

TA7668BP

LINEAR INTEGRATED CIRCUIT

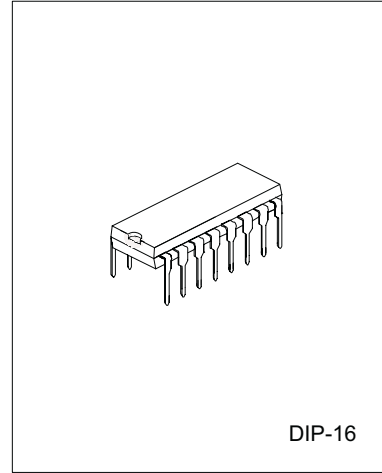
DUAL PRE-AMPLIFIER FOR TAPE RECORDER

DESCRIPTION

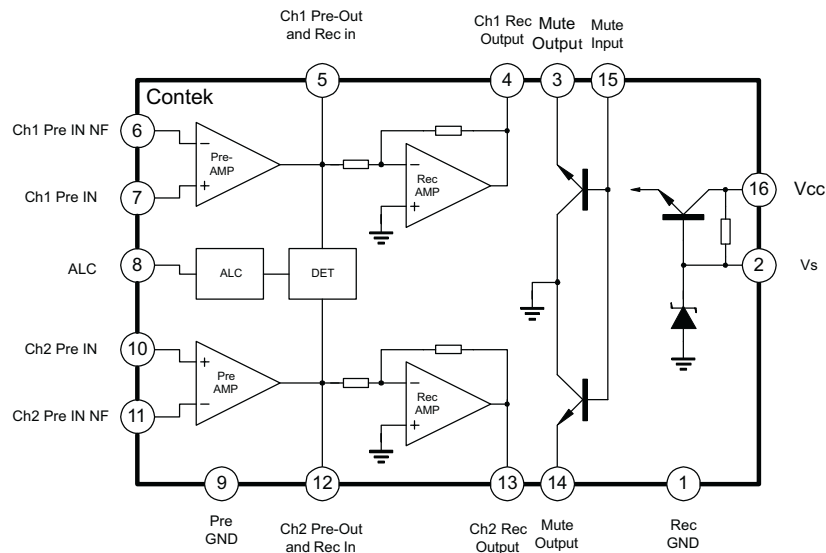
The Contek TA7668BP is a dual pre-amplifier with ALC and muting designed for use recorder/playback amplifier of tape recorder. It is suitable for a stereo set and a radio cassette recorder.

FEATURES

- *Build-in ALC detector circuit
- *Build-in muting circuit
- *Wide operating voltage range(6V to 15V)



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATING (Ta=25 C)

| PARAMETER | SYMBOL | VALUE | UNIT |
|-----------------------|--------|---------|------|
| Supply Voltage | VCC | 16 | V |
| Power Dissipation | PD | 750 | mW |
| Operating Temperature | TOPR | -25~75 | C |
| Storage Temperature | TSTG | -55~150 | C |

Note: De-rated above Ta=25 C in proportion of 6mW/ C.



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DC VOLTAGE (V_{CC}=9V, T_a=25 °C, no input signal)

| PIN NO. | SYMBOL | VALUE | UNIT |
|---------|--------|-------|------|
| 1 | V1 | 0 | V |
| 2 | V2 | 8.2 | V |
| 3 | V3 | 0 | V |
| 4 | V4 | 3.3 | V |
| 5 | V5 | 1.3 | V |
| 6 | V6 | 1.3 | V |
| 7 | V7 | 0 | V |
| 8 | V8 | 0.9 | V |
| 9 | V9 | 0 | V |
| 10 | V10 | 0 | V |
| 11 | V11 | 1.3 | V |
| 12 | V12 | 1.3 | V |
| 13 | V13 | 3.3 | V |
| 14 | V14 | 0 | V |
| 15 | V15 | 2.4 | V |
| 16 | V16 | 9 | V |

