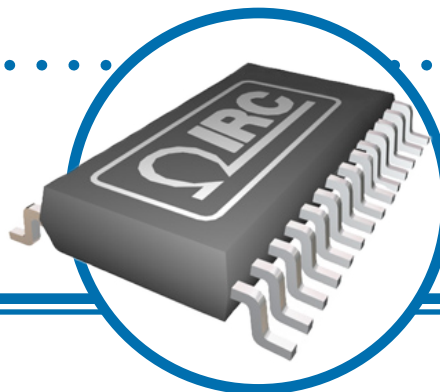


TaNsil[®] Integrated Audio Passive Network



QS013 Series

- RoHS compliant or Sn/Pb terminations available
- Less than -90dB channel to channel crosstalk
- Contains all AC97 signal conditioning components
- Single 28-pin QSOP package saves board space and assembly cost



Electrical Data

Absolute Tolerance	Ratio Tolerance	Absolute TCR	Package Power Rating	Channel to Channel Crosstalk	Inter-Channel Crosstalk
±5%	to ±1%	±100ppm/°C	1.00 Watts	<-90dB @ 1KHz	<-90dB @ 1KHz

Environmental Data ($\Delta R\%$)

Test per MIL-PRF-83401	Characteristic H Limits	IRC Maximum	IRC Typical
Thermal Shock	±0.5	±0.1	±0.02
Power Conditioning	±0.5	±0.2	±0.05
Low Temperature Operation	±0.1	±0.1	±0.03
Short Time Overload	±0.1	±0.1	±0.03
Terminal Strength	±0.25	±0.1	±0.02
Resistance to Soldering Heat	±0.1	±0.1	±0.05
Moisture Resistance	±0.4	±0.2	±0.05
Shock	±0.25	±0.1	±0.02
Vibration	±0.25	±0.1	±0.02
Life	±0.5	±0.1	±0.10
High Temperature Exposure	±0.2	±0.1	±0.05
Low Temperature Storage	±0.1	±0.1	±0.03
25°C Double Load	±0.5	±0.1	±0.10

General Note

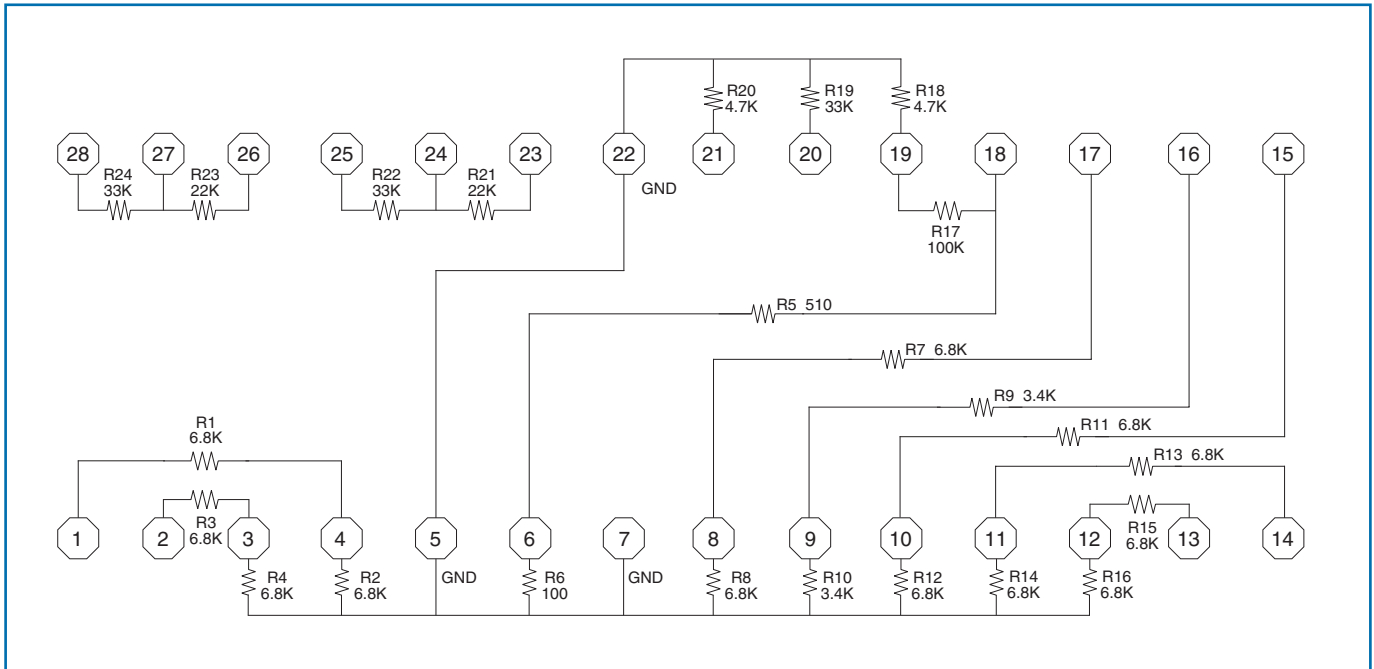
IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.



