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# 音频放大器

## 扬声器放大器

### 便携式放大器 1.9W+1.9W立体声扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Standby Current (μA) | Voltage Gain (dB) | Output Power (W) | Distortion (%) | Output Noise Voltage (μVrms) | Package |
|---|---|---|---|---|---|---|---|---|---|
| BD7836EFV | 4.5 to 5.5 | 1.0 | 5 | 0.1 | 6/10/15.6/21.6 | 1.9 ($V_{DD}$=5V, 4Ω, THD+N=1%) | 0.1 | 16 | HTSSOP-B20 |

### 便携式放大器 1.1W~1.5W单声道扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (mW) | Quiescent Current (mA) | Standby Current (μA) | Voltage Gain (dB) | Output Power ($R_L$=8Ω, THD=10%) $V_{CC}$=3.6V | Output Power ($R_L$=8Ω, THD=10%) $V_{CC}$=5.0V | Distortion (%) | Output Noise Voltage (dBV) | Package | Automotive Grade | AEC-Q100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH7824FVM | 2.4 to 5.5 | 470 | 3.5 | 0 | 0 to 20 | 0.60W | 1.1W | 0.07 | −94 | MSOP8 | YES | — |
| BH7826FVM | 2.6 to 5.5 | 470 | 3.5 | 0 | 0 to 20 | 0.60W | 1.1W | 0.20 | −94 | MSOP8 | YES | — |
| BD7830NUV | 2.4 to 5.5 | 530 | 3.2 | 0 | 0 to 20 | 0.77W | 1.5W | 0.10 | −100 | VSON008V2030 | YES | — |

### 便携式放大器 模拟输入单声道D类扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Voltage Gain (dB) | Output Power (W) | | Distortion (%) | Output Noise Voltage (μVrms) | ALC Circuit | Package (mm) |
|---|---|---|---|---|---|---|---|---|---|---|
| BD5460GUL | 2.5 to 5.5 | 0.69 | 2.0 ($V_{DD}$=3.6V) | 6 | 2.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 0.85 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N=10%) | 0.3 ($V_{DD}$=3.6V) | 30 | — | VCSP50L1 (1.6×1.6) |
| BD5461GUL | 2.5 to 5.5 | 0.69 | 2.0 ($V_{DD}$=3.6V) | 12 | 2.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 0.85 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N=10%) | 0.3 ($V_{DD}$=3.6V) | 40 | — | VCSP50L1 (1.6×1.6) |
| BD27400GUL | 2.5 to 5.5 | 0.69 | 2.9 ($V_{DD}$=3.6V) | External Variable | 2.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 0.85 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N=10%) | 0.3 ($V_{DD}$=3.6V) | 40 | — | VCSP50L1 (1.5×1.5) |
| BD5632NUX | 2.5 to 5.5 | 0.52 | 2.7 ($V_{DD}$=3.6V) | 6 | 2.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 0.85 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N=10%) | 0.1 ($V_{DD}$=3.6V) | 40 | — | VSON008X2030 |
| BD5634NUX | 2.5 to 5.5 | 0.52 | 2.7 ($V_{DD}$=3.6V) | 12 | 2.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 0.85 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N=10%) | 0.1 ($V_{DD}$=3.6V) | 40 | — | VSON008X2030 |
| BD5638NUX | 2.5 to 5.5 | 0.52 | 2.7 ($V_{DD}$=3.6V) | 18 | 2.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 0.85 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N=10%) | 0.1 ($V_{DD}$=3.6V) | 40 | — | VSON008X2030 |
| BD5465GUL | 2.5 to 5.5 | 0.69 | 3.3 ($V_{DD}$=3.6V) | 12 | 0.6 ($V_{DD}$=3.6 to 5.5V) | | 0.1 ($V_{DD}$=3.6V) | 40 | ✔ | VCSP50L1 (1.8×1.8) |
| BD5466GUL | 2.5 to 5.5 | 0.69 | 3.0 ($V_{DD}$=3.6V) | 18 | 1.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N≦1%) | 0.5 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N≦1%) | 0.1 ($V_{DD}$=3.6V) | 40 | ✔ | VCSP50L1 (1.7×1.7) |
| BD5467GUL | 2.5 to 5.5 | 0.69 | 3.0 ($V_{DD}$=3.6V) | 13 | 1.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N≦1%) | 0.5 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N≦1%) | 0.1 ($V_{DD}$=3.6V) | 40 | ✔ | VCSP50L1 (1.7×1.7) |
| BD5468GUL | 2.5 to 5.5 | 0.69 | 3.0 ($V_{DD}$=3.6V) | 13 | 1.5 ($V_{DD}$=5V, $R_L$=4Ω, THD+N≦1%) | 0.5 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N≦1%) | 0.1 ($V_{DD}$=3.6V) | 40 | ✔ | VCSP50L1 (1.7×1.7) |
| BD5469GUL | 2.5 to 5.5 | 0.69 | 3.0 ($V_{DD}$=3.6V) | 13 | 0.88 ($V_{DD}$=4.2V, $R_L$=8Ω, THD+N≦1%) | 0.64 ($V_{DD}$=3.6V, $R_L$=8Ω, THD+N≦1%) | 0.1 ($V_{DD}$=3.6V) | 40 | ✔ | VCSP50L1 (1.7×1.7) |

### 便携式放大器 模拟输入立体声D类扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Voltage Gain (dB) | Output Power (W) | | Distortion (%) | Output Noise Voltage (μVrms) | Max. LDO Current (mA) | Package |
|---|---|---|---|---|---|---|---|---|---|---|
| BD5471MUV | 4.5 to 5.5 | 2.2 | 5.8 ($V_{DD}$=5V) | 6/12/18/24 | 2.3 ($V_{DD}$=5V, $R_L$=4Ω, THD+N=10%) | 1.5 ($V_{DD}$=5V, $R_L$=8Ω, THD+N=10%) | 0.2 ($V_{DD}$=5V) | 35 | 200 | VQFN024V4040 |
| **New** BD28412MUV | 4.5 to 13 | 3.26 | 16 ($V_{CC}$=11V) | 20/26/32/36 | 18 ($V_{CC}$=12V, $R_L$=4Ω, THD+N=10%, PBTL) | 9 ($V_{CC}$=12V, $R_L$=8Ω, THD+N=10%) | 0.03 ($V_{CC}$=11V) | 100 | — | VQFN032V5050 |

### 中/高输出放大器 搭载DSP的支持数字输入的D类扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Output Power (W) | | Distortion (%) | Output Noise Voltage (μVrms) | DSP Volume | DSP DC Cut HPF | DSP Hard Clipper | DSP Parametric EQ | DSP DRC | DSP Surround | DSP Perfect Pure | DSP FIR Filter | DSP 3-Band Tone | H/P AMP | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BM5446EFV | 10 to 26 | 6.2 (4-layer board) 4.5 (2-layer board) | 60 ($V_{CC}$=13V) | 10 ($V_{CC}$=13V, $R_L$=8Ω) | 20 ($V_{CC}$=18V, $R_L$=8Ω) | 0.07 | 140 | ✔ | ✔ | ✔ | ✔ (7Band) | — | ✔ | $P^3$-Bass $P^3$-Treble $P^3$-Volume | — | ✔ | — | HTSSOP-B54 |
| BM5480MUV | 10 to 26 | 4.30 (4-layer board) | 65 ($V_{CC}$=18V) | 10 ($V_{CC}$=13.5V, $R_L$=8Ω) | 20 ($V_{CC}$=19V, $R_L$=8Ω) | 0.07 | 80 | ✔ | ✔ | ✔ | ✔ (16Band) | ✔ (2Band) | ✔ | $P^3$-Bass+ | — | — | — | VQFN048V7070 |
| BM5481MUV | 10 to 26 | 4.30 (4-layer board) | 65 ($V_{CC}$=18V) | 10 ($V_{CC}$=13.5V, $R_L$=8Ω) | 20 ($V_{CC}$=19V, $R_L$=8Ω) | 0.07 | 80 | ✔ | ✔ | ✔ | ✔ (16Band) | ✔ (2Band) | ✔ | $P^3$-Bass+ | — | — | ✔ | VQFN048V7070 |
| BM5449MWV | 10 to 26 | 4.29 (4-layer board) | 85 ($V_{CC}$=18V) | 10 ($V_{CC}$=13V, $R_L$=8Ω) | 25 ($V_{CC}$=20.5V, $R_L$=8Ω) | 0.05 | 80 | ✔ | ✔ | ✔ | ✔ (12Band) | ✔ (2Band) | ✔ | $P^3$-Bass+ $P^3$-Volume | ✔ (512Tap) | — | — | UQFN056V7070 |
| BM28720MUV | 10 to 24 | 4.56 (4-layer board) | 45 ($V_{CC}$=18V) | 10 ($V_{CC}$=13V, $R_L$=8Ω) | 20 ($V_{CC}$=18.5V, $R_L$=8Ω) | 0.07 | 80 | ✔ | ✔ | ✔ | ✔ (12Band) | ✔ (3Band) | — | — | — | — | — | VQFN032V5050 |