ELECTRICAL CHARACTERISTICS (T_a=25 °C, V_{CC}=9V, f=1kHz, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------------------|----------|---|------|------|------|-------------------|
| Quiescent Circuit Current | ICCQ | VIN=0 | | 8.5 | 10.5 | mA |
| PRE AMPLIFIER | | | | | | |
| Open Loop Voltage Gain | GVO | VIN=-80dBm | 65 | 78 | | dB |
| Maximum Output Voltage | VOM(1) | THD=1% | 0.5 | 0.8 | | V _{rms} |
| Total Harmonic Distortion | THD(1) | VO=0.2V _{rms} | | 0.15 | 0.5 | % |
| Output Noise Voltage | VNO | R _g =2.2KΩ, B.P.F., NAB, 30Hz~20kHz | | 0.26 | 0.6 | mV _{rms} |
| Cross Talk | C.T. | R _g =2.2KΩ | 47 | 60 | | dB |
| REC AMPLIFIER | | | | | | |
| Closed Loop Voltage Gain | GV | RL=10KΩ | 12.7 | 14.7 | 16.7 | dB |
| Maximum Output Voltage | VOM(2) | THD=1% | 2 | 2.5 | | V _{rms} |
| Total Harmonic Distortion | THD(2) | VO=1.5V _{rms} | | 0.2 | | % |
| ALC Range | RALC | VIN=-60dBm, RIN=2.2KΩ | | 45 | | dB |
| Total Harmonic Distortion (ALC) | THD(ALC) | VIN=-20dBm, RIN=2.2KΩ, RL=10KΩ | | 0.3 | 1 | % |
| ALC Voltage | VO(ALC) | VIN=-20dBm, RIN=2.2KΩ, RL=10KΩ | 0.9 | 1.1 | 1.42 | V _{rms} |
| Muting Attenuation | ATT | | 45 | 55 | | dB |
| ALC Balance | BALC | VIN=-20dBm | | 0 | 2 | dB |



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TEST METHOD

| SYMBOL | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | Measure Terminal |
|----------|-----|---------|-----|------|---------|----|---------|-----|-----------|-----|--------------------|
| ICCQ | * | * | * | * | * | * | * | * | OFF | * | Vcc |
| GVO | OFF | CH1 | GVO | FLAT | CH1 | * | * | * | OFF | OFF | Pre-Out |
| VOM(1) | OFF | CH1 | GV | NAB | CH1 | * | * | * | OFF | OFF | Pre-Out |
| THD(1) | OFF | CH1 | GV | NAB | CH1 | * | * | * | OFF | OFF | Pre-Out |
| VNO | OFF | OFF | GV | NAB | CH2 | | * | * | OFF | OFF | Pre-Out |
| CT | OFF | CH1 | GV | FLAT | CH1 CH2 | * | * | * | OFF | OFF | Pre-Out |
| GV | OFF | CH1 | GV | FLAT | CH1 | * | CH1 | CH2 | OFF | OFF | Pre-Out Rec-Out |
| VOM(2) | OFF | CH1 | GV | FLAT | CH2 | * | CH1 | CH2 | OFF | OFF | Rec-Out |
| THD(2) | OFF | CH1 | GV | FLAT | CH2 | * | CH1 | CH2 | OFF | OFF | Rec-Out |
| RALC | OFF | CH1 | GV | FLAT | CH2 | * | CH1 | CH2 | OFF | ON | Rec-Out |
| THD(ALC) | OFF | CH1 | GV | FLAT | CH2 | * | CH1 | CH2 | OFF | ON | Rec-Out |
| VO(ALC) | OFF | CH1 | GV | FLAT | CH2 | * | CH1 | CH2 | OFF | ON | Rec-Out |
| ATT | OFF | CH1 | GV | FLAT | CH1 | * | * | CH1 | OFF ON | OFF | Mute-Out |
| BALC | CH2 | CH1 CH2 | GV | FLAT | * | * | CH1 CH2 | * | OFF | ON | Rec-Out |

