

**ACF 7323C ACF 7363C
ACF 7383C**

**MICRA
CORP.**

MICRA CORPORATION
120 RICEFIELD LANE
HAUPPAUGE, N.Y. 11788

DTMF Tone Detection Band Pass Filter

FEATURES

- Standard model tone frequency settings of 697, 770, 852, 941, 1209, 1336, 1477 and 1633 and MF frequencies of 700, 900, 1100, 1300, 1500, 1700
- $\pm 0.3\%$ F_0 tolerance
- $\pm 0.0075\%/^{\circ}\text{C}$ F_0 temperature coefficient
- $\pm 0.1\%/^{\circ}\text{C}$ Q temperature coefficient
- Preset Q, 22 $\pm 10\%$ (4.5% B.W.)
- Filter design factory tunable over F_0 range of 500 to 3kHz and Q range of 10 to 30
- Low power consumption 72mW max at $\pm 12\text{VDC}$
- Can be operated with single-ended power supplies

DESCRIPTION

The General Instrument ACF 7323C/ACF 7363C/ACF 7383C Band Pass Active Filters are pre-tuned active filters designed specifically for tone receiver applications. These filters are available in hermetically sealed 12-lead TO-8, D.D.I.L., and S.I.L. packages.

Maximum Ratings *

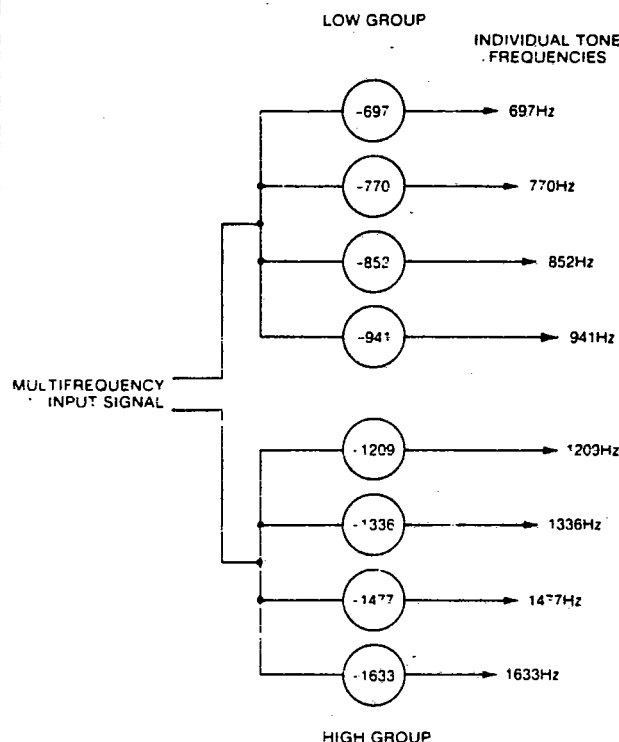
V_{CC} (Max)	± 18 Volts
V_{CC} (Min)	± 8 Volts
Input Voltage Range	Power Supply Potential
Storage Temperature Range	-65°C to $+150^{\circ}\text{C}$
Operating Temperature Range	0°C to -70°C

* Exceeding these ratings could cause permanent damage. Functional operation of this device at these conditions is not implied—operating ranges are specified below.

ELECTRICAL CHARACTERISTICS (25°C unless otherwise specified)

