

Spectral analysis band-pass filter for mini component stereo

BA3833F

The BA3833F is a 4+1 band-pass filter IC for spectrum analyzer with built-in recording indicator output. External components can be reduced largely by incorporating all capacitors that compose a filter. This enables to make set smaller and more highly-reliable.

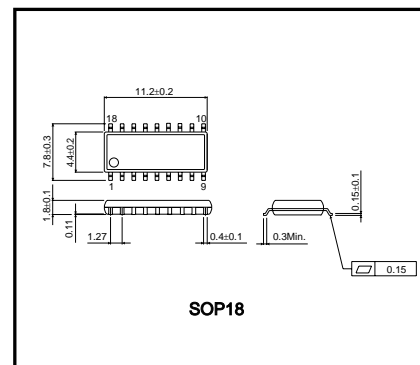
●Applications

CD radio cassette player, mini component stereo, car stereo

●Features

- 1) Spectral analysis 4-band band-pass filter and rectifier circuit (with internal capacitor).
- 2) Detector circuit for every frequency.
- 3) Parallel output with internal Lch / Rch mixing-up function.
- 4) Single battery operation in 5 to 6 V.

●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	9	V
Power dissipation	P _d	550 *	mW
Operating temperature range	T _{opr}	-40 to +85	°C
Storage temperature range	T _{stg}	-55 to +125	°C

* For an operation with Ta=25°C or more, 5.5mW shall be reduced per 1°C.
A glass epoxy board 50mmx50mmx1.6mm in thickness shall be mounted.

●Recommended operating conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V _{IN}	4.5	5	8	V

Audio ICs

●Electrical characteristics

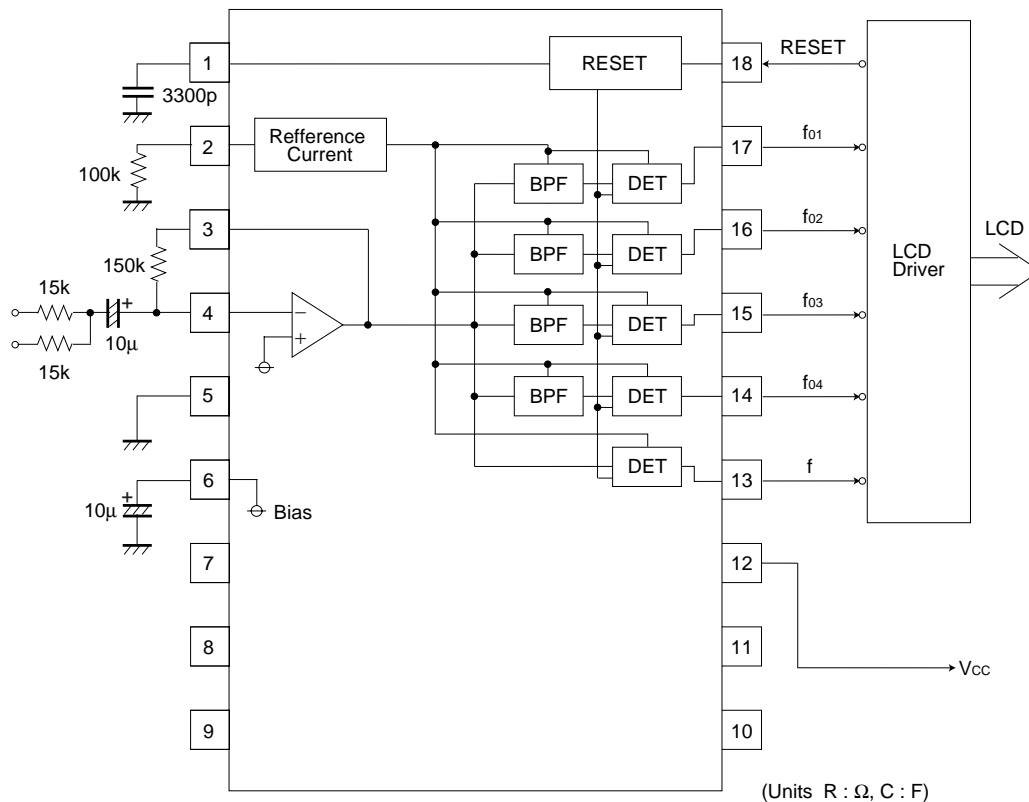
(Unless specified particularly, $T_a=25^\circ\text{C}$, $V_{CC}=5\text{V}$, $R_L=10\text{M}\Omega$, $V_{IN}=-30\text{dBV}$ and reset OFF)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current upon no signal	I_Q	–	4	8	mA	Upon no input
Maximum output level	V_{OM}	4.0	4.8	–	V	$V_{IN}=-14\text{dBV}$, every output measurement
Output offset voltage	V_{OS}	–	30	150	mV	Upon no input
Standard output level 1	V_{O1}	1.00	1.80	2.30	V	$f_{IN}=125\text{Hz}$, f_{O1} output
Standard output level 2	V_{O2}	1.00	1.80	2.30	V	$f_{IN}=500\text{Hz}$, f_{O2} output
Standard output level 3	V_{O3}	1.00	1.80	2.30	V	$f_{IN}=2\text{kHz}$, f_{O3} output
Standard output level 4	V_{O4}	1.00	1.80	2.30	V	$f_{IN}=8\text{kHz}$, f_{O4} output
Standard output level 5	V_{O5}	0.80	1.50	1.85	V	$f_{IN}=1\text{kHz}$, f_{O5} output
Leak current upon reset terminal LOW	I_R	–	0.5	10	μA	Pin18=0V
Reset terminal H level	V_{IH}	3.5	–	–	V	
Reset terminal L level	V_{IL}	–	–	1.5	V	

Designed according to Q=1.

©Radiation resistance is not included in the design.

●Application circuit



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