

音频/视频			
音频放大器	P.86	音频电源	P.88
音频处理器	P.88	音频转换器	P.91
视频放大器	P.92	图像校正	P.93
图像LSI	P.93		

# 音频放大器

## 车载功放

1.2W 单声道AB类功放													
Part No.	Supply Voltage (V)	Quiescent Current (mA)	Standby Current (μA)	Voltage Gain (dB)	Output Power (W)	Input Impedance $Z_{in}$ (kΩ)	Built-in Amplifier Resistance		Distortion (%)	Output Noise Voltage (μVrms)	Package	ComfySIL™ Functional Safety*1	Automotive Grade AEC-Q100
							Ri (kΩ)	Rf (kΩ)					
BD78306EFJ-M	4.0 to 5.5	2.5	0.1	6.0 (Po=0.5W)	1.2 (THD+N=1%)	45	90	90	0.05 (Po=1W)	15	HTSOP-J8	FSs	YES
☆BD78308EFJ-M				8.0 (Po=0.5W)		40	80	80	0.05 (Po=1W)	16	HTSOP-J8	FSs	YES
BD78310EFJ-M				10.0 (Po=0.5W)		35	70	110	0.06 (Po=1W)	17	HTSOP-J8	FSs	YES
☆BD78312EFJ-M				12.0 (Po=0.5W)		30	60	120	0.06 (Po=1W)	19	HTSOP-J8	FSs	YES
☆BD78314EFJ-M				14.0 (Po=0.5W)		25	50	130	0.07 (Po=1W)	22	HTSOP-J8	FSs	YES
☆BD78316EFJ-M				16.0 (Po=0.5W)		20	40	140	0.09 (Po=1W)	24	HTSOP-J8	FSs	YES
☆BD78318EFJ-M				18.0 (Po=0.5W)		18	36	144	0.10 (Po=1W)	26	HTSOP-J8	FSs	YES
☆BD78320EFJ-M				20.0 (Po=0.5W)		15	30	150	0.12 (Po=1W)	31	HTSOP-J8	FSs	YES
☆BD78322EFJ-M				22.0 (Po=0.5W)		12	24	156	0.15 (Po=1W)	35	HTSOP-J8	FSs	YES
☆BD78324EFJ-M				24.0 (Po=0.5W)		10	20	160	0.17 (Po=1W)	43	HTSOP-J8	FSs	YES
BD78326EFJ-M				26.0 (Po=0.5W)		8	16	164	0.20 (Po=1W)	50	HTSOP-J8	FSs	YES

©ComfySIL™ 是ROHM Co., Ltd.的商标或注册商标。  
\*1 "ComfySIL™ 功能安全类别" 的详情请参阅封二。

☆: 开发中

## 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
						$V_{CC}=5V$	$V_{CC}=3.6V$			
BD7836EFV	4.5 to 5.5	1.0	5	0.1	6/10/15.6/21.6	1.9	1.9 (V <sub>DD</sub> =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 (W)	Quiescent Current (mA)	Standby Current (μA)	Voltage Gain (dB)	Output Power (R <sub>L</sub> =8Ω, THD=10%)		Distortion (%)	Output Noise Voltage (dBV)	Package
						V <sub>CC</sub> =3.6V	V <sub>CC</sub> =5.0V			
BD7830NUV	2.4 to 5.5	0.53	3.2	0	0 to 20	0.77W	1.5W	0.1	-100	VSON008V2030

  

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)
					$V_{DD}=5V, R_L=4Ω$	$V_{DD}=3.6V, R_L=8Ω$				
BD5460GUL	2.5 to 5.5	0.69	2.0 (V <sub>DD</sub> =3.6V)	6	2.5	0.85	0.3 (V <sub>DD</sub> =3.6V)	30	-	VCSP50L1 1.6x1.6, H=0.55Max
BD5461GUL					2.5	0.85				
BD27400GUL					2.5	0.85				
BD5632NUX					2.5	0.85				
BD5634NUX					2.5	0.85				
BD5638NUX					2.5	0.85				
BD5465GUL					0.6	0.6				
BD5466GUL					1.5	0.5				
BD5467GUL					1.5	0.5				
BD5468GUL					1.5	0.5				
BD5469GUL					0.88	0.64				

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 ( $\mu$ Vrms)	Max LDO Current (mA)	Package
<b>BD28412MUV</b>	4.5 to 13.0	3.20	16 ( $V_{CC}=11V$ )	20/26/ 32/36	$\begin{matrix} 18 \\ (V_{CC}=12V, R_L=4\Omega) \\ (THD+N=10\%, P_{BTL}) \end{matrix}$	$\begin{matrix} 9 \\ (V_{CC}=12V, R_L=8\Omega) \\ (THD+N=10\%) \end{matrix}$	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 ( $\mu$ Vrms)	DSP					Package
				$\begin{matrix} 10 \\ (V_{CC}=13V) \\ R_L=8\Omega \end{matrix}$	$\begin{matrix} 17 \\ (V_{CC}=18V) \\ R_L=8\Omega \end{matrix}$			Volume	DC Cut HPF	Hard Clipper	Parametric EQ	DRC	
<b>BM28723AMUV</b>	10 to 24	4.56 (4-Layer Board)	45 ( $V_{CC}=18V$ )	$\begin{matrix} 10 \\ (V_{CC}=13V) \\ R_L=8\Omega \end{matrix}$	$\begin{matrix} 17 \\ (V_{CC}=18V) \\ R_L=8\Omega \end{matrix}$	0.08	150	✓	✓	✓	✓ (12 Band)	✓ (3 Band)	VQFN032V5050

  

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 ( $\mu$ Vrms)	Power Limiter Function	Package	
<b>BD28623MUV</b>	8.5 to 24.0	3.56 (4-Layer Board) 2.21 (2-Layer Board)	40 ( $V_{CC}=18V$ )	—	$\begin{matrix} 15 \\ (V_{CC}=16V, R_L=8\Omega) \end{matrix}$	0.08	150	✓ (GAIN)	VQFN024V4040	

  