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## 中/高输出放大器 支持数字输入的D类扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Output Power (W) | | Distortion (%) | Output Noise Voltage (μVrms) | Power Limiter Function | Package |
|---|---|---|---|---|---|---|---|---|---|
| BD5446EFV | 10 to 26 | 6.2 (4-layer board) 4.5 (2-layer board) | 45 (Vcc=13V) | 10 $\left(\begin{matrix}V_{CC}=13V\\R_L=8\Omega\end{matrix}\right)$ | 20 $\left(\begin{matrix}V_{CC}=18V\\R_L=8\Omega\end{matrix}\right)$ | 0.07 | 140 | ✔ (Power Limitter) | HTSSOP-B54 |
| BD5451EFV | 10 to 18 | 4.7 (4-layer board) 3.3 (2-layer board) | 50 (Vcc=12V) | 10 $\left(\begin{matrix}V_{CC}=12V\\R_L=8\Omega\end{matrix}\right)$ | 15 $\left(\begin{matrix}V_{CC}=15V\\R_L=8\Omega\end{matrix}\right)$ | 0.07 | 100 | — | HTSSOP-B28 |
| BD5452AMUV | 10 to 18 | 4.56 (4-layer board) 3.26 (2-layer board) | 50 (Vcc=12V) | — | 15 $\left(\begin{matrix}V_{CC}=16V\\R_L=8\Omega\end{matrix}\right)$ | 0.08 | 100 | ✔ (GAIN) | VQFN032V5050 |
| BD28620MUV | 8.5 to 24 | 3.56 (4-layer board) 2.21 (2-layer board) | 40 (Vcc=18V) | — | 15 $\left(\begin{matrix}V_{CC}=16V\\R_L=8\Omega\end{matrix}\right)$ | 0.08 | 150 | ✔ (GAIN) | VQFN024V4040 |
| BD28623MUV *New* | 8.5 to 24 | 3.56 (4-layer board) 2.21 (2-layer board) | 40 (Vcc=18V) | — | 15 $\left(\begin{matrix}V_{CC}=16V\\R_L=8\Omega\end{matrix}\right)$ | 0.08 | 150 | ✔ (GAIN) | VQFN024V4040 |

## 中/高功率放大器 支持模拟输入/BTL输出的D类扬声器放大

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Voltage Gain (dB) | Output Power (W) | | Distortion (%) | Output Noise Voltage (μVrms) | Power Limiter Function | Package |
|---|---|---|---|---|---|---|---|---|---|---|
| BD5424EFS | 10 to 18 | 4.5 (4-layer board) 2.0 (2-layer board) | 30 (Vcc=12V) | 28 | 10 $\left(\begin{matrix}V_{CC}=12V\\R_L=8\Omega\end{matrix}\right)$ | 20 $\left(\begin{matrix}V_{CC}=17V\\R_L=8\Omega\end{matrix}\right)$ | 0.1 | 80 | ✔ (Power Limit) | HTSSOP-A44 |
| BD5423AEFS | 10 to 16.5 | 4.5 (4-layer board) 2.0 (2-layer board) | 25 (Vcc=12V) | 28 | 10 $\left(\begin{matrix}V_{CC}=12V\\R_L=8\Omega\end{matrix}\right)$ | 17 $\left(\begin{matrix}V_{CC}=12V\\R_L=4\Omega\end{matrix}\right)$ | 0.1 | 80 | ✔ (Power Limit) | HTSSOP-A44 |
| BD5423MUV | 10 to 16.5 | 4.8 (4-layer board) 3.28 (2-layer board) | 25 (Vcc=12V) | 28 | 10 $\left(\begin{matrix}V_{CC}=12V\\R_L=8\Omega\end{matrix}\right)$ | 17 $\left(\begin{matrix}V_{CC}=12V\\R_L=4\Omega\end{matrix}\right)$ | 0.1 | 80 | ✔ (Power Limit) | VQFN048V7070 |
| BD5426EFS | 10 to 16.5 | 4.5 (4-layer board) 2.0 (2-layer board) | 25 (Vcc=12V) | 28 | 9 $\left(\begin{matrix}V_{CC}=12V\\R_L=8\Omega\end{matrix}\right)$ | 10 $\left(\begin{matrix}V_{CC}=13V\\R_L=8\Omega\end{matrix}\right)$ | 0.1 | 80 | ✔ (Power Limit) | HTSSOP-A44 |
| BD5426MUV | 10 to 16.5 | 4.8 (4-layer board) 3.28 (2-layer board) | 25 (Vcc=12V) | 28 | 9 $\left(\begin{matrix}V_{CC}=12V\\R_L=8\Omega\end{matrix}\right)$ | 10 $\left(\begin{matrix}V_{CC}=13V\\R_L=8\Omega\end{matrix}\right)$ | 0.1 | 80 | ✔ (Power Limit) | VQFN048V7070 |
| BD5413EFV | 6 to 10.5 | 2.8 (4-layer board) 1.1 (2-layer board) | 12 (Vcc=9V) | 30 | 4 $\left(\begin{matrix}V_{CC}=9V\\R_L=8\Omega\end{matrix}\right)$ | 5 $\left(\begin{matrix}V_{CC}=9V\\R_L=6\Omega\end{matrix}\right)$ | 0.2 | 90 | — | HTSSOP-B24 |

## 中/高功率放大器 5W+5W立体声扬声器放大器

| Part No. | Supply Voltage (V) | Power Dissipation (W) | Quiescent Current (mA) | Standby Current (μA) | Output Power (W) [Vcc=12V, RL=3Ω] | Closed Loop Voltage Gain (dB) | Output Noise Voltage (mVrms) | Distortion (%) | Ripple Rejection (dB) | Package |
|---|---|---|---|---|---|---|---|---|---|---|
| BA5406 | 5 to 15 | 20 | 40 | — | 5 | 46 | 0.6 | 0.3 | — | SIP-M12 |
| BA5417 | 6 to 15 | 15 | 22 | 0 | 5 | 45 | 0.3 | 0.1 | 55 | HSIP15 |

# 耳机放大器

## 超小无需耦合电容器的耳机放大器

| Part No. | Supply Voltage (V) | Quiescent Current (mA) | Gain (V/V) | Maximum Output Power (mW) | Distortion (%) | Output Noise Voltage (μVrms) | Ripple Rejection (dB) | Note | Package (mm) |
|---|---|---|---|---|---|---|---|---|---|
| BD88200GUL | 2.4 to 5.5 | 2.0 | Variable Gain with external resistor | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Virtual ground based | VCSP50L2 (2.1 × 2.1) |
| BD88210GUL | 2.4 to 5.5 | 2.0 | − 1.0 | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Virtual ground based | VCSP50L2 (2.1 × 2.1) |
| BD88215GUL | 2.4 to 5.5 | 2.0 | − 1.5 | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Virtual ground based | VCSP50L2 (2.1 × 2.1) |
| BD88220GUL | 2.4 to 5.5 | 2.0 | − 2.0 | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Virtual ground based | VCSP50L2 (2.1 × 2.1) |
| BD88400GUL | 2.4 to 5.5 | 2.0 | Variable Gain with external resistor | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Ground based | VCSP50L2 (2.1 × 2.1) |
| BD88400FJ | | | | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | | | | | SOP-J14 |
| BD88410GUL | 2.4 to 5.5 | 2.0 | − 1.0 | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Ground based | VCSP50L2 (2.1 × 2.1) |
| BD88415GUL | 2.4 to 5.5 | 2.0 | − 1.5 | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Ground based | VCSP50L2 (2.1 × 2.1) |
| BD88420GUL | 2.4 to 5.5 | 2.0 | − 2.0 | 80 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 0.006 ($V_{DD}$ = 3.3V, $R_L$ = 16Ω) | 10 | − 80 (f = 217Hz) | Ground based | VCSP50L2 (2.1 × 2.1) |

