

BA3833F

Audio ICs

Spectral analysis band-pass filter for mini component stereo

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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.

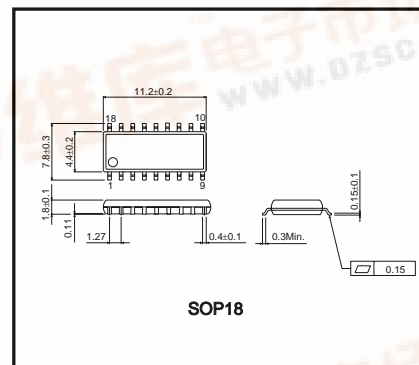
●Applications

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

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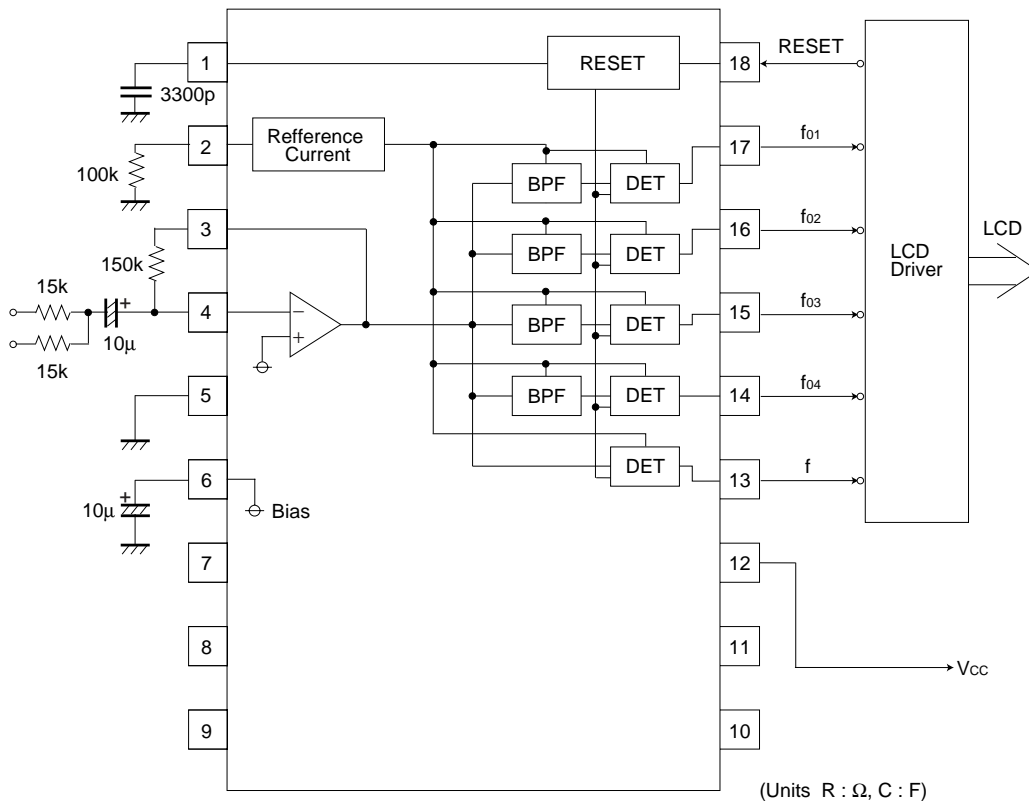
●Electrical characteristics

(Unless specified particularly, Ta=25°C, Vcc=5V, RL=10MΩ, VIN= -30dBV and reset OFF)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current upon no signal	I _o	–	4	8	mA	Upon no input
Maximum output level	V _{OM}	4.0	4.8	–	V	V _{IN} = -14dBV, 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} =125Hz, fo ₁ output
Standard output level 2	V _{O2}	1.00	1.80	2.30	V	f _{IN} =500Hz, fo ₂ output
Standard output level 3	V _{O3}	1.00	1.80	2.30	V	f _{IN} =2kHz, fo ₃ output
Standard output level 4	V _{O4}	1.00	1.80	2.30	V	f _{IN} =8kHz, fo ₄ output
Standard output level 5	V _{O5}	0.80	1.50	1.85	V	f _{IN} =1kHz, fo ₅ 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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