中/高功率放大器 支持模拟输入/BTL输出的D类扬声器放大器										
Part No.	Supply Voltage (V)	Power Dissipation (W)	Quiescent Current (mA)	Voltage Gain (dB)	Output Power (W)		Distortion (%)	Output Noise Voltage ( $\mu$ Vrms)	Power Limiter Function	Package
<b>BD5424EFS</b>	10.0 to 18.0	4.5 (4-Layer Board) 2.0 (2-Layer Board)	30 ( $V_{CC}=12V$ )	28	$\begin{matrix} 10 \\ (V_{CC}=12V, R_L=8\Omega) \end{matrix}$	$\begin{matrix} 20 \\ (V_{CC}=17V, R_L=8\Omega) \end{matrix}$	0.1	80	✓ (Power Limiter)	HTSSOP-A44
<b>BD5423AEFS</b>	10.0 to 16.5	4.5 (4-Layer Board) 2.0 (2-Layer Board)	25 ( $V_{CC}=12V$ )	28	$\begin{matrix} 10 \\ (V_{CC}=12V, R_L=8\Omega) \end{matrix}$	$\begin{matrix} 17 \\ (V_{CC}=12V, R_L=4\Omega) \end{matrix}$	0.1	80	✓ (Power Limiter)	HTSSOP-A44
<b>BD5426EFS</b>	10.0 to 16.5	4.5 (4-Layer Board) 2.0 (2-Layer Board)	25 ( $V_{CC}=12V$ )	28	$\begin{matrix} 9 \\ (V_{CC}=12V, R_L=8\Omega) \end{matrix}$	$\begin{matrix} 10 \\ (V_{CC}=13V, R_L=8\Omega) \end{matrix}$	0.1	80	✓ (Power Limiter)	HTSSOP-A44
<b>BD5413EFV</b>	6.0 to 10.5	2.8 (4-Layer Board) 1.1 (2-Layer Board)	12 ( $V_{CC}=9V$ )	30	$\begin{matrix} 4 \\ (V_{CC}=9V, R_L=8\Omega) \end{matrix}$	$\begin{matrix} 5 \\ (V_{CC}=9V, R_L=6\Omega) \end{matrix}$	0.2	90	—	HTSSOP-B24

耳机放大器

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 ( $\mu$ Vrms)	Ripple Rejection (dB)	Note	Package (mm)	
<b>BD88200GUL</b>	2.4 to 5.5	2	Variable Gain with external resistor	$\begin{matrix} 80 \\ (V_{DD}=3.3V, R_L=16\Omega) \end{matrix}$	0.006 ( $V_{DD}=3.3V, R_L=16\Omega$ )	10	-80 ( $f=217Hz$ )	Virtual ground based	VCSP50L2 2.1x2.1	
<b>BD88210GUL</b>			-1.0					Virtual ground based	VCSP50L2 2.1x2.1	
<b>BD88215GUL</b>			-1.5					Virtual ground based	VCSP50L2 2.1x2.1	
<b>BD88220GUL</b>			-2.0					Virtual ground based	VCSP50L2 2.1x2.1	
<b>BD88400GUL</b>			Variable Gain with external resistor					Ground based	VCSP50L2 2.1x2.1	
<b>BD88400FJ</b>			Variable Gain with external resistor					Ground based	SOP-J14	
<b>BD88410GUL</b>			-1.0					Ground based	VCSP50L2 2.1x2.1	
<b>BD88415GUL</b>			-1.5					Ground based	VCSP50L2 2.1x2.1	
<b>BD88420GUL</b>			-2.0					Ground based	VCSP50L2 2.1x2.1	

0.93V低电压工作(1节电池)耳机放大器

Part No.	Supply Voltage (V)	Quiescent Current (mA)	Maximum Output Power (mW)		Distortion (%)		Output Noise Voltage ( $\mu$ Vrms)	Package
			Single-ended (16 $\Omega$ )	BTL (8 $\Omega$ )	Single-ended (16 $\Omega$ )	BTL (8 $\Omega$ )		
<b>BU7150NUV</b>	0.93 to 3.50 ( $T_A=0^\circ C$ or more)	1	$\begin{matrix} 14 \\ (V_{DD}=1.5V) \end{matrix}$	$\begin{matrix} 85 \\ (V_{DD}=1.5V) \end{matrix}$	0.1 ( $P_O=5mW$ )	0.2 ( $P_O=25mW$ )	10	VSON010V3030

标准耳机放大器

Part No.	Supply Voltage (V)	Quiescent Current (mA)	Voltage Gain (dB)	Maximum Output Power (mW) $R_L=16\Omega$	Distortion (%)	Ripple Rejection (dB)	Package
<b>BH3544F</b>	2.8 to 6.5	7.0	6	62	0.02	57	SOP8
<b>BH3547F</b>	4.5 to 6.5	3.7	6	77	0.05	57	SOP8
<b>BH3548F</b>	4.0 to 5.5	6.5	6	$\begin{matrix} 62 \\ (120@R_L=8\Omega) \end{matrix}$	0.02	57	SOP8

## 其他

线路放大器(Output Coupling Capacitor-less Line Amplifier)											
Part No.	Supply Voltage (V)	Circuit Current (mA)	ch	Voltage Gain (dB)	Maximum Output Voltage (Vrms)	Distortion (%)	Output Noise Voltage ( $\mu$ Vrms)	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	0.003	10	65	65	✓	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 ( $\mu$ Vrms)	Channel Separation (dB)	Slew Rate (V/ $\mu$ s)	Input Resistance (k $\Omega$ )	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

## 音频电源

### 高品质音频电源

\*以下产品属于电源管理产品。(请参见P.42)

关于输入电压, 请考虑输出电压值以及输入输出电压差后使用。

高品质音频电源											
Part No.	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Reference Voltage Accuracy (%)	Dropout Voltage (mV)	Noise Level ( $\mu$ Vrms)	PSRR (dB)	Over Current Protection	Thermal Protection	Package	
MUS-IC BD37201NUX	0.5	2.7 to 5.5	Variable 1.0 to 4.5	$\pm 1$	200	3.3	90 (f=1kHz) 55 (f=1MHz)	✓	✓	VSON008X2030	

©MUS-IC 标记表示MUS-IC™系列。MUS-IC™是ROHM Co., Ltd.的商标或注册商标。作为罗姆音频IC的高端系列, 充分实现音频元器件所需的性能参数和音质性能。

