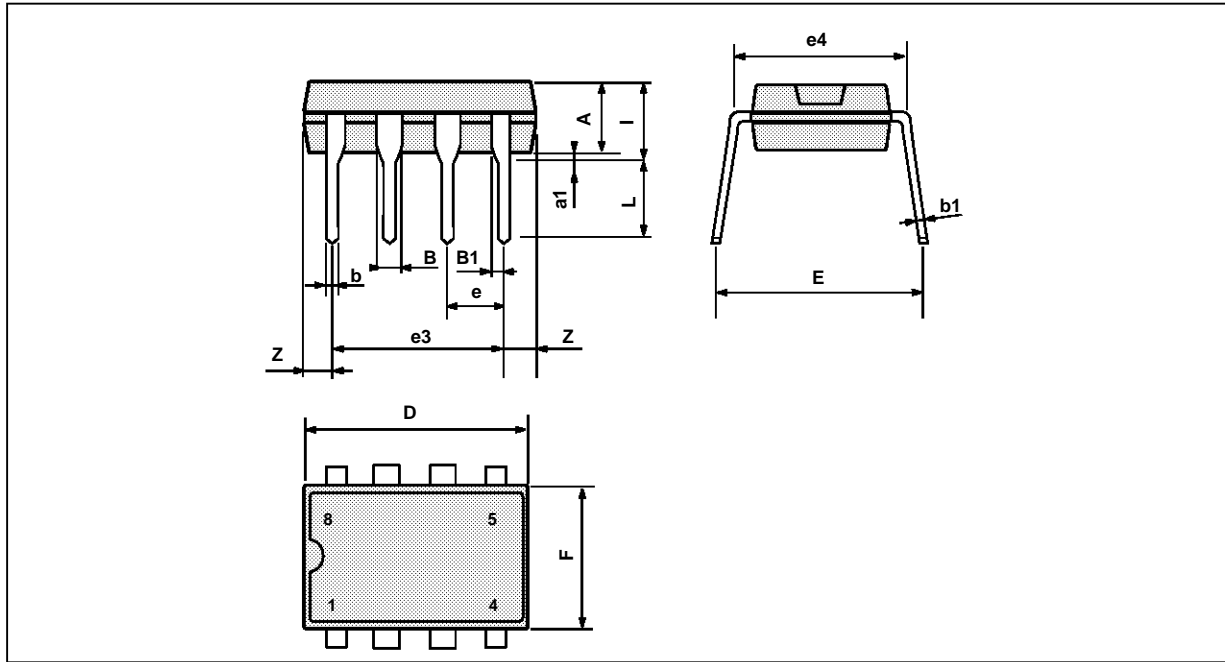
Figure 3 : MMC II - PLL TV Frequency Synthesizer



2320-06.EPS

PACKAGE MECHANICAL DATA

8 PINS -PLASTIC DIP



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

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