## 为0.93V低电压工作设计的耳机放大器

| Part No. | Supply Voltage (V) | Quiescent Current (mA) | Maximum Output Power(mW) | | Distortion(%) | | Output Noise Voltage (μVrms) | Package |
|---|---|---|---|---|---|---|---|---|
| | | | Single-ended (16Ω) | BTL (8Ω) | Single-ended (16Ω) | BTL (8Ω) | | |
| BU7150NUV | 0.93 to 3.5 (Ta=0℃ or more) | 1.0 | 14 ($V_{DD}$ = 1.5V) | 85 ($V_{DD}$ = 1.5V) | 0.1 (Po = 5mW) | 0.2 (Po = 25mW) | 10 | VSON010V3030 |

## 标准耳机放大器

| Part No. | Supply Voltage (V) | Quiescent Current(mA) | Voltage Gain (dB) | Maximum Output Power (mW) RL=16Ω | Distortion (%) | Ripple Rejection (dB) | Package |
|---|---|---|---|---|---|---|---|
| BH3544F | 2.8 to 6.5 | 7.0 | 6 | 62 | 0.02 | 57 | SOP8 |
| BH3547F | 4.5 to 6.5 | 3.7 | 6 | 77 | 0.05 | 57 | SOP8 |
| BH3548F | 4.0 to 5.5 | 6.5 | 6 | 62 [120 @ $R_L$=8Ω] | 0.02 | 57 | SOP8 |

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## 其他

### 音频子系统

| Part No. | Supply Voltage (V) | Power Dissipation (mW) | Quiescent Current (mA) | Standby Current (μA) | Speaker Amplifier | | | Headphone Amplifier | | | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Voltage Gain (dB) | Distortion (%) | Output Power(W) $V_{CC}$=5V | Voltage Gain (dB) | Distortion (%) | Maximum Output Voltage (dBV) @ $V_{CC}$=3.3V | |
| BH7881EFV | 3.3 to 5.5 | 1100 | 18 | 0 | 11(SE)/17(BTL) | 0.04 | 2.0 | 5.5 | 0.02 | 1.4 | HTSSOP-B24 |
| BH7884EFV | 3.0 to 5.5 | 1100 | 9 | 0.2 | 12(SE)/18.2(BTL) | 0.1 | 1.0 | 5.6 | 0.025 | 1.0 | HTSSOP-B24 |

### 线路放大器

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Open Loop Gain (dB) | Input | CMRR (dB) | Supply Voltage Rejection Ratio (dB) | Common-mode Input Voltage Range(V) $V_{CC}$=8V | Offset Voltage (mV) | Offset Current (nA) | Input Bias Current (nA) | Distortion (%) | Channel Separation (dB) | Gain Bandwidth Product (MHz) | Slew Rate (V/μs) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA3131FS | 6.0 to 16.0 | 4.9 | 110 | 3 | 72 | 90 | 6 | 0.5 | 5.0 | 50 | 0.0025 | 115 | 2.6 | 1.2 | SSOP-A20 |

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Channel (ch) | Gain (dB) | Maximum Output Voltage (Vrms) | Distortion (%) | Output Noise Voltage (μVrms) | Channel Separation (dB) | Ripple Rejection (dB) | Charge Pump | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BD8876FV | 3.0 to 5.5 | 3.2 | 2 | 6 or 9 | 3.5 | 0.003 | 8 | 80 | 65 | ✓ | SSOP-B14 |
| BD8878FV | 3.0 to 5.5 | 3.2 | 2 | 6.7 | 3 | 0.003 | 10 | 65 | 65 | ✓ | SSOP-B14 |

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Open Loop Gain (dB) | Distortion (%) | Input Resistance (kΩ) | Maximum Output Voltage (Vrms) | Equivalent Input Noise Voltage (μVrms) | ALC Range (dB) | Channel Balance (dB) | Channel Separation (dB) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BA3308F | 4.5 to 14.0 | 3.5 | 80 | 0.1 | 25 | 1.2 | 1.0 | 45 | 0 | 75 | SOP14 |
| BA3308FV | 4.5 to 14.0 | 3.5 | 80 | 0.1 | 25 | 1.2 | 1.0 | 45 | 0 | 75 | SSOP-B14 |

### 隔离放大器

| Part No. | Supply Voltage (V) | Operating Temperature (°C) | Circuit | Circuit Current (mA) | Voltage Gain (dB) | CMRR (dB) | Common-mode Input Voltage Range (V) $V_{CC}$=8V | THD (%) | Output Noise Voltage (μVrms) | Channel Separation (dB) | Slew Rate (V/μs) | Input Resistance (kΩ) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA3121F | 4.0 to 18.0 | −30 to +85 | 2 | 9.0 | −0.04 | 57 | 3.75 | 0.002 | 3.5 | 82 | 2.0 | 55 | SOP8 |
| BA3123F | 4.0 to 18.0 | −40 to +85 | 2 | 9.0 | −0.04 | 57 | 3.75 | 0.002 | 3.5 | 82 | 2.0 | 55 | SOP8 |

# 音频处理器

## 模拟音频处理器

### 内置 μ-step音量6ch/8ch语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Output Noise Voltage (μVrms) | Distortion (%) | Selector | Main Volume | Channel | Zone Volume | Channel | Tone | Serial Control | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD34704KS2 | ±6.5 to ±7.5 | ±32 | 1.2 | 0.0004 | 18 | +32 to −95dB 0.5dB/Step | 8 | +7.5 to −91.5dB 0.5dB/Step | 2 | — | 2 Wire | SQFP-T80C |
| BD34705KS2 | ±6.5 to ±7.5 | ±32 | 1.2 | 0.0004 | 12 | +32 to −95dB 0.5dB/Step | 8 | +6 to −16dB 1dB/Step −16 to −56dB 2dB/Step | 2 | — | 2 Wire | SQFP-T64 |
| BD34701KS2 | ±6.5 to ±7.5 | ±22 | 1.5 | 0.0004 | 8 | +32 to −95dB 0.5dB/Step | 8 | — | — | — | 2 Wire | SQFP-T52 |
| BD3471KS2 | ±6.5 to ±7.5 | ±30 | 1.5 | 0.0004 | 12 | +24 to −95dB 0.5dB/Step | 8 | — | — | — | 2 Wire | SQFP-T80C |
| BD3473KS2 | ±6.5 to ±7.5 | ±30 | 1.5 | 0.0004 | 12 | +24 to −95dB 0.5dB/Step | 8 | — | — | Bass, Treble | 2 Wire | SQFP-T80C |
| BD3474KS2 | ±6.5 to ±7.5 | ±30 | 1.5 | 0.0004 | 12 | +32 to −95dB 0.5dB/Step | 6 | — | — | Bass, Treble | 2 Wire | SQFP-T80C |

### 2ch / 4ch / 6ch语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Output Noise Voltage (μVrms) | Distortion (%) | Selector | Main Volume | Channel | Zone Volume | Channel | Tone | Serial Control | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD34700FV | ±6.5 to ±7.5 | ±22 | 1.5 | 0.0004 | — | +32 to −95dB 0.5dB/Step | 4 | — | — | — | 2 Wire | SSOP-B40 |
| ☆BD34710FV | ±6.5 to ±7.5 | ±22 | 1.5 | 0.0004 | 3 | +32 to −95dB 0.5dB/Step | 6 | — | — | — | 2 Wire | SSOP-B40 |
| BD3812F | ±5.0 to ±7.3 | ±2 | 1.2 | 0.005 | — | 0,6 to 18dB 2dB/Step 0 to −103dB 1dB/Step | 2 | — | — | — | 2 Wire | SOP14 |
| BD3814FV | ±5.0 to ±7.3 | ±7 | 1.0 | 0.001 | — | 0 to −95dB 1dB/Step | 6 | — | — | Bass, Treble | 2 Wire | SSOP-B40 |