## 音频处理器

### 模拟音频处理器

内置 $\mu$ -step音量 6ch/8ch声音处理器												
Part No.	Supply Voltage (V)	Circuit Current (mA)	Output Noise Voltage ( $\mu$ Vrms)	Distortion (%)	Selector	Main Volume (dB)		Zone Volume (dB)		Tone Control	Serial Control	Package
						ch	ch	ch	ch			
MUS-IC BD34704KS2	$\pm 6.5$ to $\pm 7.5$	$\pm 32$	1.2	0.0004	18	+32 to -95 0.5/Step	8	+7.5 to -91.5 0.5/Step	2	-	2Wire	SQFP-T80C
MUS-IC BD34705KS2	$\pm 6.5$ to $\pm 7.5$	$\pm 32$	1.2	0.0004	12	+32 to -95 0.5/Step	8	+6 to -16 1/Step, -16 to -56 2/Step	2	-	2Wire	SQFP-T64
BD34701KS2	$\pm 6.5$ to $\pm 7.5$	$\pm 22$	1.5	0.0004	8	+32 to -95 0.5/Step	8	-	-	-	2Wire	SQFP-T52
BD3474KS2	$\pm 6.5$ to $\pm 7.5$	$\pm 30$	1.5	0.0004	12	+32 to -95 0.5/Step	6	-	-	Bass, Treble	2Wire	SQFP-T80C

  

2ch/4ch/6ch声音处理器												
Part No.	Supply Voltage (V)	Circuit Current (mA)	Output Noise Voltage ( $\mu$ Vrms)	Distortion (%)	Selector	Main Volume (dB)		Zone Volume (dB)		Tone Control	Serial Control	Package
						ch	ch	ch	ch			
BD3814FV	$\pm 5.0$ to $\pm 7.3$	$\pm 7$	1.0	0.001	-	0 to -95 1/Step	6	-	-	Bass, Treble	2Wire	SSOP-B40
BD34700FV	$\pm 6.5$ to $\pm 7.5$	$\pm 22$	1.5	0.0004	-	+32 to -95 0.5/Step	4	-	-	-	2Wire	SSOP-B40
BD3812F	$\pm 5.0$ to $\pm 7.3$	$\pm 2$	1.2	0.0050	-	0,6 to 18 2/Step, 0 to -103 1/Step	2	-	-	-	2Wire	SOP14

©MUS-IC 标记表示MUS-IC™系列。MUS-IC™是ROHM Co., Ltd.的商标或注册商标。作为罗姆音频IC的高端系列, 充分实现音频元器件所需的性能参数和音质性能。

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 ( $\mu$ Vrms)	Distortion (%)	Selector	Serial Control	Package
BD3843FS	$\pm 4.0$ to $\pm 7.3$	$\pm 3$	1.0	0.004	6	2Wire	SSOP-A24
BD3841FS	$\pm 5.0$ to $\pm 7.3$	$\pm 3$	1.0	0.004	9	2Wire	SSOP-A32

内置双频段均衡器的声音处理器

Part No.	Supply Voltage (V)	Current Consumption (mA)	Selector		Input Gain (dB)	Volume (dB)	Fader		Parametric EQ	Loudness	LPF for Sub Woofer	Option	Serial Control	Output Noise Voltage ( $\mu$ Vrms)	Distortion (%)	Package
			Single	Diff.			(dB)	Output								
BD37503FV	7.0 to 9.5	20	3	1	0 to +20	0 to -36, $-\infty$	0 to -63, $-\infty$	4	-	✓*	-	Anti-aliasing Filter*	I <sup>2</sup> C BUS	5.8	0.001	SSOP-B20
BD37511FS	7.0 to 9.5	15	3	-	0 to +20	0 to -40	0 to -62, $-\infty$	4	-	-	-	-	I <sup>2</sup> C BUS	6.0	0.005	SSOP-A20
BD37512FS	7.0 to 9.5	15	3	1	0 to +20	0 to -40	0 to -62, $-\infty$	4	-	-	-	-	I <sup>2</sup> C BUS	6.0	0.005	SSOP-A20
BD37513FS	7.0 to 9.5	38	3	1	0 to +20	+15 to -79, $-\infty$	0 to -79, $-\infty$	4	-	✓	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A20
BD37514FS	7.0 to 9.5	38	3	1	0 to +20	+15 to -79, $-\infty$	0 to -79, $-\infty$	5	✓	✓	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A20
BD37515FS	7.0 to 9.5	38	3	1	0 to +20	+15 to -79, $-\infty$	+15 to -79, $-\infty$	5	✓	✓	✓	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A20
BD37521FS	7.0 to 9.5	38	3	1	0 to +20	+15 to -79, $-\infty$	0 to -79, $-\infty$	4	-	EXT	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A24
BD37522FS	7.0 to 9.5	38	4	1	0 to +20	+15 to -79, $-\infty$	0 to -79, $-\infty$	4	✓	✓	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A24
BD37523FS	7.0 to 9.5	38	4	1	0 to +20	+15 to -79, $-\infty$	+15 to -79, $-\infty$	5	✓	✓	✓	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A24
BD3870FS	4.5 to 9.5	8	3	-	0/6/12/18	0 to -87, $-\infty$	-	2	EXT	-	-	Surround	2Wire	4.5	0.01	SSOP-A24
BD3871FS	4.5 to 9.5	8	3	-	24/26/28	0 to -87, $-\infty$	-	2	EXT	-	-	Surround	2Wire	40 (Gv=24dB)	0.01	SSOP-A24
BD3490FV	4.75 to 9.50	7	4	-	0/2/4/6/8/12/16/20	0 to -87 (2ch Independent control), $-\infty$	-	2	EXT	-	-	Bass Boost, Surround	I <sup>2</sup> C BUS	5.0	0.002	SSOP-B28
BD3491FS	4.75 to 9.50	7	6	-	0/2/4/6/8/12/16/20	0 to -87 (2ch Independent control), $-\infty$	-	2	EXT	-	-	Bass Boost, Surround	I <sup>2</sup> C BUS	5.0	0.002	SSOP-A32

内置双频段均衡器的声音处理器 :搭载低音、高音 \*可排他性使用响度 EXT : 由外置元件设定  
 BD37511FS、BD37512FS的引脚兼容。BD37513FS、BD37514FS、BD37515FS的引脚兼容。  
 BD37522FS和BD37523FS的引脚兼容。

