



SGM4808

Wide Power Supply Range Audio Click-Pop Noise Eliminator

GENERAL DESCRIPTION

The SGM4808 is an audio click-pop eliminator which can operate from a 2.7V to 12V single power supply. It is designed for HiFi audio system or portable devices.

The SGM4806 allows $-V_{CC}$ to $+V_{CC}$ wide range audio signals passing with low distortion. An external processor can eliminate the click-pop noise.

The SGM4808 is available in Green TQFN-2.6×1.8-16L and SOIC-16 packages. It operates over an ambient temperature range of -40°C to $+85^{\circ}\text{C}$.

FEATURES

- **Supply Voltage Range: 2.7V to 12V**
- **Low On-Resistance: 1.1Ω (TYP)**
- **$-V_{CC}$ to $+V_{CC}$ Rail-to-Rail Low Distortion Audio Signals Passing**
- **Fast Switching Times**
- **High Off-Isolation**
- **Low Crosstalk**
- **1.8V Logic Control**
- **-40°C to $+85^{\circ}\text{C}$ Operating Temperature Range**
- **Available in Green TQFN-2.6×1.8-16L and SOIC-16 Packages**

APPLICATIONS

HiFi Audio System
Portable Equipment

PACKAGE/ORDERING INFORMATION

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM4808	TQFN-2.6×1.8-16L	-40°C to +85°C	SGM4808YTQA16G/TR	4808 XXXXX	Tape and Reel, 3000
	SOIC-16	-40°C to +85°C	SGM4808YS16G/TR	SGM4808YS16 XXXXX	Tape and Reel, 2500

NOTE: XXXXX = Date Code and Vendor Code.

Green (RoHS & HSF): SG Micro Corp defines "Green" to mean Pb-Free (RoHS compatible) and free of halogen substances. If you have additional comments or questions, please contact your SGMICRO representative directly.

ABSOLUTE MAXIMUM RATINGS

V_{CC} to GND0V to 13.2V
 MUTER, MUTEL, EN to GND0V to 6V
 Passing Audio Signals Range ⁽¹⁾
(-V_{CC} - 0.3V) to (V_{CC} + 0.3V)
 Continuous Current±200mA
 Peak Current±250mA
 I/O Clamp Current (V_I < 0)-30mA
 Junction Temperature+150°C
 Storage Temperature Range-65°C to +150°C
 Lead Temperature (Soldering, 10s)+260°C
 ESD Susceptibility
 HBM 7000V
 MM 300V
 CDM 1000V

NOTE:

1. Signals on RIN, LIN, ROUT, LOU, exceeding V_{CC} will be clamped by internal diodes. Limit forward diode current to maximum current ratings.

RECOMMENDED OPERATING CONDITIONS

Supply Voltage Range2.7V to 12V
 Operating Temperature Range-40°C to +85°C

OVERSTRESS CAUTION

Stresses beyond those listed in Absolute Maximum Ratings may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may affect reliability. Functional operation of the device at any conditions beyond those indicated in the Recommended Operating Conditions section is not implied.

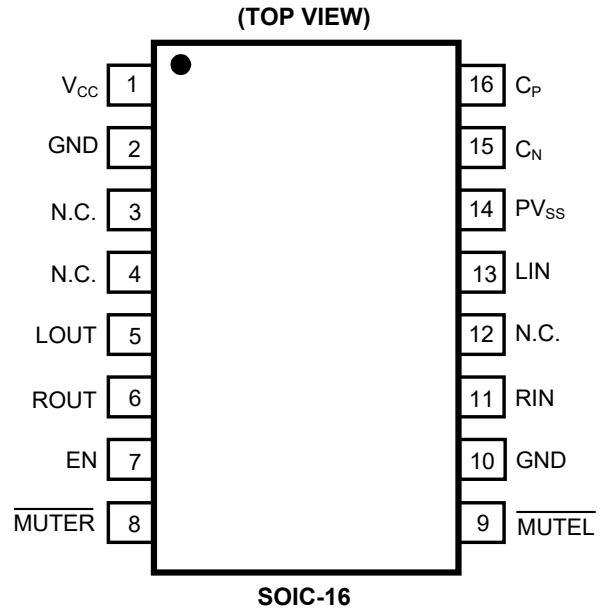
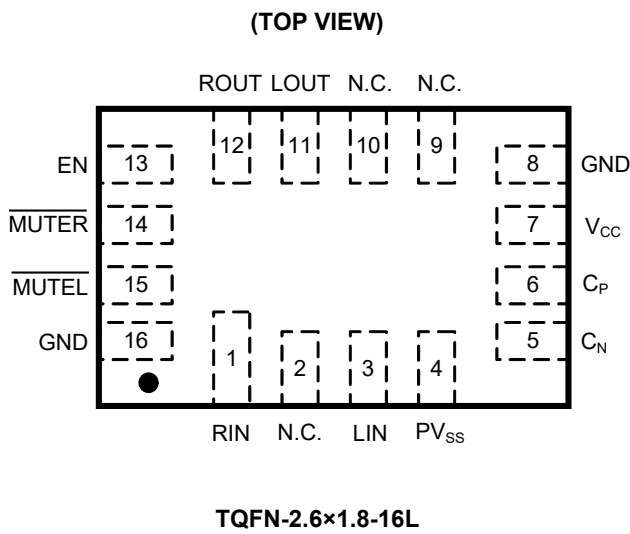
ESD SENSITIVITY CAUTION