☆：开发中

## 6ch语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Output Noise Voltage (μVrms) | Distortion (%) | Selector | Input Gain | Output Gain | Volume | Number of Volume | Tone Control | Bass Boost | Serial Interface | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD3811K1 | ±5.0 to ±7.3 | ±15 | 2.0 | 0.005 | 8 | 0,6dB | 0,6 to18dB 2dB/Step | 0 to −103dB 1dB/Step | 6 | Bass, Treble | ✔ | 2 Wire | QFP80 |
| BD3818KS | ±5.0 to ±7.4 | ±28 | 1.0 | 0.002 | 5 | 0,3,6,9dB | — | 0 to −95dB 1dB/Step | 6 | Bass, Treble | (Dynamic) | 2 Wire | SQFP80 |

## 7ch语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Output Noise Voltage (μVrms) | Distortion (%) | Selector | Input Gain | Output Gain | Volume | Number of Volume | Tone Control | Serial Interface | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD3816K1 | ±5.0 to ±7.3 | ±24 | 1.2 | 0.001 | 7 | 0 to 7dB 1dB/Step | 0 to 17dB 1dB/Step | 0 to −95dB 1dB/Step | 7 | Bass, Treble | 2 Wire | QFP80 |
| BD3817KS | ±5.0 to ±7.3 | ±24 | 1.2 | 0.001 | 10 | 0 to 7dB 1dB/Step | 0 to 17dB 1dB/Step | 0 to −95dB 1dB/Step | 7 | Bass, Treble | 2 Wire | SQFP100 |

## 6ch/9ch立体声输入选择器IC 最大输入电压4.2V

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Output Noise Voltage (μVrms) | Distortion (%) | Selector | Serial Interface | Package |
|---|---|---|---|---|---|---|---|
| BD3843FS | ±4.0 to ±7.3 | ±3 | 1.0 | 0.004 | 6 | 2 Wire | SSOP-A24 |
| BD3841FS | ±5.0 to ±7.3 | ±3 | 1.0 | 0.004 | 9 | 2 Wire | SSOP-A32 |

## 内置环绕功能的语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Input Selector | Volume | Tone Control | Bass Boost | Surround | Serial Interface | Output Noise Voltage (μVrms) | Distortion (%) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BD3491FS | 4.75 to 9.5 | 6.4 | 6 | 0 to −87, −∞ (1dB/Step) | Bass, Treble | ✔ | ✔ | I²C-bus | 5 | 0.002 | SSOP-A32 |
| BD3490FV | 4.75 to 9.5 | 6.4 | 4 | 0 to −87, −∞ (1dB/Step) | Bass, Treble | ✔ | ✔ | I²C-bus | 5 | 0.002 | SSOP-B28 |

## 内置2频段均衡器的语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Input Selector Single | Input Selector Diff. | Input Gain (dB) | Volume (dB) | Fader (dB) | Fader Output | Parametric EQ | Loudness | LPF for Sub Woofer | Option | Serial Interface | Output Noise Voltage (μVrms) | Distortion (%) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD37503FV | 7 to 9.5 | 20 | 3 | 1 | 0 to +20 | 0 to −36, −∞ | 0 to −63, −∞ | 4 | — | ✔* | — | Anti-aliasing Filter* | I²C-bus | 5.8 | 0.001 | SSOP-B20 |
| BD37511FS | 7 to 9.5 | 15 | 3 | 0 | 0 to +20 | 0 to −40 | 0 to −62, −∞ | 4 | — | — | — | — | I²C-bus | 6 | 0.005 | SSOP-A20 |
| BD37512FS | 7 to 9.5 | 15 | 3 | 1 | 0 to +20 | 0 to −40 | 0 to −62, −∞ | 4 | — | — | — | — | I²C-bus | 6 | 0.005 | SSOP-A20 |
| BD37513FS | 7 to 9.5 | 38 | 3 | 1 | 0 to +20 | +15 to −79, −∞ | 0 to −79 −∞ | 4 | — | ✔ | — | — | I²C-bus | 3.8 | 0.001 | SSOP-A20 |
| BD37514FS | 7 to 9.5 | 38 | 3 | 1 | 0 to +20 | +15 to −79, −∞ | 0 to −79, −∞ | 5 | ✔ | ✔ | — | — | I²C-bus | 3.8 | 0.001 | SSOP-A20 |
| BD37515FS | 7 to 9.5 | 38 | 3 | 1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 5 | ✔ | ✔ | ✔ | — | I²C-bus | 3.8 | 0.001 | SSOP-A20 |
| BD37521FS | 7 to 9.5 | 38 | 3 | 1 | 0 to +20 | +15 to −79, −∞ | 0 to −79, −∞ | 4 | — | EXT | — | — | I²C-bus | 3.8 | 0.001 | SSOP-A24 |
| BD37522FS | 7 to 9.5 | 38 | 4 | 1 | 0 to +20 | +15 to −79, −∞ | 0 to −79, −∞ | 4 | ✔ | ✔ | — | — | I²C-bus | 3.8 | 0.001 | SSOP-A24 |
| BD37523FS | 7 to 9.5 | 38 | 4 | 1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 5 | ✔ | ✔ | ✔ | — | I²C-bus | 3.8 | 0.001 | SSOP-A24 |
| BD3870FS | 4.5 to 9.5 | 8 | 3 | — | 0/6/ 12/18 | 0 to −87, −∞ | — | 2 | EXT | — | — | Surround | 2 Wire | 4.5 | 0.01 | SSOP-A24 |
| BD3871FS | 4.5 to 9.5 | 8 | 3 | — | 24/26/ 28 | 0 to −87, −∞ | — | 2 | EXT | — | — | Surround | 2 Wire | 40 (Gv=24dB) | 0.01 | SSOP-A24 |
| BD3873FS | 4.5 to 9.5 | 8 | 3 | — | 18/21/ 24/27 | 0 to −87, −∞ | — | 2 | EXT | — | — | Surround | 2 Wire | 40 (Gv=24dB) | 0.01 | SSOP-A24 |
| BD3872FS | 4.5 to 9.5 | 8 | 5 | — | 0/5/10/ 19/23/ 26/28 | 0 to −87, −∞ | — | 2 | EXT | — | — | Surround | 2 Wire | 4.5 | 0.01 | SSOP-A32 |
| BD3490FV | 4.75 to 9.5 | 7 | 4 | — | 0/2/4/6/ 8/12/ 16/20 | 0 to −87 (2ch Independent control),−∞ | — | 2 | EXT | — | — | Bass boost, Surround | I²C-bus | 5 | 0.002 | SSOP-B28 |
| BD3491FS | 4.75 to 9.5 | 7 | 6 | — | 0/2/4/6/ 8/12/ 16/20 | 0 to −87 (2ch Independent control),−∞ | — | 2 | EXT | — | — | Bass boost, Surround | I²C-bus | 5 | 0.002 | SSOP-A32 |

内置2频段均衡器的语言处理器：可与响度分开使用 EXT：由外置元件设定

内置2频段均衡器的语言处理器：BD37511FS、BD37512FS的引脚兼容。BD37513FS、BD37514FS、BD37515FS的引脚兼容。BD37522FS、BD37523FS、BD37524FS的引脚兼容。