模拟音频处理器

内置3频段均衡器的声音处理器																				
Part No.	Supply Voltage (V)	Current Consumption (mA)	Selector		Input Gain (dB)	Volume (dB)	Fader		Parametric EQ	Loudness	LPF/HPF for Sub Woofer	Mixing		Level Meter	Option	Serial Control	Output Noise Voltage (μVrms)	Distortion (%)	Package	ComfySIL™ Functional Safety*1
			Single	Diff.			(dB)	Outputs				ATT	ATT							
BD37524FS	7.0 to 9.5	38	4	1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	LPF	-	✓	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A24	-	
BD37531FV	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	-	-	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-B28	-	
BD37532FV	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	LPF	-	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-B28	-	
BD37533FV	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	LPF	✓	✓	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-B28	-	
BD37534FV	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	LPF	✓	✓	✓	I <sup>2</sup> C BUS	3.8	0.001	SSOP-B28	-	
BD37541FS	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	0 to -79, -∞	6	✓	EXT	-	✓	-	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-B28	-	
BD37542FS	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	EXT	LPF	✓	✓	-	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A32	-	
BD37543FS	7.0 to 9.5	38	2/3/5	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	EXT	LPF+HPF	✓	✓	✓	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A32	-	
BD37544FS	7.0 to 9.5	38	1/3/4	3/2/1	0 to +20	+15 to -79, -∞	+15 to -79, -∞	6	✓	-	LPF+HPF	✓	✓	Super Bass	I <sup>2</sup> C BUS	3.8	0.001	SSOP-A32	-	
BD37033FV-M	7.0 to 9.5	31	3/5	2/1	0 to +16	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	LPF	✓	✓	✓	I <sup>2</sup> C BUS	5.5	0.002	SSOP-B28	FSs	
BD37034FV-M	7.0 to 9.5 V <sub>ccL</sub> to 13	36	3/5	2/1	0 to +16	+15 to -79, -∞	+15 to -79, -∞	6	✓	✓	LPF+HPF	✓	✓	High Voltage Output	I <sup>2</sup> C BUS	6.0	0.002	SSOP-B28	FSs	
BD3883FS	6.5 to 9.5	8	5	-	0/6/12/16/20/23/26/29	0 to -87, -∞	0/-10	2	EXT	-	-	-	-	Surround	2Wire	4.0	0.01	SSOP-A32	-	
BD3403FV	6.5 to 9.5	16	5	-	0 to +26 (2/Step)	0 to -30 (2/Step)	0 to -59, -∞	2	EXT	-	-	-	-	Surround	2Wire	8.0	0.02	SSOP-B40	-	

  

内置高级开关的通用电子音量控制器																	
Part No.	Supply Voltage (V)	Current Consumption (mA)	Selector		Input Gain (dB)	Fader Volume (dB)	Outputs	Mixing		Post Filter	High-Voltage Output (dB)	Serial Control	Output Noise Voltage (μVrms)	Distortion (%)	Package	ComfySIL™ Functional Safety*1	
			Single	Diff.				ch	ATT (dB)								
BD3464FV	7.0 to 9.5	25	-	-	-	+23 to -79, -∞ (1/Step)	4	-	-	-	-	I <sup>2</sup> C BUS	1.9	0.0004	SSOP-B20	-	
BD3465FV	7.0 to 9.5	25	-	-	-	+23 to -79, -∞ (1/Step)	4	3	+0 to -64, -∞ (8/Step)	-	-	I <sup>2</sup> C BUS	1.9	0.0004	SSOP-B20	-	
BD3460FS	7.0 to 9.5	25	-	-	-	+23 to -79, -∞ (1/Step)	6	-	-	-	-	I <sup>2</sup> C BUS	1.9	0.0004	SSOP-A24	-	
BD3461FS	7.0 to 9.5	25	-	-	-	+23 to -79, -∞ (1/Step)	6	3	+0 to -64, -∞ (8/Step)	-	-	I <sup>2</sup> C BUS	1.9	0.0004	SSOP-A24	-	
MUS-IC BD34602FS-M	7.0 to 9.5	35	-	-	-	+23 to -79, -∞ (1/Step)	6	3	+0 to -79, -∞ (1/Step)	-	-	I <sup>2</sup> C BUS	1.3	0.0004	SSOP-A24	FSs	
BD37067FV-M	7.0 to 9.5	37	2/3/4/5	4/3/2/1	+23 to -15 (1/Step)	+23 to -79, -∞ (1/Step)	6	1	-	✓	-	I <sup>2</sup> C BUS	8	0.003	SSOP-B40	FSs	
BD37068FV-M	7.0 to 9.5 V <sub>ccL</sub> to 17.8	30/7	1/2/3/4/5	5/4/3/2/1	+23 to -15 (1/Step)	+23 to -79, -∞ (1/Step)	6	1	-	✓	0/8.3	I <sup>2</sup> C BUS	23 (High-Voltage Mode)	0.003	SSOP-B40	FSs	
BD37069FV-M	7.0 to 9.5 V <sub>ccL</sub> to 17.8	30/7	2/3/4/5	4/3/2/1	+23 to -15 (1/Step)	+23 to -79, -∞ (1/Step)	6	1	-	✓	2/4.6/8.3	I <sup>2</sup> C BUS	23 (High-Voltage Mode)	0.003	SSOP-B40	FSs	

内置3频段均衡器的语音处理器 :EXT : 由外部元件设定  
 BD37531FV、BD37532FV、BD37533FV和BD37534FV引脚兼容。  
 BD37541FS、BD37542FS、BD37543FS引脚兼容。BD37033FV-M、BD37034FV-M引脚兼容。  
 内置高级开关的通用电子音量控制器 : BD3464FS和BD3465FS引脚兼容。BD3460FS、BD3461FS、BD34602FS-M引脚兼容。  
 BD37067FV-M和BD37068FV-M引脚兼容。

©MUS-IC 标记表示MUS-IC™系列。MUS-IC™是ROHM Co., Ltd.的商标或注册商标。  
 作为罗姆音频IC的高端系列，充分实现音频元器件所需的性能参数和音质性能。  
 ©ComfySIL™是ROHM Co., Ltd.的商标或注册商标。  
 \*1 "ComfySIL™ 功能安全类别" 的详情请参阅封二。

