Replacement of
TEA1062/TEA1062A

Low Voltage Transmission ICs with dialer interface

MIK1062/MIK1062A

June 1998 – revised October 1999

Features

- Low line voltage; operates down to 1.6 V (excluding polarity guard)
- Voltage regulator with adjustable static resistance
- Provides a supply for external circuits
- Symmetrical high-impedance inputs (64 kΩ) dynamic, magnetic or piezoelectric microphones
- Asymmetrical high-impedance input (32 kΩ) for electret microphones
- DTMF signal input with confidence tone
- Mute input for pulse or DTMF dialling
  - MIK1062: active HIGH (MUTE)
  - MIK1062A: active LOW ($\overline{\text{MUTE}}$)
- Receiving amplifier for dynamic, magnetic or piezoelectric earpiece amplifiers
- Large gain setting ranges on microphone and earpiece amplifiers
- Line loss compensation (line current dependent) for microphone and earpiece amplifiers
- Gain control curve adaptable to exchange supply
- DC line voltage adjustment facility.

The MIK1062 and MIK1062A are integrated circuits that perform all speech and line interface functions required in fully electronic telephone sets. They perform electronic switching between dialling and spech. The ICs operate at line voltage down to 1.6 V DC (with reduced performance) to facilitate the use of more telephone sets connected in parallel.

All statements and values refer to all versions

Quick Reference Data

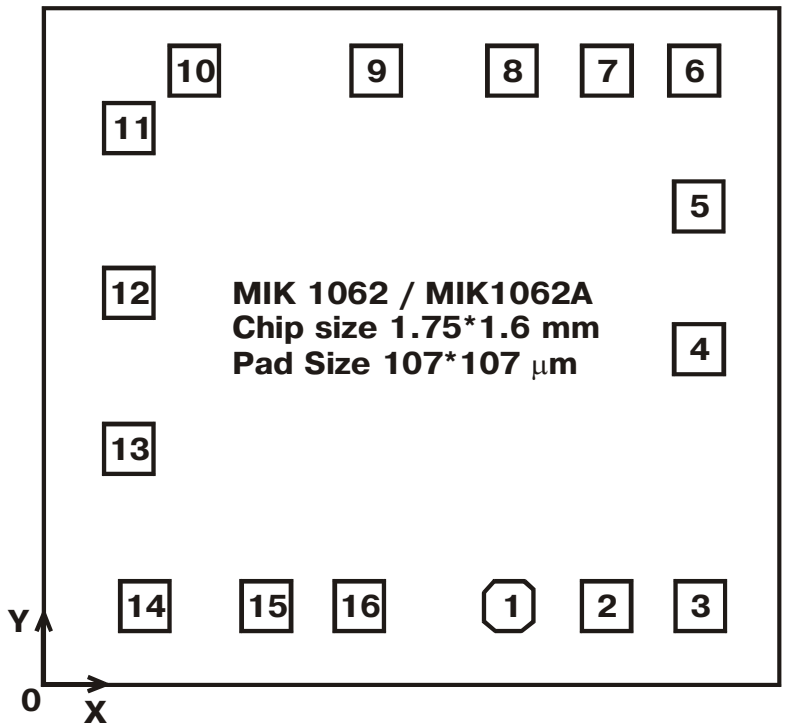
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{LN}	Line voltage	I_{line} = 15mA	3.55	4.0	4.25	V
I_{line}	Operating line current normal operation		11	–	140	mA
I_{CC}	Internal supply current	V_{CC} = 2.8 V	–	0.9	1.35	mA
V_{CC}	Supply voltage for peripherals	I_{line} = 15mA				
	MIK1062	I_P = 1.2 mA ; MUTE = HIGH	2.2	2.7	–	V
	MIK1062A	I_P = 0 mA ; MUTE = HIGH	–	3.4	–	
		I_P = 1.2 mA ; MUTE = LOW	2.2	2.7	–	
		I_P = 0 mA ; MUTE = LOW	–	3.4	–	
G_V	Voltage gain	I_{line} = 15mA				
	Microphone amplifier		50.5	–	53.5	dB
	Receiving amplifier		29.5	–	32.5	
T_{amb}	Operating ambient temperature		-25	–	+75	°C

Pinning

Symbol	Pin	Description
LN	1	positive line terminal
GAS1	2	gain adjustment; transmitting amplifier
GAS2	3	gain adjustment; transmitting amplifier
QR	4	non-inverting output; receiving amplifier
GAR	5	gain adjustment; receiving amplifier
MIC_-	6	inverting microphone input
MIC_+	7	non-inverting microphone input
STAB	8	current stabilizer
V_{EE}	9	negative line terminal
IR	10	receiving amplifier input
DTMF	11	dual-tone multi-frequency input
MUTE	12	mute input (see note 1)
V_{CC}	13	positive supply decoupling
REG	14	voltage regulator decoupling
AGC	15	automatic gain control input
SLPE	16	slope (DC resistance) adjustment

Note1: Pin 12 is active HIGH (MUTE) for MIK1062

Pad Location



Pad Location Coordinates

Pad N	Coordinates, µm		Pad N	Coordinates, µm	
	X	Y		X	Y
1	1125	190	9	815	1405
2	1370	190	10	360	1405
3	1560	190	11	190	1335
4	1560	770	12	190	895
5	1560	1100	13	190	545
6	1560	1405	14	190	190
7	1370	1405	15	455	190
8	1125	1405	16	645	190