This integrated circuit can be damaged if ESD protections are not considered carefully. SGMICRO recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because even small parametric changes could cause the device not to meet the published specifications.

DISCLAIMER

SG Micro Corp reserves the right to make any change in circuit design, or specifications without prior notice.

PIN CONFIGURATIONS

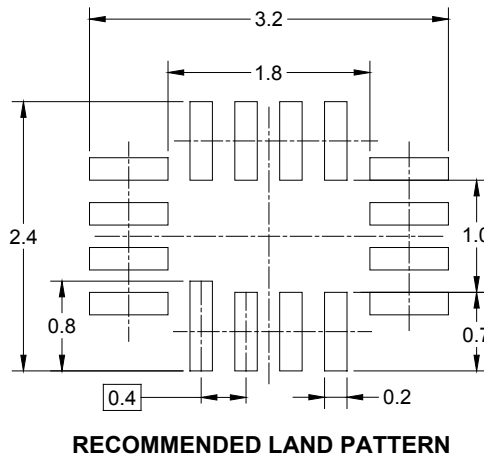
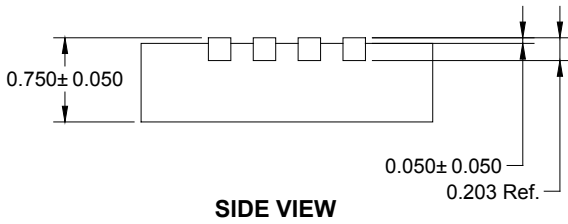
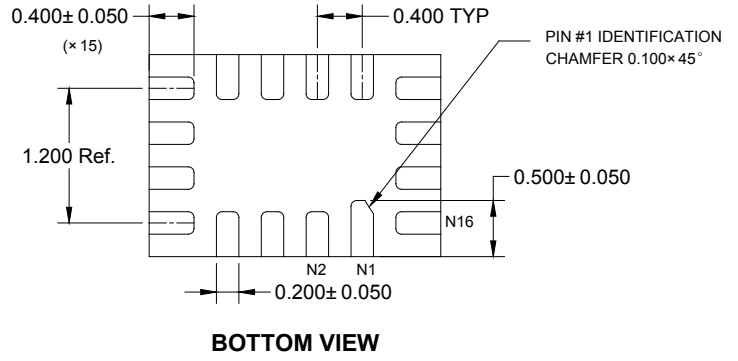
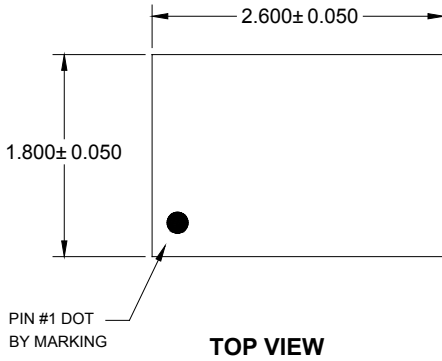