媒体解码器

AAC/WMA/MP3/WAV格式 + SD存储卡 + CD-ROM																
Part No.	Supply Voltage (V)	USB	SD	iPod	Serial I/F	Display Information	MP3	WMA	AAC	CD-ROM Mode	CD-ROM File System	MP3 Recording Format	File Search	Audio Output		Package
														Analog	Digital	
BU94605AKV	3.0 to 3.6	USB2.0 Full Speed	MMC SD, miniSD, microSD, SDHC	—	I <sup>2</sup> C 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	ISO 9660 Level1, 2	—	Search during the playback	Line	I <sup>2</sup> S 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 I/F	Display Information	MP3	WMA	AAC	CD-ROM Mode	CD-ROM File System	MP3 Recording Format	File Search	Audio Output		Package
														Analog	Digital	
BU94702AKV	3.0 to 3.6	USB2.0 Full Speed	MMC SD, miniSD, microSD, SDHC	—	I <sup>2</sup> C 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	ISO 9660 Level1, 2	MPEG1 Layer3 Sample Rate: 32, 44.1, 48kHz Bit Rate: 32, 64, 128, 192, 256, 320kHz	Search during the playback	Line	I <sup>2</sup> S SPDIF	VQFP80

音频转换器

音频编解码器

音频编解码器											
Part No.	Supply Voltage (V)	ADC	DAC	Microphone Input	Speaker Output		Headphone Output	Filter		ALC	Package
		ch/bit	ch/bit		Type	Monaural/ Stereo		EQ	Notch		
BU26154MUV	HV <sub>DD</sub> 2.7 to 5.5 LV <sub>DD</sub> 2.7 to 3.6	1ch/24bit	2ch/24bit	1	AB/D	Monaural	Stereo	✓	✓	✓	VQFN040V6060
BU26156RFS	HV <sub>DD</sub> 2.7 to 5.5 LV <sub>DD</sub> 2.7 to 3.6	2ch/24bit	2ch/24bit	2	AB/D	Stereo	Stereo	✓	✓	✓	HTSSOP-A44R

音频DAC

PCM 768kHz/32bit, DSD 22.4MHz 立体声 音频D/A转换器												
Part No.	Supply Voltage			Output Channels	Peak Output Current (mApp)	Resolution (Bit)	SNR (dB)	THD+N (dB)	Dynamic Range (dB)	Sampling Frequency (kHz)	DSD Clock (MHz)	Package
	AVCC (V)	DVDD (V)	DVDDIO (V)									
MUS-IC BD34301EKV	4.5 to 5.5	1.4 to 1.6	3.0 to 3.6	2	9.8	32	130	-115	130	32 to 768	2.8, 5.6, 11.2, 22.4	HTQFP64BV
BD34352EKV	4.5 to 5.5	1.4 to 1.6	3.0 to 3.6	2	6.25	32	126	-112	126	32 to 768	2.8, 5.6, 11.2, 22.4	HTQFP64BV

© MUS-IC 标记表示MUS-IC™系列。MUS-IC™是ROHM Co., Ltd.的商标或注册商标。作为罗姆音频IC的高端系列，充分实现音频元器件所需的性能参数和音质性能。

## 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)	Circuit Current (mA)	Amplifier Gain (dB)	Freq. Chara.1 (dB)	Freq. Chara.2 (dB)	Input type	LPF	Mute (Standby) (μA)	Output Capa-less	Max Output Level (V <sub>p-p</sub> )	Video Out→In Change Mode	Package (mm)
BH76906GU	2.5 to 3.45	15	6	-0.2 (4.5MHz)	-26 (18MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	5.2	—	VCSP85H 1.6x1.6, H=1.0 Max
BH76912GU		15	12	-0.2 (4.5MHz)	-26 (18MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	5.2	—	VCSP85H 1.6x1.6, H=1.0 Max
BH76916GU		15	16.5	-0.2 (4.5MHz)	-26 (18MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	5.2	—	VCSP85H 1.6x1.6, H=1.0 Max

#### 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) (μA)	Output Capa-less	Max Output Level (V <sub>p-p</sub> )	Package
BH76806FVM	2.5 to 3.45	16	6	-0.45 (4.5MHz)	-51 (23.5MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	5.2	MSOP8
BH76809FVM		16	9	-0.45 (4.5MHz)	-51 (23.5MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	5.2	MSOP8
BH76812FVM		15	12	-0.45 (4.5MHz)	-51 (23.5MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	5.2	MSOP8
BH76816FVM		15	16.5	-0.45 (4.5MHz)	-51 (23.5MHz)	Bias (150kΩ)	8th order 4.5MHz	0	✓	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) (μA)	Output Capa-less	Max Output Level (V <sub>p-p</sub> )	Video Out→In Change Mode	Package
BH76106HFV	2.6 to 5.5	7	6	0.1 (4.5MHz)	-45 (19MHz)	Clamp	8th order 4.5MHz	0	✓	2.6	—	HVSOF6
BH76109HFV		7	9	0.1 (4.5MHz)	-45 (19MHz)	Clamp	8th order 4.5MHz	0	✓	2.6	—	HVSOF6
BH76112HFV		7	12	0.1 (4.5MHz)	-45 (19MHz)	Clamp	8th order 4.5MHz	0	✓	2.6	—	HVSOF6
BH76206HFV		8	6	-0.3 (6MHz)	-40 (27MHz)	Clamp	8th order 6MHz	0	✓	2.6	—	HVSOF6

#### 内置视频开关 1ch视频驱动器

Part No.	Supply Voltage (V)	Circuit Current (mA)	Amplifier Gain (dB)	Freq. Chara. (dB)	Switchers	Input type	Video Driver	Mute	Output Capa-less	Max Output Level (V <sub>p-p</sub> )		Package
										V <sub>CC</sub> =3V	V <sub>CC</sub> =5V	
BH76330FVM	2.8 to 5.5	10	6	0 (10MHz)	3 input-1 output	Clamp	✓	✓ (Standby)	✓	2.7	4.6	MSOP8
BH76331FVM		10	6	0 (10MHz)	3 input-1 output	Bias	✓	✓ (Standby)	—	2.8	4.6	MSOP8
BH76360FV		12	6	0 (10MHz)	6 input-1 output	Clamp	✓	✓ (Standby)	✓	2.7	4.6	SSOP-B16
BH76361FV		12	6	0 (10MHz)	6 input-1 output	Bias	✓	✓ (Standby)	—	2.8	4.6	SSOP-B16