## 模拟音频处理器

### 内置3频段均衡器的语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Input Selector Single | Input Selector Diff. | Input Gain (dB) | Volume (dB) | Fader (Rear) (dB) | Fader (Rear) Outputs | Parametric EQ | Loudness | LPF/HPF for Sub Woofer | Mixing (ATT) | Level Meter | Option | Serial Interface | Output Noise Voltage (µVrms) | Distortion (%) | Package | Automotive Grade | AEC-Q100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD37524FS | 7 to 9.5 | 38 | 4 | 1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF | — | ✔ | — | I²C-bus | 3.8 | 0.001 | SSOP-A24 | YES | — |
| BD37531FV | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | ✔ | — | — | — | — | I²C-bus | 3.8 | 0.001 | SSOP-B28 | YES | — |
| BD37532FV | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF | — | — | — | I²C-bus | 3.8 | 0.001 | SSOP-B28 | YES | — |
| BD37533FV | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF | ✔ | — | — | I²C-bus | 3.8 | 0.001 | SSOP-B28 | YES | — |
| BD37534FV | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF | ✔ | ✔ | — | I²C-bus | 3.8 | 0.001 | SSOP-B28 | YES | — |
| BD37541FS | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | 0 to −79, −∞ | 6 | EXT | ✔ | — | — | — | — | I²C-bus | 3.8 | 0.001 | SSOP-B28 | YES | — |
| BD37542FS | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | EXT | ✔ | LPF | ✔ | — | — | I²C-bus | 3.8 | 0.001 | SSOP-A32 | YES | — |
| BD37543FS | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | EXT | ✔ | LPF + HPF | ✔ | — | — | I²C-bus | 3.8 | 0.001 | SSOP-A32 | YES | — |
| BD37544FS | 7 to 9.5 | 38 | 1/3/4 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | — | LPF + HPF | ✔ | — | Super Bass | I²C-bus | 3.8 | 0.001 | SSOP-A32 | YES | — |
| BD37545FS | 7 to 9.5 | 38 | 2/3/5 | 3/2/1 | 0 to +20 | +15 to −79, −∞ | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF + HPF | ✔ | ✔ | External I/O | I²C-bus | 3.8 | 0.001 | SSOP-A32 | YES | — |
| BD37033FV-M | 7 to 9.5 | 31 | 3/5 | 2/1 | 0 to +16 | +15 to −79 | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF | ✔ | ✔ | — | I²C-bus | 5.5 | 0.002 | SSOP-B28 | YES | YES |
| BD37034FV-M | 7 to 9.5 / VccL to 13 | 36 | 3/5 | 2/1 | 0 to +16 | +15 to −79 | +15 to −79, −∞ | 6 | ✔ | ✔ | LPF + HPF | ✔ | ✔ | High Voltage Output | I²C-bus | 6 | 0.002 | SSOP-B28 | YES | YES |
| BD3883FS | 6.5 to 9.5 | 8 | 5 | — | 0/6/12/16/20/23/26/29 | 0 to −87, −∞ | 0/−10 | 2 | EXT | — | — | — | — | Surround | 2 Wire | 4 | 0.01 | SSOP-A32 | YES | — |
| BD3403FV | 6.5 to 9.5 | 16 | 5 | — | 0 to +26 (2dB/Step) | 0 to −30 (2dB/Step) | 0 to −59, −∞ | 2 | EXT | — | — | — | — | Surround | 2 Wire | 8 | 0.02 | SSOP-B40 | YES | — |

### 内置高级开关的通用电子音量控制器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Input Selector Single | Input Selector Diff. | Input Gain (dB) | Fader Volume (dB) | Outputs | Mixing Channel | Mixing ATT (dB) | Post Filter | High-Voltage Output (dB) | Serial Control | Output Noise Voltage (µVrms) | Distortion (%) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD3464FV | 7.0 to 9.5 | 25 | — | — | — | +23 to −79, −∞ (1dB/Step) | 4 | — | — | — | — | I²C-bus | 1.9 | 0.0004 | SSOP-B20 |
| BD3465FV | 7.0 to 9.5 | 25 | — | — | — | +23 to −79, −∞ (1dB/Step) | 4 | 3ch | +0 to −64, −∞ (8dB/Step) | — | — | I²C-bus | 1.9 | 0.0004 | SSOP-B20 |
| BD3460FS | 7.0 to 9.5 | 25 | — | — | — | +23 to −79, −∞ (1dB/Step) | 6 | — | — | — | — | I²C-bus | 1.9 | 0.0004 | SSOP-A24 |
| BD3461FS | 7.0 to 9.5 | 25 | — | — | — | +23 to −79, −∞ (1dB/Step) | 6 | 3ch | +0 to −64, −∞ (8dB/Step) | — | — | I²C-bus | 1.9 | 0.0004 | SSOP-A24 |
| (New) BD34602FS-M | 7.0 to 9.5 | 35 | — | — | — | +23 to −79, −∞ (1dB/Step) | 6 | 3ch | +0 to −79, −∞ (1dB/Step) | — | — | I²C-bus | 1.3 | 0.0004 | SSOP-A24 |
| BD37067FV-M | 7.0 to 9.5 | 37 | 2/3/4/5 | 4/3/2/1 | +23 to −15 (1dB/Step) | +23 to −79, −∞ (1dB/Step) | 6 | 1ch | — | ✔ | — | I²C-bus | 8 | 0.003 | SSOP-B40 |
| BD37068FV-M | 7.0 to 9.5 / VccL to 17.8 | 307 | 1/2/3/4/5 | 5/4/3/2/1 | +23 to −15 (1dB/Step) | +23 to −79, −∞ (1dB/Step) | 6 | 1ch | — | ✔ | 0/8.3 | I²C-bus | 23 (High-Voltage Mode) | 0.003 | SSOP-B40 |
| (New) BD37069FV-M | 7.0 to 9.5 / VccL to 17.8 | 307 | 2/3/4/5 | 4/3/2/1 | +23 to −15 (1dB/Step) | +23 to −79, −∞ (1dB/Step) | 6 | 1ch | — | ✔ | 2/4.6/8.3 | I²C-bus | 23 (High-Voltage Mode) | 0.003 | SSOP-B40 |

### 5.1ch汽车影院用6ch电子音量控制器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Input selector Single Input | Input selector Monaural Differential Amplifier Input | Input Gain (dB) | Volume (dB) | Fader Volume (dB) | Output Gain (dB) | Mix Car Navi. Cell Phones | Output for Spectrum Analyzer | Serial Interface | Output Noise Voltage (µVrms) | Distortion (%) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD3433K | ±7.0 to ±9.5 | 12 | 5.1ch ×2 | 1 | O,6,12 (Each F,R) | +23 to −79, −∞ (1dB/Step) | +15 to −63, −∞ (1dB/Step) | 0, +2.5(A) / 0, −4.5(B) | ✔ | ✔ | 3 Wire | 3 | 0.001 | QFP44 |

内置3频段均衡器的语音处理器：EXT：由外部元件设定

内置3频段均衡器的语音处理器：BD37522FS、BD37523FS、BD37524FS功能兼容。BD37531FV、BD37532FV、BD37533FV和BD37534FV功能兼容。BD37541FS、BD37542FS、BD37543FS功能兼容。BD37033FV-M、BD37034FV-M功能兼容。
内置高级开关的通用电子音量控制器：BD3460FS、BD3461FS、BD34602FS-M功能兼容。BD3464FS、BD3465FS功能兼容。BD37067FV-M、BD37068FV-M功能兼容。

## 内置磁带录放功能的单电源规格语音处理器

| Part No. | Supply Voltage (V) | Current Consumption (mA) | Input Selector | Input Gain (dB) | Volume (dB) | Tone Control | Dynamic Bass | Surround | REC/PB Amp | Vocal Cut | Spectrum Analyzer | Serial Control | Output Noise Voltage (μVrms) | Max. Output (Vrms) | Distortion (%) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD3401KS2 | 8.0 to 9.5 | 35 | 5 | −5/0/3.5 | 0 to −76/−∞ (2/4/step) | Bass, Middle, Treble | ✔ | ✔ | ✔ | ✔ | ✔ | 2 Wire | 3 | 2.5 | 0.005 | SQFP-T64 |
| BD3402KS2 | 8.0 to 9.5 | 28 | 5 | −5/0/3.5 | 0 to −76/−∞ (2/4/step) | Bass, Treble | − | − | ✔ | − | − | 2 Wire | 2.5 | 2.5 | 0.005 | SQFP-T64 |

## 频谱分析显示器用带通滤波器IC

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Band | Input Mix Amplifier | REC Level Display | Standard Output | Maximum Output (V) | BPF Center Frequency (Hz) | Package |
|---|---|---|---|---|---|---|---|---|---|
| BA3835F | 4.5 to 6.5 | 8.5 | 5 | ✔ | − | 1.35 | 4.8 | 105,340,1k, 3.4k,10.5k | SOP18 |
| BA3834F | 4.5 to 6.5 | 10.0 | 7 | ✔ | − | 1.35 | 4.8 | 68,170,420,1k, 2.4k,5.9k,14.4k | SOP18 |