PIN DESCRIPTION

PIN		NAME	FUNCTION
TQFN-2.6×1.8-16L	SOIC-16		
1	11	RIN	Right Channel Audio Signals Input.
2, 9, 10	3, 4, 12	N.C.	No Connection.
3	13	LIN	Left Channel Audio Signals Input.
4	14	PV _{SS}	Negative Supply Voltage Output. Connect one 0.1μF ceramic capacitor from PV _{SS} to GND.
5	15	C _N	Negative Terminal for Charge Pump Flying Capacitor.
6	16	C _P	Positive Terminal for Charge Pump Flying Capacitor.
7	1	V _{CC}	Power Supply.
8, 16	2, 10	GND	Ground.
11	5	LOUT	Left Channel Audio Signals Output.
12	6	ROUT	Right Channel Audio Signals Output.
13	7	EN	Enable Control. When EN = “Low”, both RIN to ROUT and LIN to LOU channels will be disconnected, negative charge pump doesn’t work, the SGM4808 will be in shutdown state. When EN = “High”, negative charge pump will work, the SGM4808 will be in working state, whether the audio signals channel works depends on the logical state of $\overline{\text{MUTER}}$ or $\overline{\text{MUTEL}}$.
14	8	$\overline{\text{MUTER}}$	Digital Control Pin to Mute Right Audio Signals Channel.
15	9	$\overline{\text{MUTEL}}$	Digital Control Pin to Mute Left Audio Signals Channel.

PACKAGE OUTLINE DIMENSIONS

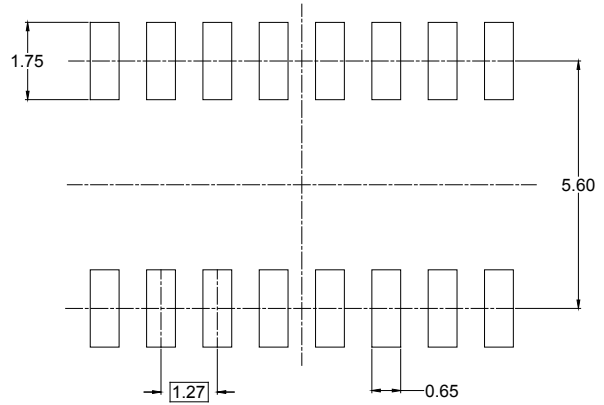
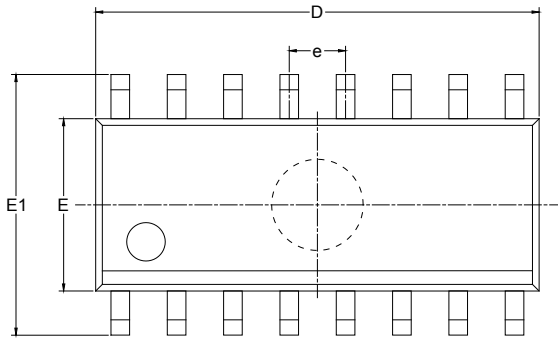
TQFN-2.6×1.8-16L



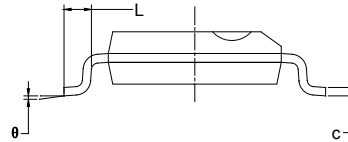
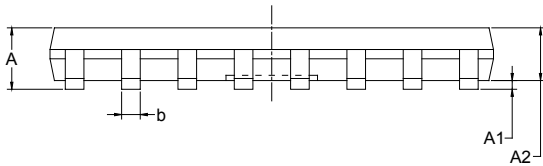
NOTE: All linear dimensions are in millimeters.

PACKAGE OUTLINE DIMENSIONS

SOIC-16



RECOMMENDED LAND PATTERN (Unit: mm)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	9.800	10.200	0.386	0.402
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.27 BSC		0.050 BSC	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

PACKAGE INFORMATION

TAPE AND REEL INFORMATION

REEL DIMENSIONS



TAPE DIMENSIONS



NOTE: The picture is only for reference. Please make the object as the standard.

KEY PARAMETER LIST OF TAPE AND REEL

Package Type	Reel Diameter	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P0 (mm)	P1 (mm)	P2 (mm)	W (mm)	Pin1 Quadrant
TQFN-2.6×1.8-16L	7"	9.0	2.01	2.81	0.93	4.0	4.0	2.0	8.0	Q1
SOIC-16	13"	16.4	6.50	10.30	2.10	4.0	8.0	2.0	16.0	Q1

DD0001

PACKAGE INFORMATION

CARTON BOX DIMENSIONS



NOTE: The picture is only for reference. Please make the object as the standard.

KEY PARAMETER LIST OF CARTON BOX

Reel Type	Length (mm)	Width (mm)	Height (mm)	Pizza/Carton
7" (Option)	368	227	224	8
7"	442	410	224	18
13"	386	280	370	5

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