$+V_{CC} = +12\text{V}$,
 $-V_{CC} = -12\text{V}$

TYPICAL APPLICATION 8-SECTION TONE FILTER



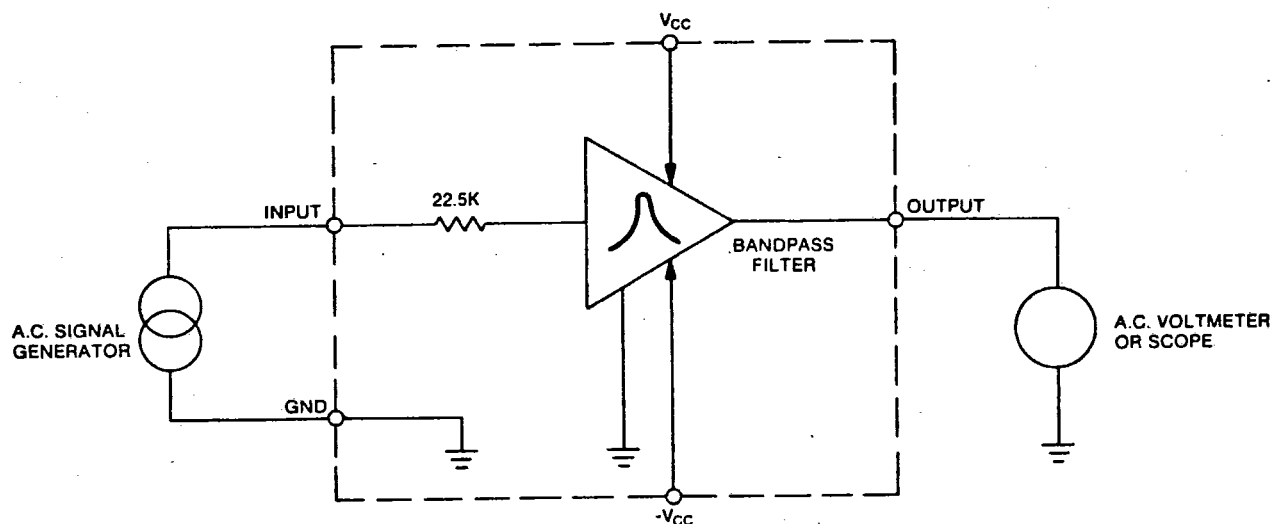
Characteristic	Min	Typ	Max.	Units	Conditions
Frequency Range	500	—	3000	Hz.	Note 1
Q Range	10	—	30	—	Note 1
F_0 Accuracy	—	± 0.2	± 0.3	%	(0°C to 70°C)
F_0 Temp Coef	—	± 35	± 75	ppm/ $^{\circ}\text{C}$	(0°C to 70°C)
Q Accuracy	—	—	± 10	%	@ F_0 (0°C to 70°C)
Q Temp Coef	—	± 500	± 1000	ppm/ $^{\circ}\text{C}$	(0°C to 70°C)
Voltage Gain	-1	0	+1	dB	@ F_0 (0°C to 70°C)
Input Impedance	22.5	30	—	k Ω	
Output voltage	—	7	—	V_{RMS}	
Output Impedance	—	—	1	Ω	10 to 10kHz
Output Noise	—	0.25	0.75	mV $_{\text{RMS}}$	10 to 10kHz
Output Offset Voltage	—	± 40	± 60	mV	
Positive Supply Voltage	+5	+12	+18	V	
Negative Supply Voltage	-5	-12	-18	V	
Power Supply Current @ $\pm 15\text{V}$	—	1.5	3.0	mA	
Operating Temp Range	0	—	70	$^{\circ}\text{C}$	
Storage Temp Range	-55	—	150	$^{\circ}\text{C}$	

NOTE 1:

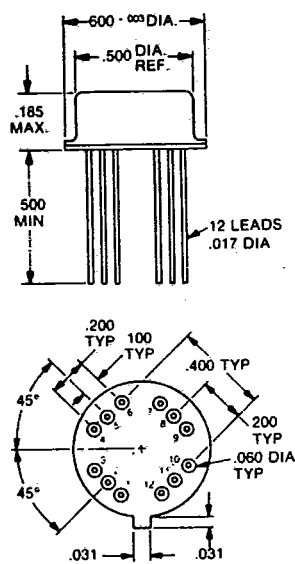
For the eight standard models, Q is preset to 22 and F_0 is preset at the tone frequencies: 697, 770, 852, 941, 1209, 1336, 1477 and 1633. The model number designation is ACF 73XXC — F_0 (e.g., ACF 7323C—0697). Other values of Q are indicated by a dash number (e.g., ACF 7323C—0697—18).

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TEST CIRCUIT

PACKAGE INFORMATION
PIN CONFIGURATION

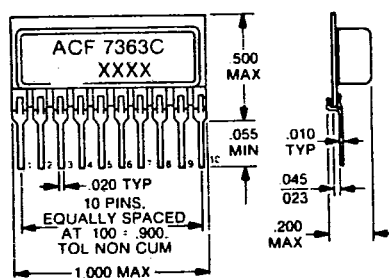
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PIN FUNCTION

1. NC
2. NC
3. GND
4. Input Test Point
5. Input
6. NC
7. NC
8. NC
9. NC
10. Output
11. -Vcc
12. +Vcc

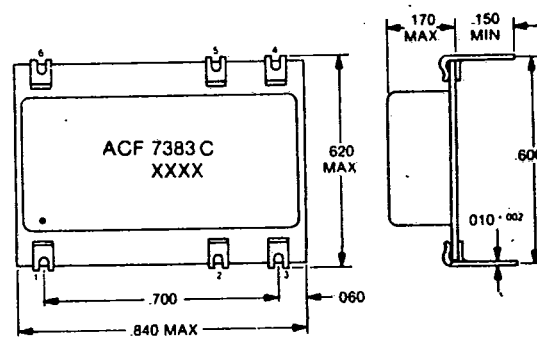
ACF 7363C



PIN FUNCTION

1. NC
2. Input
3. Test Point
4. NC
5. NC
6. -Vcc
7. GND
8. +Vcc
9. Output
10. NC

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PIN FUNCTION

1. GND
2. Input Test Point
3. +Vcc
4. -Vcc
5. Output
6. Input

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