## AUDIO SOC

### Audio设备控制用　1CHIP　System LSI

| Part No. | Supply Voltage (V) | USB I/F | SD I/F | CD DSP | SDRAM | Quad SPI I/F | SPI I/F (ch) | I²C I/F (ch) | UART I/F (ch) | Digital Audio I/F (ch) | GPIO (Dedicated pins) | Operating Temperature Range (Min.) [°C] | Operating Temperature Range (Max.) [°C] | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BM94710KUT | HVcc 3.0 to 3.5 LVcc 1.50 to 1.65 | USB2.0 Dual Role Full Speed (Host/Device) (1ch) | SDIO | 3Beam Method | 16Mbit Stack | 1ch | Master 1ch Slave 1ch | Master Slave 2ch | HS UART 1ch UART 1ch | I²S IN 1ch I²S OUT 2ch | 44(20) | −40 | 85 | TQFP128UM |
| BM94801KUT | HVcc 3.0 to 3.5 LVcc 1.55 to 1.65 | USB2.0 Dual Role High Speed (Host/Device) (1ch) | SDIO | 3Beam Method | 16Mbit Stack | 1ch | Master 1ch Slave 1ch | Master Slave 2ch | HS UART 1ch UART 1ch | I²S IN 2ch I²S OUT 2ch | 44(20) | −40 | 75 | TQFP128UM |

## 媒体解码器

### AAC / WMA / MP3 / WAV格式 + SD存储卡

| Part No. | Supply Voltage(V) | USB | SD | iPod | Serial Interface | Display Information | MP3 | WMA | AAC | CD-ROM Mode | CD-ROM File System | MP3 Recording Format | File Search | Analog | Digital | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU94501AMUV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | − | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | − | − | − | Search during the playback | Line | I²S SPDIF | VQFN40 |
| BU94501AKS2 | | | | | | | | | | | | | | | | SQFP-T52 |

### AAC / WMA / MP3 / WAV格式 + SD存储卡 + iPod

| Part No. | Supply Voltage(V) | USB | SD | iPod | Serial Interface | Display Information | MP3 | WMA | AAC | CD-ROM Mode | CD-ROM File System | MP3 Recording Format | File Search | Analog | Digital | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU94502AMUV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | iPod5G-iPod nano-iPod Classic-iPod touch-iPhone-iPad | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | − | − | − | Search during the playback | Line | I²S SPDIF | VQFN40 |
| BU94502AKS2 | | | | | | | | | | | | | | | | SQFP-T52 |
| BU94502CMUV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | iPod5G-iPod nano-iPod Classic-iPod touch-iPhone-iPad | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | − | − | − | List making before the playback | Line | I²S SPDIF | VQFN40 |
| BU94502CKS2 | | | | | | | | | | | | | | | | SQFP-T52 |

### AAC / WMA / MP3 / WAV格式 + SD存储卡 + CD-ROM

| Part No. | Supply Voltage(V) | USB | SD | iPod | Serial Interface | Display Information | MP3 | WMA | AAC | CD-ROM Mode | CD-ROM File System | MP3 Recording Format | File Search | Analog | Digital | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU94605AKV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | − | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | Mode1, Mode2, form1/2, Romeo, Joliet | ISO9660 Level1,2 | − | Search during the playback | Line | I²S SPDIF | VQFP80 |

### AAC / WMA / MP3 / WAV格式 + SD存储卡 + iPod + CD-ROM

| Part No. | Supply Voltage(V) | USB | SD | iPod | Serial Interface | Display Information | MP3 | WMA | AAC | CD-ROM Mode | CD-ROM File System | MP3 Recording Format | File Search | Analog | Digital | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU94607AKV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | iPod5G-iPod nano-iPod Classic-iPod touch-iPhone-iPad | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | Mode1, Mode2, form1/2, Romeo, Joliet | ISO9660 Level1,2 | − | Search during the playback | Line | I²S SPDIF | VQFP80 |

### AAC / WMA / MP3 / WAV格式 + SD存储卡 + CD-ROM + MP3录音

| Part No. | Supply Voltage(V) | USB | SD | iPod | Serial Interface | Display Information | MP3 | WMA | AAC | CD-ROM Mode | CD-ROM File System | MP3 Recording Format | File Search | Analog | Digital | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU94702AKV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | − | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | Mode1, Mode2, form1/2, Romeo, Joliet | ISO9660 Level1,2 | MPEG1 Layer3 Sample Rate：32,44.1,48kHz Bit Rate：32,64,128, 192,256,320kHz | Search during the playback | Line | I²S SPDIF | VQFP80 |

### AAC / WMA / MP3 / WAV格式 + SD存储卡 + iPod + CD-ROM + MP3录音

| Part No. | Supply Voltage(V) | USB | SD | iPod | Serial Interface | Display Information | MP3 | WMA | AAC | CD-ROM Mode | CD-ROM File System | MP3 Recording Format | File Search | Analog | Digital | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU94705AKV | 3.0 to 3.6 | USB2.0 Full Speed | MMC SD miniSD microSD SDHC | iPod5G-iPod nano-iPod Classic-iPod touch-iPhone-iPad | I²C BUS | Folder number, File number, Play time, Folder name, File name, TAG(Artist, Album, Title) | MPEG1,2,2.5 LAYER1,2,3 | WMA9 Standard | MPEG4 AAC-LC | Mode1, Mode2, form1/2, Romeo, Joliet | ISO9660 Level1,2 | MPEG1 Layer3 Sample Rate：32,44.1,48kHz Bit Rate：32,64,128, 192,256,320kHz | Search during the playback | Line | I²S SPDIF | VQFP80 |

媒体解码器：iPod, iPad和iPhone是在美国以及其他各国注册的苹果公司的商标。

媒体解码器：BU94502AMUV, BU94502AKS2, BU94502CMUV, BU94502CKS2, BU94607AKV, BU94705AKV以取得Made for iPod/iPone/iPad许可为前提条件。

A

音频 / 视频

# 视频放大器

## 复合视频放大器

### 超小型 WL-CSP 无输出电容器 1ch视频驱动器

| Part No. | Supply Voltage (V) | Output Circuit | Circuit Current (mA) | Amplifier Gain (dB) | Freq.Chara.1 (dB) | Freq.Chara.2 (dB) | Input Type | LPF | Mute (Standby) | Output Capa-less | Max. Output Level (VP-P) | Video Out -> In Change Mode | Package (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH76906GU | 2.5 to 3.45 | 1ch | 15 | 6 | −0.2 (4.5MHz) | −26 (18MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | − | VCSP85H1 (1.6×1.6) H=1.0Max. |
| BH76909GU | 2.5 to 3.45 | 1ch | 15 | 9 | −0.2 (4.5MHz) | −26 (18MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | − | VCSP85H1 (1.6×1.6) H=1.0Max. |
| BH76912GU | 2.5 to 3.45 | 1ch | 15 | 12 | −0.2 (4.5MHz) | −26 (18MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | − | VCSP85H1 (1.6×1.6) H=1.0Max. |
| BH76916GU | 2.5 to 3.45 | 1ch | 15 | 16.5 | −0.2 (4.5MHz) | −26 (18MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | − | VCSP85H1 (1.6×1.6) H=1.0Max. |
| BH76706GU | 2.5 to 3.45 | 1ch | 15 | 6 | −0.2 (4.5MHz) | −28 (18MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | ✔ | VCSP85H1 (1.6×1.6) H=1.0Max. |

### 无输出电容器 1ch视频驱动器

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Amplifier Gain (dB) | Freq.Chara.1 (dB) | Freq.Chara.2 (dB) | Input Type | LPF | Mute (Standby) | Output Capa-less | Max. Output Level (VP-P) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BH76806FVM | 2.5 to 3.45 | 16 | 6 | −0.45 (4.5MHz) | −51 (23.5MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | MSOP8 |
| BH76809FVM | 2.5 to 3.45 | 16 | 9 | −0.45 (4.5MHz) | −51 (23.5MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | MSOP8 |
| BH76812FVM | 2.5 to 3.45 | 15 | 12 | −0.45 (4.5MHz) | −51 (23.5MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | MSOP8 |
| BH76816FVM | 2.5 to 3.45 | 15 | 16.5 | −0.45 (4.5MHz) | −51 (23.5MHz) | Bias (150kΩ) | 8th order 4.5MHz | 0μA | ✔ | 5.2 | MSOP8 |