### 视频开关

#### 宽带 1ch视频开关

Part No.	Supply Voltage (V)	Circuit Current (mA)	Amplifier Gain (dB)	Freq. Chara. (dB)	Switchers	Input type	Video Driver	Mute	Crosstalk (dB)	Max Output Level (V <sub>p-p</sub> )		Package
										V <sub>CC</sub> =3V	V <sub>CC</sub> =5V	
BH76332FVM	2.8 to 5.5	9	0	0 (30MHz)	3 input-1 output	Clamp	—	✓ (Standby)	-65 (4.43MHz)	1.8	3.8	MSOP8
BH76333FVM		8	0	0 (30MHz)	3 input-1 output	Bias	—	✓ (Standby)	-65 (4.43MHz)	1.9	3.4	MSOP8
BH76362FV		11	0	0 (30MHz)	6 input-1 output	Clamp	—	✓ (Standby)	-65 (4.43MHz)	1.8	3.8	SSOP-B16
BH76363FV		11	0	0 (30MHz)	6 input-1 output	Bias	—	✓ (Standby)	-65 (4.43MHz)	1.9	3.4	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 Amplifier Gain (dB)	Audio Freq. Chara.1 (dB)	Audio Freq. Chara.2 (dB)	Audio Amplifier 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)	Circuit Current (mA)	Amplifier Gain (dB)	Freq. Chara. (dB)	ch	Input type	Video Driver	Input Impedance (kΩ)	CMRR (dB)	Max Output Level (V <sub>p-p</sub> )	Package
BH7673G	4.5 to 5.5	4.8	0	0 (10MHz)	1	Bias	—	150	60	3.8	SSOP5



# 图像校正

面板用图像校正IC											
Part No.	Supply Voltage (V)			Image Data Size	Control I/F	Input/Output Digital I/F	Image Adjustment	PWM Output	LVDS Transmitter	Package	Automotive Grade AEC-Q100
	V <sub>DD</sub> Core	V <sub>DD</sub> I/O	V <sub>DD</sub> LVDS								
BU1523KV	1.65 to 1.95	3.0 to 3.6	3.0 to 3.6	Supports up to WVGA+ (864x480)	I <sup>2</sup> C BUS	24bit RGB Interface 8bit YUV=4 : 2 : 2 ITU-R BT.656	✓	—	✓	VQFP100	Preparing

  

内置图像校正的视频编码器										
Part No.	Supply Voltage (V)			Image Data Size	Control I/F	Input/Output Digital I/F	Fog Reduction	Video Encoder	Package	Automotive Grade AEC-Q100
	V <sub>DD</sub> Core	V <sub>DD</sub> I/O	V <sub>DD</sub>							
BU6521KV	1.4 to 1.6	2.7 to 3.6	2.7 to 3.6	ITU-R BT.656	I <sup>2</sup> C BUS Serial EEPROM Interface	8bit YUV=4 : 2 : 2 ITU-R BT.656	✓	✓	VQFP48C	YES

# 图像LSI

## 视频解码器

(LAPIS Technology产品)

CVBS/S-video									
Part No.	Supply Voltage (V)	Input (Analog)		Output (Digital)	Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2
		Terminal	Type						
ML86101A	3.3/1.5	CVBSx4 or CVBSx2+S-videox1 or S-videox2	NTSC PAL SECAM	ITU-R BT.656 YUV 8bit	Simple, small	-40 to +85	P-TQFP48 -0707-0.50-ZK6	✓	YES
<b>New</b> ML86112	3.3/1.2	CVBSx4 or differentialx2	NTSC PAL	MIPI CSI-2 (YUV422-8bit) ITU-R BT.656	Simple, small MIPI output I/P conversion	-40 to +105	P-WQFN32 -0505-0.50-W66	✓	YES
ML86V7668A	3.3/2.5	CVBSx4 or CVBSx1+S-videox3	NTSC PAL SECAM	ITU-R BT.656 YUV 8/16bit RGB 18bit	RGB output	-40 to +85	P-TQFP100 -1414-0.50-ZK6	✓	YES
☆ML86160	3.3/1.2	CVBSx4 or differentialx2	NTSC PAL High Definition Analog	ITU-R BT.656 MIPI CSI-2	High Definition Analog Decoder HD-ACT*3	-40 to +105 (T.B.D)	P-WQFN36 -0606-0.50 (T.B.D)	✓	YES

  

CVBS/S-video/Component/RGB									
Part No.	Supply Voltage (V)	Input (Analog)		Output (Digital)	Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2
		Terminal	Type						
ML86V7675	3.3/1.5	CVBSx4 +(Comp or S-video)x1 +Comp1	NTSC PAL SECAM	ITU-R BT.656 YUV 8bit	WVGA, EGA analog RGB supported	-40 to +85	P-TQFP64 -1010-0.50-ZK6	✓	YES

\*1 带无卤素标记 ✓，表示备有无卤素产品。详细内容请咨询销售人员。

\*2 关于AEC-Q100，请咨询销售人员。

\*3 HD-ACT(High Definition-Analog Composite Transport)利用独特的高分辨率技术清晰显示模拟影像。

☆：开发中

## 视频编码器

(LAPIS Technology产品)

CVBS									
Part No.	Supply Voltage (V)	Input (Digital)	Output (Analog)		Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2
			Terminal	Type					
ML86V76580	3.3/1.8	ITU-R BT.656 YUV 8bit	CVBS	NTSC PAL	75Ω drive	-40 to +85	P-TQFP48 -0707-0.50-ZK6	✓	YES
ML86640	3.3	ITU-R BT.656 YUV 8/16/24bit RGB 24bit	CVBS	NTSC PAL	75Ω drive P/I conversion	-40 to +105	P-TQFP48 -0707-0.50-ZK6	✓	YES
☆ML86660	3.3	ITU-R BT.656 MIPI CSI-2	CVBS	NTSC PAL High Definition Analog	High Definition Analog Encoder HD-ACT*3	-40 to +105 (T.B.D)	WQFN36 -0505-0.50 (T.B.D)	✓	YES

  

CVBS/S-video/Component/RGB									
Part No.	Supply Voltage (V)	Input (Digital)	Output (Analog)		Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2
			Terminal	Type					
ML86V7655	3.3/2.5	ITU-R BT.656 YUV 8/16/24bit RGB 24bit	CVBS S-video Component	NTSC PAL	I/P, P/I conversion	-40 to +85	P-TQFP100 -1414-0.50-ZK6	✓	YES

\*1 带无卤素标记 ✓，表示备有无卤素产品。详细内容请咨询销售人员。

\*2 关于AEC-Q100，请咨询销售人员。

\*3 HD-ACT(High Definition-Analog Composite Transport)利用独特的高分辨率技术清晰显示模拟影像。

☆：开发中



## 视频接口

(LAPIS Technology产品)

