



MOTOROLA

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MC44303

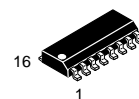
Product Preview I/Q Demodulator

The MC44303 is an IF amplifier and synchronous I/Q detector circuit intended for demodulation of QAM, VSB or GPSK digitally modulated signals. Great care was applied to this design to provide the best possible linearity, bandwidth and quadrature accuracy.

- 70 dB Voltage Gain IF Amplifier
- 10 MHz I/Q Detectors for QAM, VSB or Analog Signals
- Quadrature Error < 2°
- Continuous AGC with Adjustable Delay for RF Stage
- Oscillator at "Half IF" to Minimize Spurious Feedback
- Quadrature Generator Frequency Range 30 to 55 MHz

IF AMPLIFIER AND I/Q DEMODULATOR

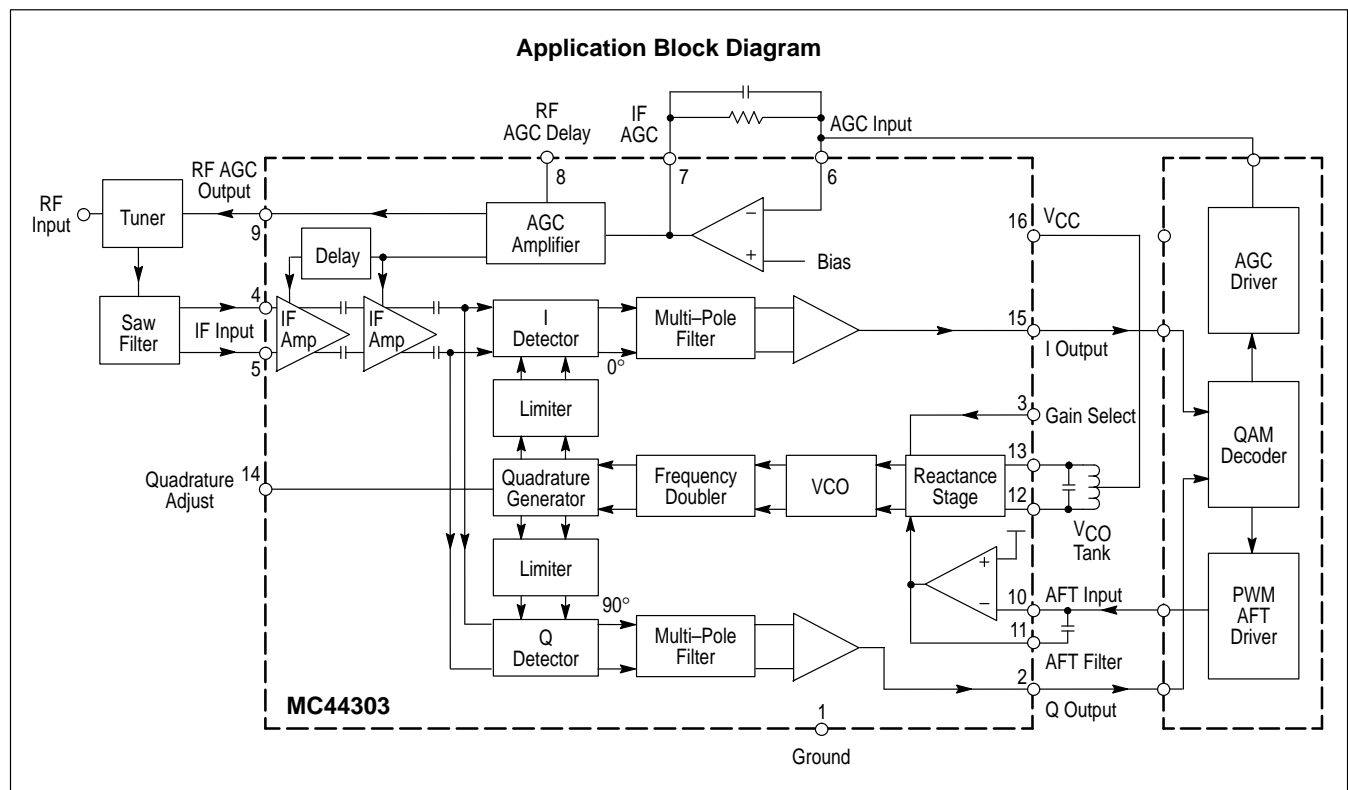
SEMICONDUCTOR TECHNICAL DATA



D SUFFIX
PLASTIC PACKAGE
CASE 751B
(SO-16)