### 小型/低消耗电流 1ch视频驱动器

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Amplifier Gain (dB) | Freq.Chara.1 (dB) | Freq.Chara.2 (dB) | Input Type | LPF | Mute (Standby) | Standby Logic | Output Capa-less | Video Out -> In Change Mode | Max. Output Level (VP-P) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH76106HFV | 2.6 to 5.5 | 7 | 6 | 0.1 (4.5MHz) | −45 (19MHz) | Clamp | 8th order 4.5MHz | 0μA | Low-STBY | ✔ | − | 2.6 | HVSOF6 |
| BH76109HFV | 2.6 to 5.5 | 7 | 9 | 0.1 (4.5MHz) | −45 (19MHz) | Clamp | 8th order 4.5MHz | 0μA | Low-STBY | ✔ | − | 2.6 | HVSOF6 |
| BH76112HFV | 2.6 to 5.5 | 7 | 12 | 0.1 (4.5MHz) | −45 (19MHz) | Clamp | 8th order 4.5MHz | 0μA | Low-STBY | ✔ | − | 2.6 | HVSOF6 |
| BH76206HFV | 2.6 to 5.5 | 8 | 6 | −0.3 (6MHz) | −40 (27MHz) | Clamp | 8th order 6MHz | 0μA | Low-STBY | ✔ | − | 2.6 | HVSOF6 |

### 内置视频开关 1ch视频驱动器

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Switchers | Input Type | Amp.Gain (dB) | Max.Output Level(VP-P) VCC=3V | Max.Output Level(VP-P) VCC=5V | Video Driver | Mute | Output Capa-less | Freq.Chara. (dB) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH76330FVM | 2.8 to 5.5 | 10 | 3 in - 1 out | Clamp | 6 | 2.7 | 4.6 | ✔ | ✔ (Standby) | ✔ | 0 (10MHz) | MSOP8 |
| BH76331FVM | 2.8 to 5.5 | 10 | 3 in - 1 out | Bias | 6 | 2.8 | 4.6 | ✔ | ✔ (Standby) | − | 0 (10MHz) | MSOP8 |
| BH76360FV | 2.8 to 5.5 | 12 | 6 in - 1 out | Clamp | 6 | 2.7 | 4.6 | ✔ | ✔ (Standby) | ✔ | 0 (10MHz) | SSOP-B16 |
| BH76361FV | 2.8 to 5.5 | 12 | 6 in - 1 out | Bias | 6 | 2.8 | 4.6 | ✔ | ✔ (Standby) | − | 0 (10MHz) | SSOP-B16 |

## 视频开关

### 宽带 1ch视频开关

| Part No. | Supply Voltage (V) | Circuit Current (mA) | Switchers | Input Type | Amp.Gain (dB) | Max.Output Level(VP-P) VCC=3V | Max.Output Level(VP-P) VCC=5V | Mute | Crosstalk (dB) | Freq.Chara (dB) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BH76332FVM | 2.8 to 5.5 | 9 | 3 in - 1 out | Clamp | 0 | 1.8 | 3.8 | ✔ (Standby) | −65 (4.43MHz) | 0 (30MHz) | MSOP8 |
| BH76333FVM | 2.8 to 5.5 | 8 | 3 in - 1 out | Bias | 0 | 1.9 | 3.4 | ✔ (Standby) | −65 (4.43MHz) | 0 (30MHz) | MSOP8 |
| BH76362FV | 2.8 to 5.5 | 11 | 6 in - 1 out | Clamp | 0 | 1.8 | 3.8 | ✔ (Standby) | −65 (4.43MHz) | 0 (30MHz) | SSOP-B16 |
| BH76363FV | 2.8 to 5.5 | 11 | 6 in - 1 out | Bias | 0 | 1.9 | 3.4 | ✔ (Standby) | −65 (4.43MHz) | 0 (30MHz) | SSOP-B16 |

### 视频、音频开关

| Part No. | Supply Voltage (V) | Video Circuit Current (mA) | Audio Circuit Current (mA) | Video Freq.Chara 1 (dB) | Video Freq.Chara 2 (dB) | Video Amp.Gain (dB) | Audio Freq.Chara 1 (dB) | Audio Freq.Chara 2 (dB) | Audio Amp.Gain (dB) | Residual Noise (μVrms) | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BH7649KS2 | 7.5 to 9.5 | 34 | 23 | 0 (6.75MHz) | −30 (27MHz) | −3/−6/0 /+3/+6 | −0.5 (24kHz) | −26 (96kHz) | −6/0 | 20 | SQFP-T52 |

## 其他

### 隔离放大器

| Part No. | Supply Voltage (V) | Circuits | Circuit Current (mA) | Input Type | Voltage Gain (dB) | CMRR (dB) | Max.Output Level (VP-P) | Freq.Chara (dB) | Input Resistance (kΩ) | Package | Automotive Grade | AEC-Q100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH7673G | 4.5 to 5.5 | 1 | 4.8 | Bias | 0 | 60 | 3.8 | 0 (f＝10MHz) | 150 | SSOP5 | YES | YES |

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音频／视频

▶音频转换器 ▶▶ Audio Codec
▶图像校正 ▶▶ 面板用图像校正IC
▶▶ 内置图像校正的视频编码器
▶图像LSI ▶▶ 视频解码器系列
▶▶ 视频编码器系列
▶▶ 视频接口系列

IC
音频 / 视频 IC

# 音频转换器

## Audio Codec

| Part No. | Supply Voltage (V) | ADC Number of Channels/bit | DAC Number of Channels/bit | Microphone Input | Speaker Output Type | Speaker Output Monaural /Stereo | Head-phone Output | Filter EQ | Filter Notch | ALC | Package | Automotive Grade | AEC-Q100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU26154MUV | HV$_{DD}$ 2.7 to 5.5 LV$_{DD}$ 2.7 to 3.6 | 1ch/24bit | 2ch/24bit | 1 | AB/D | Monaural | Stereo | ✔ | ✔ | ✔ | VQFN040V6060 | YES | — |
| BU26156RFS | HV$_{DD}$ 2.7 to 5.5 LV$_{DD}$ 2.7 to 3.6 | 2ch/24bit | 2ch/24bit | 2 | AB/D | Stereo | Stereo | ✔ | ✔ | ✔ | HTSSOP-A44R | YES | — |

# 图像校正

## 面板用图像校正IC

| Part No. | V$_{DD}$ Core | V$_{DD}$ I/O | V$_{DD}$ LVDS | Image Data Size | Control Interface | Input/Output Digital Interface | Image Adjustment | PWM Output | LVDS Transmitter | Package | Automotive Grade | AEC-Q100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BU1573KV | 1.40 to 1.60 | 2.7 to 3.6 | — | Supports up to WVGA + (864 × 480) | I²C BUS | 18bitRGB Interface BUS Interface | — | ✔ | — | VQFP64 | YES | — |
| BU1523KV | 1.65 to 1.95 | 3.0 to 3.6 | 3.0 to 3.6 | Supports up to WVGA + (864 × 480) | I²C BUS | 24bitRGB Interface 8bit YUV = 4 : 2 : 2 ITU-R BT.656 | ✔ | — | ✔ | VQFP100 | YES | — |

## 内置图像校正的视频编码器

| Part No. | V$_{DD}$ Core | V$_{DD}$ I/O | AV$_{DD}$ | Image Data Size | Control Interface | Input/Output Digital Interface | Fog Reduction | Video Encoder | Package | Automotive Grade | AEC-Q100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BU6521KV | 1.40 to 1.60 | 2.7 to 3.6 | 2.7 to 3.6 | ITU-R BT.656 | I²C BUS Serial EEPROM interface | 8bit YUV = 4 : 2 : 2 ITU-R BT.656 | ✔ | ✔ | VQFP48C | YES | YES |