LVTTTL/LVDS/MIPI 视频接口									
Part No.	Supply Voltage (V)	Input	Output	Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2	
<b>ML86795</b>	3.3 (1.8)/1.5	ITU-R BT.656 YUV 8bit Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/888, YUV422-8bit)	ITU-R BT.656 YUV 8/16bit Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/888, YUV422-8bit)	LVTTTL/LVDS/MIPI CSI-2 to LVTTTL/ LVDS/MIPI CSI-2, MIPI Virtual Channel output	-40 to +105	P-WQFN64 -0909-0.50-63	✓	YES	
☆ <b>ML86781</b>	3.3/1.5	RGB 24bit MIPI CSI-2 (RGB565/888, YUV422-8bit) MIPI DSI (RGB565/888, YUV422-8bit)	Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/888, YUV422-8bit)	LVTTTL/MIPI DSI/CSI-2 to LVDS/ MIPI CSI-2 Separate one image into two	-40 to +85	P-TQFP128 -1414-0.40-Z6K6- MC	✓	YES	
☆ <b>ML86796</b>	3.3/1.2	MIPI CSI-2 (RGB565/666/888, YUV422-8/10bit, RAW8/10/12/14/16/20/24)×4	MIPI CSI-2 (RGB565/666/888, YUV422-8/10bit, RAW8/10/12/14/16/20/24)×2	MIPI CSI-2 to MIPI CSI-2 Supports 4Virtual Channel inputs/ outputs	-40 to +105 (T.B.D)	P-TQFP100 -1414-0.50-ZK6 (T.B.D)	✓	YES	
☆ <b>ML86797</b>	3.3/1.2	Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/666/888 YUV422-8bit) MIPI DSI (RGB565/888 YUV422-8bit)	Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/666/888 YUV422-8bit) MIPI DSI (RGB565/888 YUV422-8bit)	LVDS to MIPI CSI-2/DSI MIPI CSI-2/DSI to LVDS MIPI CSI-2/DSI to MIPI DSI/CSI-2	-40 to +105 (T.B.D)	P-WQFN64 -0909-0.50-63 (T.B.D)	✓	YES	
☆ <b>ML86799</b>	3.3/1.2	Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/666/888 YUV422-8bit) MIPI DSI (RGB565/666/888 YUV422-8bit)	eDP (RGB565/666/888)	LVDS/MIPI CSI-2/DSI to eDP	-40 to +105 (T.B.D)	P-WQFN64 -0909-0.50-63 (T.B.D)	✓	YES	

\*1 带无卤素标记 ✓，表示备有无卤素产品。详细内容请咨询销售人员。  
\*2 关于AEC-Q100，请咨询销售人员。

☆：开发中

面向小型TFT液晶显示器的显示屏控制器系列

(LAPIS Technology产品)

内置视频解码器、缩放器																		
Part No.	Supply Voltage (V)	Input (Analog)		Input (Digital)	Output	Resolution	OSD	MCU	Feature	Operating Temperature (°C)	Package	Halogen Free Support <sup>*1</sup>	Automotive Grade <sup>*2</sup>					
		Terminal	Type															
ML86V8201	3.3/1.5	CVBS×2 or S-video×1	NTSC PAL SECAM	ITU-R BT.656 YUV 8/16/24bit RGB 18/24bit	ITU-R BT.656 YUV 8bit RGB 18/24bit	QVGA to WVGA	Line	—	Rear camera function Image quality adjustment	-40 to +85	P-TQFP100 -1414-0.50-ZK6	✓	YES					
ML86203		CVBS×1		ITU-R BT.656 YUV 8/16/24bit RGB 18/24bit	ITU-R BT.656 YUV 8bit Single LVDS (RGB666/888)		—	—	Rear camera function WXGA panel support Image quality adjustment		P-TQFP80 -1010-0.40-ZK6	✓	YES					
ML86207		CVBS×2			ITU-R BT.656 YUV 8/16/24bit RGB 18/24bit + Single LVDS (RGB666/888)	ITU-R BT.656 YUV 8bit RGB 18/24bit Single LVDS (RGB666/888)	VGA to WXGA	Text Line BMP (ML86287 Only)	—		LVTTTL/LVDS I/F Digital video input x2 WXGA panel support Rear camera function Picture in Picture (ML86287 Only) Image quality adjustment OSD ROM-OSD function (ML86287 Only)	P-TQFP100 -1414-0.50-ZK6	✓	YES				
ML86287														P-TQFP128 -1414-0.40-ZK6-MC	✓	YES		
ML86209		CVBS single×2 or differential×1		NTSC PAL	ITU-R BT.656 YUV 8/16bit ITU-R BT.1120 like Single/Dual LVDS (RGB666/888) MIPI CSI-2 (RGB565/888, YUV422-8bit)	ITU-R BT.656 or MIPI CSI-2 (RGB565/888, YUV422-8bit) + Single/Dual LVDS (RGB666/888)		Text Line BMP	—		LVTTTL/LVDS/MIPI CSI-2 I/F Digital video input x4 Full HD panel support Rear camera function Picture in Picture (ML86289 Only) Image quality adjustment OSD, ROM-OSD function	P-TQFP128 -1414-0.40-Z6K6	✓	YES				
ML86289														P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES		
New ML86290		CVBS single×3 or differential×1			ITU-R BT.656 YUV 8/16bit ITU-R BT.1120-like MIPI DSI (RGB565/888 YUV422-8bit ARGB8565 (ML86290)) MIPI CSI-2 (RGB565/888, YUV422-8bit)	Dual/Single LVDS (RGB666/888)	VGA to Full HD	BMP	—		Multi Input support LVTTTL/MIPI-DSI/MIPI CSI-2/CVBS I/F Rear camera function Picture in Picture ROM-OSD function (10windows, 2layers (ML86291 Only))	P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES				
New ML86291														P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES		
ML86V8202C		3.3/1.8	CVBS×2 + (Comp or S-video)×1 + Comp×1		ITU-R BT.656 YUV 8/16/24bit RGB 18/24bit	ITU-R BT.656 style YUV 8/16/24bit RGB 18/24bit		—	—		Component video support Image quality adjustment	P-TQFP100 -1414-0.50-ZK6	✓	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 YUV 8/16/24bit RGB 18/24bit 2ch	ITU-R BT.656 YUV 8bit RGB 18/24bit		Text Line	—		Component video support Digital video input x2 Rear camera function Image quality adjustment OSD function	P-TFBGA144 -1111-0.80-1	✓	YES				
ML86241	3.3 (1.8)/1.5	CVBS×4 or CVBS×2 + (Comp or S-video)×1 + Comp×1		ITU-R BT.656 YUV 8/16/24bit RGB 18/24bit + Single LVDS (RGB 18/24bit)	ITU-R BT.656 YUV 8/16bit + RGB 18/24bit YUV 16bit Single LVDS (RGB 18/24bit)		Text Line BMP	—	Component video support LVTTTL/LVDS I/F Digital video input x2 WXGA panel support Rear camera function Image quality adjustment OSD, ROM-OSD function	P-TFBGA144 -1111-0.80-1	✓	YES						
New ML86242	CVBS single×2 or differential×1 Component (ML86242 Only)		NTSC PAL	*3 ITU-R BT.656 YUV 8/16bit ITU-R BT.1120 like Single/Dual LVDS (RGB666/888, YUV422-8/16bit, YUV444-24bit)	*3 ITU-R BT.656 YUV 8/16bit RGB 24bit Single/Dual LVDS MIPI-CSI2 (RGB565/888 YUV422-16bit)	QVGA to WXGA	Text Line BMP	—	*3 Multi Input/Output support LVTTTL/LVDS/MIPI CSI-2/ CVBS/Comp I/F Rear camera function Picture in Picture Image quality adjustment OSD, ROM-OSD function State monitor function	P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES						
ML86243																P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES
New ML86244																	P-TQFP128 -1414-0.40-Z6K6-MC	✓
ML86245	3.3/1.5	—	—	*3 ITU-R BT.656 YUV 8/16bit ITU-R BT.1120 like Single/Dual LVDS (RGB666/888 YUV422-8/16bit)	*3 ITU-R BT.656 YUV 8/16bit RGB 24bit Single/Dual LVDS (RGB666/888)		Text Line BMP	—	Multi Input/Output support LVTTTL/LVDS/MIPI CSI-2 I/F Rear camera function Picture in Picture Image quality adjustment OSD, ROM-OSD function State monitor function	P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES						
ML86321	CVBS single×2 or differential×1	NTSC PAL	ITU-R BT.656 YUV 8/16bit ITU-R BT.1120 like MIPI CSI-2 (RGB565/888, YUV422-8bit)	YUV 8/16bit Single LVDS (RGB666/888)			Text Line BMP	—	Electronic rear-view mirror support 3-screen synthesis Image correction function (Angle/Aspherical/Keystone/Lens distortion correction) OSD, ROM-OSD function (15windows, 1layer) State monitor function	P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES						