TaNiSi[®] Integrated Audio Passive Network



Schematic Data

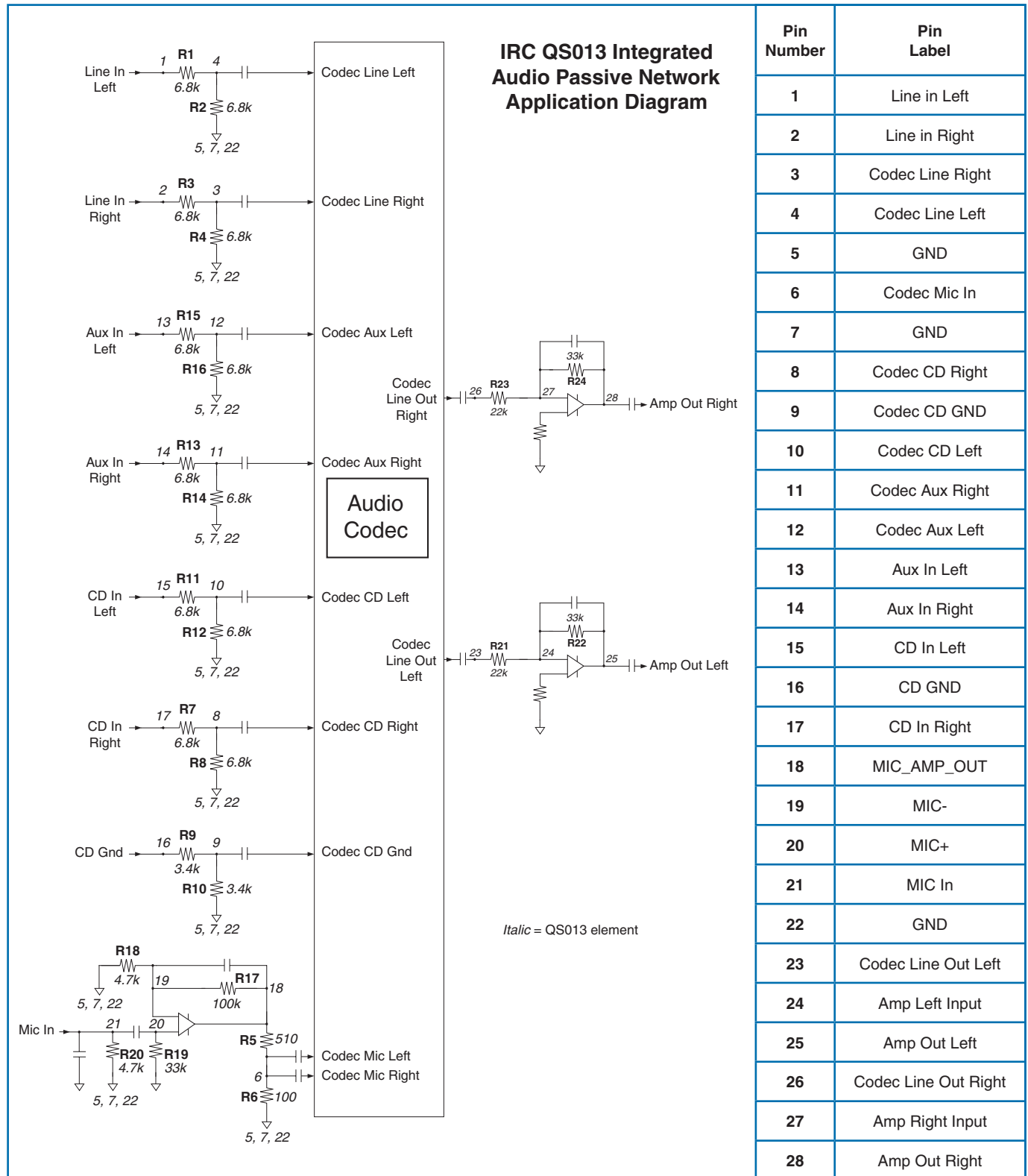


Resistor	Value (Ω)	Pins	Ratio Tolerance	Ratio Ref Resistor	Trk TCR (ppm/°C)	Resistor	Value (Ω)	Pins	Ratio Tolerance	Ratio Ref Resistor	Trk TCR (ppm/°C)
1	6.8k	1, 4	-	-	-	13	6.8k	11, 14	-	-	-
2	6.8k	4, GND	-	-	-	14	6.8k	11, GND	-	-	-
3	6.8k	2, 3	to ±1	1	±10	15	6.8k	12, 13	to ±1	13	±10
4	6.8k	3, GND	to ±1	2	±10	16	6.8k	12, GND	to ±1	14	±10
5	510	6, 18	-	-	-	17	100k	18, 19	-	-	-
6	100	6, GND	-	-	-	18	4.7k	19, GND	-	-	-
7	6.8k	8, 17	-	-	-	19	33k	20, GND	-	-	-
8	6.8k	8, GND	-	-	-	20	4.7k	21, GND	-	-	-