ORDERING INFORMATION

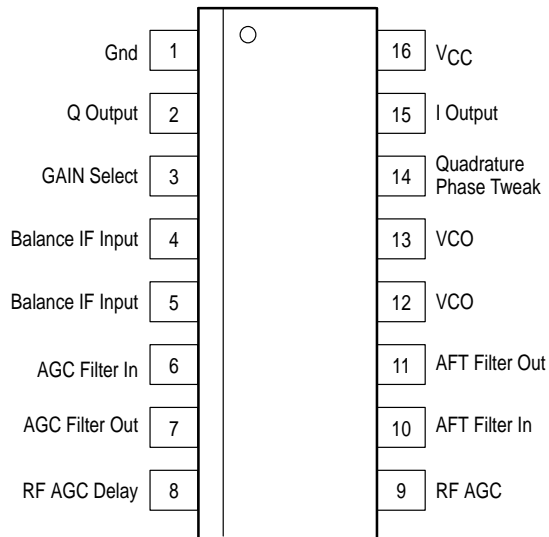
Device	Operating Temperature Range	Package
MC44303D	$T_A = 0^\circ \text{ to } +70^\circ\text{C}$	SO-16



MC44303

PIN CONNECTIONS

(Top View)

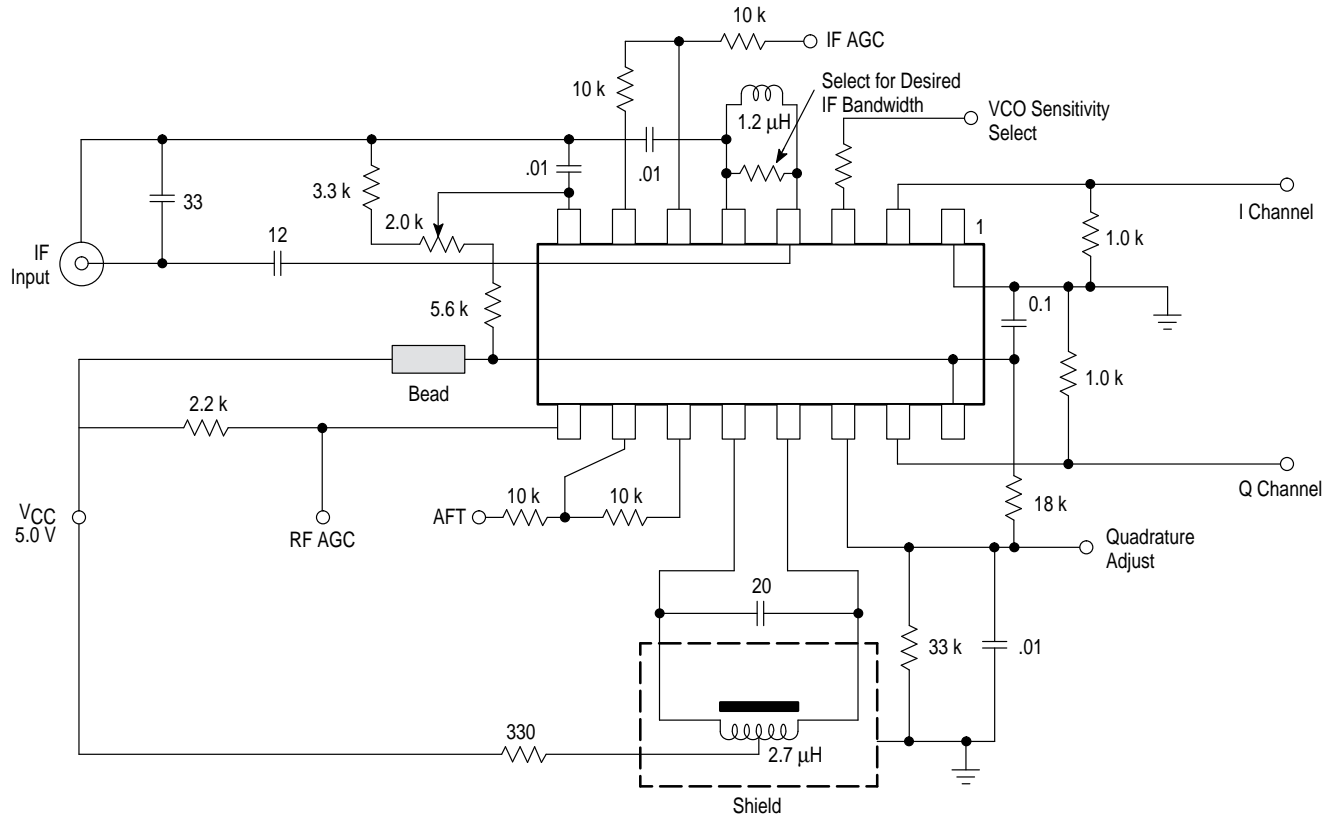


MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Power Supply Voltage	V_{CC}	7.0	V
Input Voltage Range IF Input, AGC Input, AFT Input, Gain Select, RF AGC Delay, Quadrature Adjust	V_{in}	-0.5 to V_{CC}	V
VCO Coil Voltage	VCO	V_{CC}	V
Output Current I/Q Outputs RF AGC, Internally Limited		15 2.0	mA
Power Dissipation at $T_A = 70^\circ\text{C}$	P_D $R_{\theta JA}$	800 100	mW °C/W
Operating Junction Temperature	T_J	+150	°C
Operating Ambient Temperature	T_A	0 to +70	°C

