

## DC PARAMETERS

| PARAMETER                           | SYMBOL                                 | MIN <sup>[2]</sup> | TYP <sup>[1]</sup> | MAX <sup>[2]</sup> | UNITS | CONDITIONS                               |
|-------------------------------------|--|--------------------|--------------------|--------------------|-------|--|
| Input Low Voltage                   | V <sub>IL</sub>                        |                    |                    | 0.8                | V     |  |
| Input High Voltage                  | V <sub>IH</sub>                        | 2.0                |                    |                    | V     |  |
| Output Low Voltage                  | V <sub>OL</sub>                        |                    |                    | 0.4                | V     | I <sub>OL</sub> = 4.0 mA <sup>[3]</sup>  |
| Output High Voltage                 | V <sub>OH</sub>                        | 2.4                |                    |                    | V     | I <sub>OH</sub> = -1.6 mA <sup>[3]</sup> |
| V <sub>CC</sub> Current (Operating) | I <sub>CC</sub>                        |                    |                    | 30                 | mA    | V <sub>CC</sub> = 4.5V                   |
| V <sub>CC</sub> Current (Standby)   | I <sub>SB</sub>                        |                    | 0.5                | 10                 | μA    | <sup>[4]</sup> <sup>[5]</sup>            |
| Input Leakage Current               | I <sub>I_LPD1</sub>                    |                    |                    | ±1                 | μA    | Force V <sub>SS</sub> <sup>[6]</sup>     |
| Input Current HIGH                  | I <sub>I_LPD2</sub>                    | 30                 | 150                | 400                | μA    | Force V <sub>CC</sub> <sup>[7]</sup>     |
| Input Current HIGH                  | I <sub>I_LPD3</sub>                    | 3                  |                    | 130                | μA    | Force V <sub>CC</sub> <sup>[8]</sup>     |
| Output Load Impedance               | R <sub>EXT</sub>                       | 8                  |                    |                    | Ω     | Speaker Load, SP+ to SP-                 |
| Preamp Input Resistance             | R <sub>MIC</sub> , R <sub>MICREF</sub> |                    | 10                 |                    | KΩ    |  |
| MIC SP+/- Gain                      | A <sub>MSP</sub>                       |                    | 40                 |                    | dB    | AGC = 0.0V                               |

### Notes:

- [1] Typical values @ T<sub>A</sub> = 25° and V<sub>CC</sub> = 3.0V.
- [2] All Min/Max limits are guaranteed by Winbond via electrical testing or characterization. Not all specifications are 100 percent tested.
- [3] Record LED output, RECLE<sub>D</sub>.
- [4] V<sub>CCA</sub> and V<sub>CCD</sub> connected together.
- [5] REC, PLAYL, PLAYE, XCLK, and FT must be at V<sub>SSD</sub>.
- [6] REC, PLAYL and PLAYE.
- [7] REC, PLAYL and PLAYE.
- [8] Test limits of Final Test.

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