\*1 带无卤素标记 ✓, 表示备有无卤素产品。详细内容请咨询销售人员。  
\*2 关于AEC-Q100, 请咨询销售人员。  
\*3 关于可选择的信号组合, 请咨询销售人员。

音频 / 视频

### 面向小型TFT液晶显示器的显示屏控制器系列

(LAPIS Technology产品)

#### 内置画质调节功能

Part No.	Supply Voltage (V)	Input (Analog)		Input (Digital)	Output	Resolution	OSD	MCU	Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2
		Terminal	Type										
<b>ML86V8101</b>	3.3			RGB 18bit	RGB 18bit	QVGA to QHD	-		Image quality adjustment function	-40 to +85	P-TQFP64 -1010-0.50-ZK6	✓	YES
<b>ML86V8102</b>				RGB 18/24bit	RGB 18/24bit				RGB 24bits supported image quality adjustment function		P-TQFP80 -1010-0.40-ZK6	✓	YES
<b>New ML86172</b>	3.3/1.5			ITU-R BT.656 YUV 8/10bit RGB 18/24bit Single/Dual LVDS (RGB666/888)	RGB 18/24bit (ML86172 Only) Single/Dual LVDS (RGB666/888bit)	WVGA to H 2880 (Max) V 1080 (Max) (Pixel rate 160MHz Max)			Image quality adjustment OSD, ROM OSD function (30windows, 2layers) Error Detection (Input data/Input sync/ Output data/Pattern check (ML86172 Only)) Frequency conversion function State monitor function		P-TQFP100 -1414-0.50-Z6K6	✓	YES
<b>ML86173</b>											P-TQFP100 -1414-0.50-Z6K6	✓	YES
☆ <b>ML86174</b>	3.3/1.2		-	Single/Dual LVDS (RGB565/888) MIPI CSI-2, MIPI DSI (RGB565/888, YUV422-8bit)	Single/Dual LVDS (RGB666/888)	H 2880 (Max) V 1080 (Max) (Pixel rate 160MHz Max)	Text BMP		Image quality adjustment OSD, ROM OSD function (50windows, 2layers) Error Detection (Input data/Input sync/ Output data/Pattern check) Frequency conversion function State monitor function		P-TQFP100 -1414-0.50-Z6K6	✓	YES
<b>ML86175</b>	3.3/1.5			ITU-R BT.656 YUV 8/16bit RGB 18/24bit Single/Dual LVDS (RGB666/888)		H 2048 (Max) V 2048 (Max) (Pixel rate 160MHz Max)			Image quality adjustment 90 degree rotation function OSD, ROM OSD function (15windows, 1layer) Frequency conversion function State monitor function		TQFP128 -1414-0.40-Z6K6-MC	✓	YES
<b>New ML86177</b>											P-TQFP128 -1414-0.40-Z6K6-MC	✓	YES
				RGB 24bit Single LVDS (RGB888)	RGB 24bit Single LVDS (RGB888)	QVGA to WXGA	BMP		Warping and rotation for HUD ROM OSD function (10windows, 2layers) Status output Fail detection function		P-TQFP128 -1414-0.50-Z6K6-MC	✓	YES

#### 内置视频解码器、8051MCU

Part No.	Supply Voltage (V)	Input (Analog)		Input (Digital)	Output	Resolution	OSD	MCU	Feature	Operating Temperature (°C)	Package	Halogen Free Support*1	Automotive Grade*2
		Terminal	Type										
<b>ML86V8401</b>	3.3/1.8	CVBS×3 or CVBS×2 +S-video×1	NTSC PAL SECAM	ITU-R BT.656 YUV 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	P-TQFP100 -1414-0.50-ZK6	✓	YES

\*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。  
\*2 关于AEC-Q100, 请咨询销售人员。

☆: 开发中