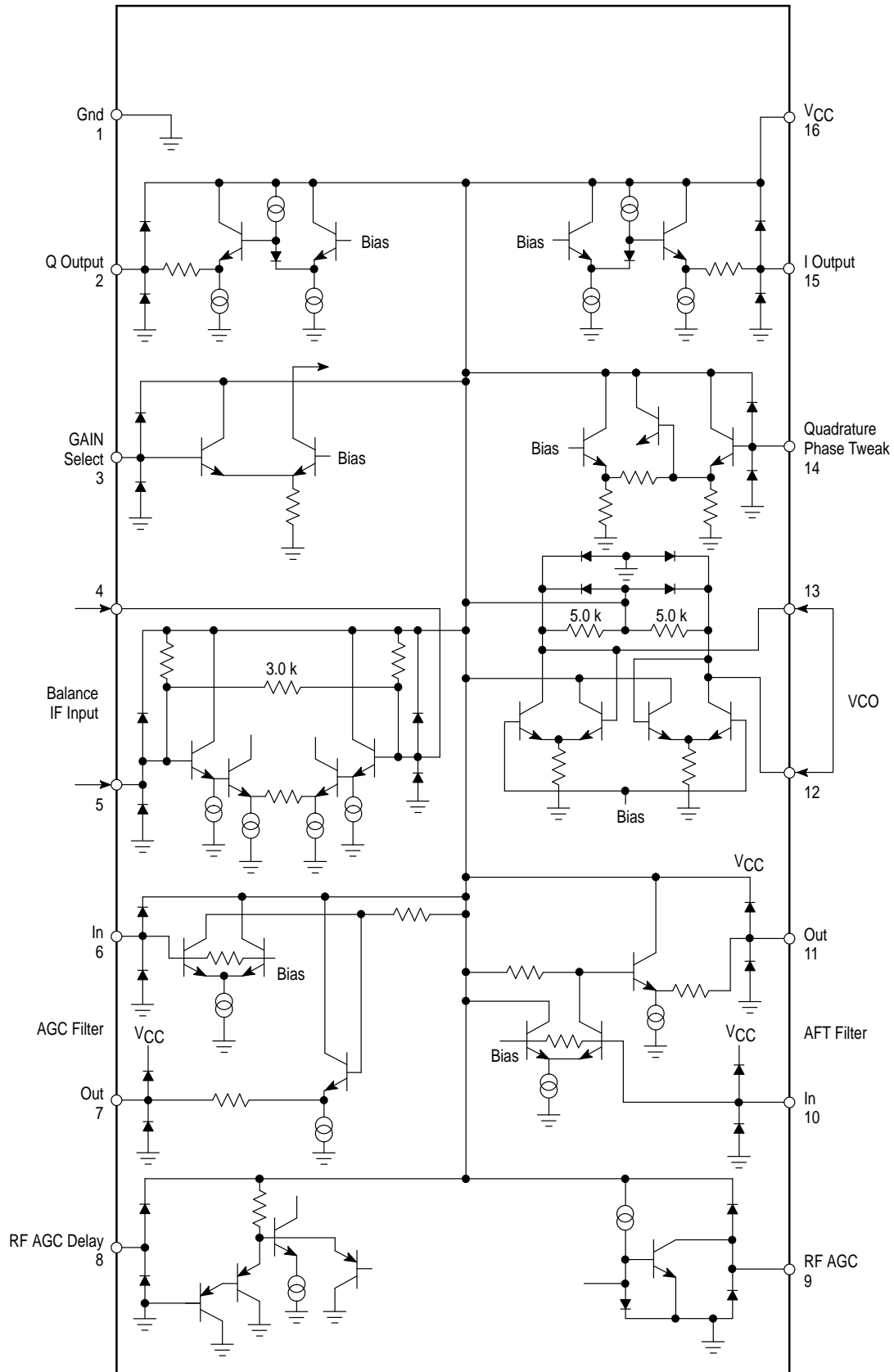
MC44303

Figure 1. MC44303 Test Circuit



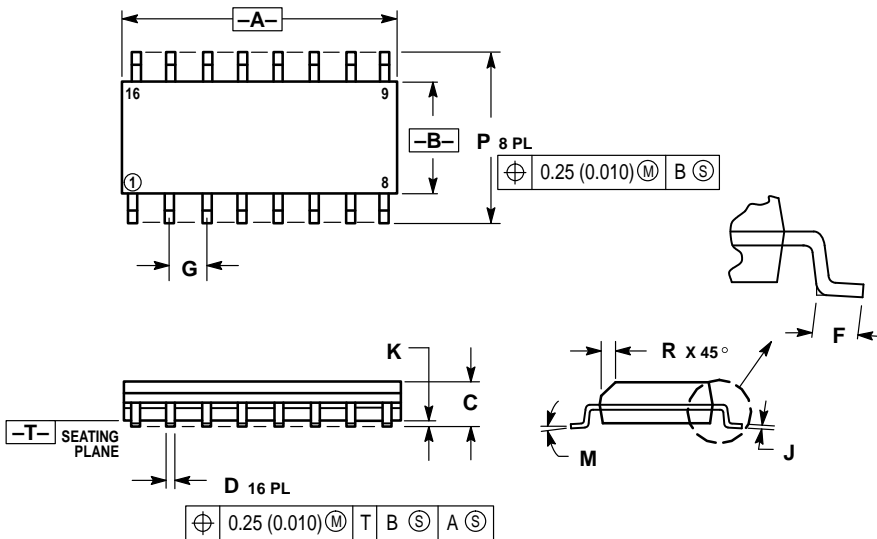
MC44303

Figure 2. MC44303 Pin Schematic



OUTLINE DIMENSIONS


D SUFFIX
PLASTIC PACKAGE
CASE 751B-05
(SO-16)
ISSUE J



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS A AND B DO NOT INCLUDE MOLD PROTRUSION.
4. MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
5. DIMENSION D DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 (0.005) TOTAL IN EXCESS OF THE D DIMENSION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.80	10.00	0.386	0.393
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.25	0.016	0.049
G	1.27 BSC		0.050 BSC	
J	0.19	0.25	0.008	0.009
K	0.10	0.25	0.004	0.009
M	0°	7°	0°	7°
P	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

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