9	3.4k	9, 16	-	-	-	21	22k	23, 24	-	-	-
10	3.4k	9, GND	-	-	-	22	33k	25, 24	-	-	-
11	6.8k	10, 15	to ±1	7	±10	23	22k	26, 27	to ±1	21	±10
12	6.8k	10, GND	to ±1	8	±10	24	33k	28, 27	to ±1	22	±10

TaNsil[®] Integrated Audio Passive Network



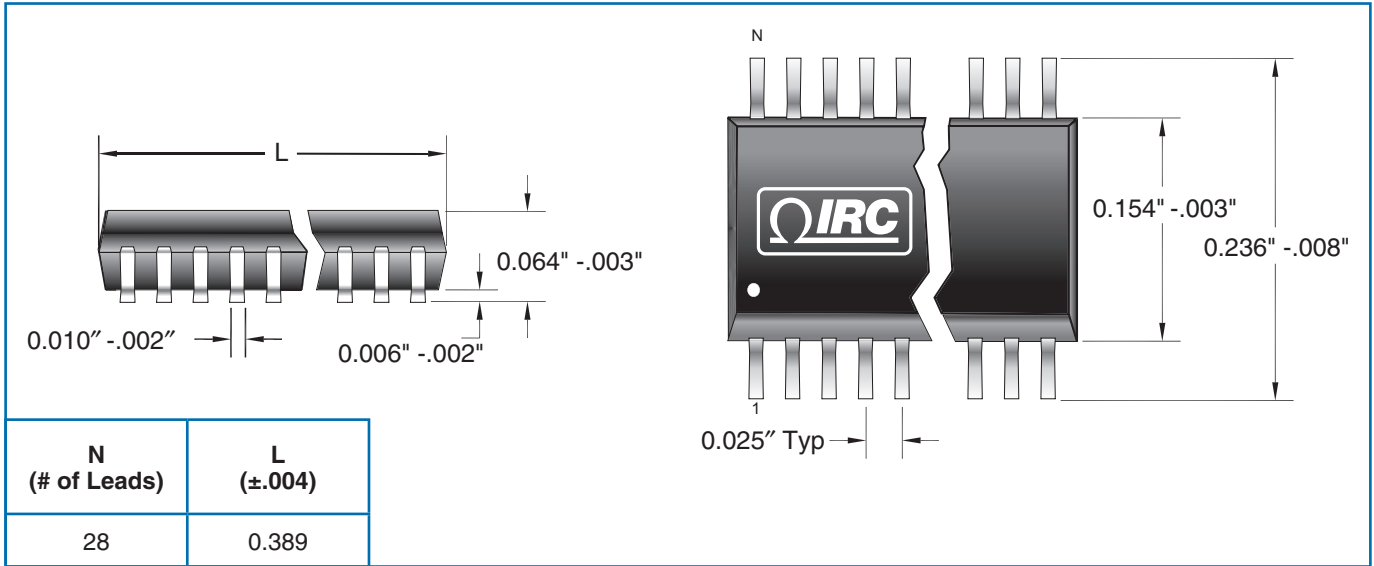
Application Data



TaNSiI[®] Integrated Audio Passive Network



Physical Data



Ordering Data

IRC Part Number	Absolute Tolerance	Ratio Tolerance*
GUS-QS013LF	±5%	±2%
GUS-QS013		
GUS-QS013ALF	±5%	±1%
GUS-QS013A		

*Notes: Reference Resistor Details Table for element matching references.
LF indicates RoHS compliant, 100% matte tin, Pb-free terminations.