

### TBA651 Tuner and IF Amplifier

#### REFERENCE TABLE

Code	Stock No.
TBA651	31168E

#### DESCRIPTION

The TBA651 is a linear integrated circuit that processes the whole high frequency signal in AM receivers.

It is particularly intended for car radio and high quality radio receivers.

The TBA651 consists of five stages: RF amplifier, mixer, oscillator, IF amplifier and AGC control.

#### ABSOLUTE MAXIMUM RATINGS

Supply voltage	18V
Power dissipation ( $T_A \leq 80^\circ\text{C}$ )	250mW
Storage temperature range	$-55^\circ\text{C}$ to $150^\circ\text{C}$
Operating temperature range	$29^\circ\text{C}$ to $80^\circ\text{C}$

#### FEATURES

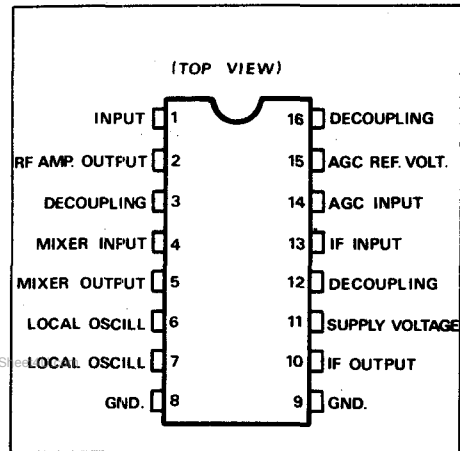
Audio output voltage 0.6V

Low noise and high gain

Wide voltage supply range  
4.5V to 18V

High signal handling capability: 1V

#### CONNECTION DIAGRAM



See outline drawing No. 119 for dimensions.

#### TYPICAL ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ , $V_{CC} = 12\text{V}$ unless otherwise specified)

Parameter	Conditions	Value	Unit
Total Supply Current		11.5	mA
Audio Output Voltage	$f_c = 1.6\text{ MHz}$ , $f_m = 1\text{ KHz}$ , $m = 0.3$ , $V_{IN} = 100\mu\text{V}$	0.5	V
Audio Output Voltage	$f_c = 1.6\text{ MHz}$ , $f_m = 1\text{ KHz}$ , $m = 0.3$ , $V_{IN} = 1.5\mu\text{V}$	180	mV
rf Input Voltage (pin 1)	Signal to noise ratio = 26 dB	10	$\mu\text{V}$
rf Input Voltage (pin 1)	$f_c = 1.6\text{ MHz}$ , $f_m = 1\text{ KHz}$ , $m = 0.8$ , T.H.D. = 5%	100	mV
rf Signal Handling Capability (pin 1)		1	V
A.G.C. Range	for 10 dB expansion of audio output voltage	80	dB
rf Amplifier Input Conductance (pin 1)	$f_c = 1.6\text{ MHz}$	0.7	$\text{m}\Omega^{-1}$
Mixer Input Conductance (pin 4)	$f_c = 1.6\text{ MHz}$	0.4	$\text{m}\Omega^{-1}$
IF Amplifier Input Conductance (pin 13)	$f = 455\text{ KHz}$	0.25	$\text{m}\Omega^{-1}$

PLEASE QUOTE STOCK NO. AND MANUFACTURER'S CODE WHEN ORDERING

7