# 图像LSI

## 视频解码器系列 (LAPIS Semiconductor产品)

### CVBS/S-video

| Part No. | Supply Voltage(V) | Input (Analog) Terminal | Input (Analog) Type | Output (LVTTL) | Pixel Frequency | Crystal Oscillator supported | Feature | Operating Temperature (℃) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| ML86101A | 3.3/1.5 | CVBS×4 or CVBS×2 + S-video ×1 or S-video×2 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8bit | 12.2727MHz, 13.5MHz, 14.3181MHz, 14.75MHz | ✔ | Simple, small | −40 to +85 | TQFP48 | YES |
| ML86V7668A | 3.3/2.5 | CVBS×4 or CVBS× 1 + S-video×3 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16bit RGB 18bit | 12.2727MHz, 13.5MHz | — | RGB output | −40 to +85 | TQFP100 | YES |

### CVBS/S-video/Component

| Part No. | Supply Voltage(V) | Input (Analog) Terminal | Input (Analog) Type | Output (LVTTL) | Pixel Frequency | Crystal Oscillator supported | Feature | Operating Temperature (℃) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| ML86V7675 | 3.3/1.5 | CVBS×4 +(Comp or S-video)×1 +Comp×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8bit | 7.9930MHz to 33.333MHz | ✔ | WVGA, EGA analog RGB supported | −40 to +85 | TQFP64 | YES |

## 视频编码器系列 (LAPIS Semiconductor产品)

### CVBS

| Part No. | Supply Voltage(V) | Input (LVTTL) | Output (Analog) Terminal | Output (Analog) Type | Pixel Frequency | Crystal Oscillator supported | Feature | Operating Temperature (℃) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| ML86V76580 | 3.3/1.8 | ITU-R BT.656 YCbCr 8bit | CVBS | NTSC PAL | 12.2727MHz, 13.5MHz, 14.3181MHz, 14.75MHz | — | 75Ωdrive | −40 to +85 | TQFP48 | YES |
| | | | | | | | | | WCSP25 | — |
| ☆ML86640 | 3.3 | ITU-R BT.656 YCbCr 8/16/24bit RGB 24bit | CVBS | NTSC PAL | 13.5MHz, 27MHz, 54MHz | — | 75Ωdrive P/I conversion | −40 to +105 | TQFP48 | YES |

### CVBS/S-video/Component

| Part No. | Supply Voltage(V) | Input (LVTTL) | Output (Analog) Terminal | Output (Analog) Type | Pixel Frequency | Crystal Oscillator supported | Feature | Operating Temperature (℃) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| ML86V7655 | 3.3/2.5 | ITU-R BT.656 YCbCr 8/16/24bit RGB 24bit | CVBS S-video Component | NTSC PAL | 12.2727MHz, 13.5MHz, 14.3181MHz, 14.75MHz, 18MHz | — | I/P, P/I conversion | −40 to +85 | TQFP100 | YES |

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## 视频接口系列 (LAPIS Semiconductor产品)

### MIPI→MIPI/LVTTL Video Interface

| Part No. | Supply Voltage(V) | Input (MIPI) | Output (LVTTL) | Output (MIPI) | Feature | Operating Temperature (℃) | Package |
|---|---|---|---|---|---|---|---|
| ML86790 | 1.8 to 3.3 1.5 | MIPI/CSI-2(2Lane) YCbCr 8bit 650Mbps/Lane Max. | YCbCr 16bit 81MHz(typ) | MIPI/CSI-2(2Lane) YCbCr 8bit 650Mbps/Lane Max. | MIPI/CSI-2 receiver/transmitter, MIPI to LVTTL translate | −20 to +85 | WCSP63 |

A
音频 / 视频

## 面向中小型TFT液晶显示器的显示屏控制器系列　　　　(LAPIS Semiconductor产品)

### 内置视频解码器 / 定标器

| Part No. | Supply Voltage (V) | Input (Analog) Terminal | Type | Input (LVTTL/LVDS) | Output (LVTTL/LVDS) | Resolution | OSD | MCU | Feature | Operating Temperature (°C) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ML86V8201 | 3.3/1.5 | CVBS×2 or S-video×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit | ITU-R BT.656 YCbCr 8bit RGB 18/24bit | QVGA to WVGA | Line | — | Rear camera function Image quality adjustment | −40 to +85 | TQFP100 | YES |
| ML86203 | 3.3/1.5 | CVBS×1 | NTSC PAL | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit | ITU-R BT.656 YCbCr 8bit RGB 18/24bit LVDS 4ch (RGB 18/24bit) | VGA to WXGA | — | — | Rear camera function WXGA panel support Image quality adjustment | −40 to +85 | TQFP80 | YES |
| New ML86207 | 3.3/1.5 | CVBS×2 | NTSC PAL | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit + LVDS 4ch (RGB 18/24bit) | ITU-R BT.656 YCbCr 8bit RGB 18/24bit LVDS 4ch (RGB 18/24bit) | VGA to WXGA | Text Line | — | LVTTL/LVDS I/F Digital video input ×2 WXGA panel support Rear camera function Image quarity adjustment OSD function | −40 to +85 | TQFP100 | YES |
| New ML86287 | 3.3/1.5 | CVBS×2 | NTSC PAL | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit + LVDS 4ch (RGB 18/24bit) | ITU-R BT.656 YCbCr 8bit RGB 18/24bit LVDS 4ch (RGB 18/24bit) | VGA to WXGA | Text Line | — | LVTTL/LVDS I/F Digital video input ×2 WXGA panel support Rear camera function Picture in Picture Image quality adjustment OSD, ROM-OSD function | −40 to +85 | TQFP128 | YES |
| ML86V8202C | 3.3/1.8 | CVBS×2 +(Comp or S-video)×1 +Comp×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit | ITU-R BT.656 style YCbCr 8/16/24bit RGB 18/24bit | QVGA to WVGA | — | — | Component video support Image quality adjustment | −40 to +85 | TQFP100 | YES |
| ML86V8207 | 3.3/2.5 | CVBS×4 or CVBS×3 +(Comp or S-video)×1 or CVBS×2+S-video×1 +(Comp or S-video)×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit | RGB 18/24bit | QVGA to WVGA | Text Line | — | OSD function | −40 to +85 | LQFP144 | YES |
| ML86240 | 3.3/1.5 | CVBS×4 or CVBS×2 +(Comp or S-video)×1 +Comp×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit 2ch | ITU-R BT.656 YCbCr 8bit RGB 18/24bit | QVGA to WVGA | Text Line | — | Component video support Digital video input ×2 Rear camera function Image quality adjustment OSD function | −40 to +85 | BGA144 | YES |
| ☆ML86241 | 3.3/1.5 (1.8) | CVBS×4 or CVBS×2 +(Comp or S-video)×1 +Comp×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit + LVDS 4ch (RGB 18/24bit) | ITU-R BT.656 YCbCr 8bit YCbCr 16bit RGB 18/24bit LVDS 4ch (RGB 18/24bit) | VGA to WXGA | Text Line | — | Component video support LVTTL/LVDS I/F Digital video input ×2 WXGA panel support Rear camera function Image quality adjustment OSD, ROM-OSD function | −40 to +85 | BGA144 | YES |

### T-CON 内置画质调整功能

| Part No. | Supply Voltage (V) | Input (Analog) Terminal | Type | Input (LVTTL) | Output (LVTTL) | Resolution | OSD | MCU | Feature | Operating Temperature (°C) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ML86V8101 | 3.3 | — | — | RGB 18bit | RGB 18bit | QVGA to QHD | — | — | Image quality adjustment function | −40 to +85 | TQFP64 | YES |
| ML86V8102 | 3.3 | — | — | RGB 18/24bit | RGB 18/24bit | QVGA to QHD | — | — | RGB 24 bits supported Image quality adjustment function | −40 to +85 | TQFP80 | YES |

### 视频解码器 内置8051MCU

| Part No. | Supply Voltage (V) | Input (Analog) Terminal | Type | Input (LVTTL) | Output (LVTTL) | Resolution | OSD | MCU | Feature | Operating Temperature (°C) | Package | Automotive Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ML86V8401 | 3.3/1.8 | CVBS×3 or CVBS×2 +S-video×1 | NTSC PAL SECAM | ITU-R BT.656 YCbCr 8/16/24bit RGB 18/24bit | ITU-R BT.656 RGB 18/24bit | QVGA to WVGA | Text | 8051 (8bit) | System control MCU installed | −40 to +85 | TQFP100 | YES |

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