



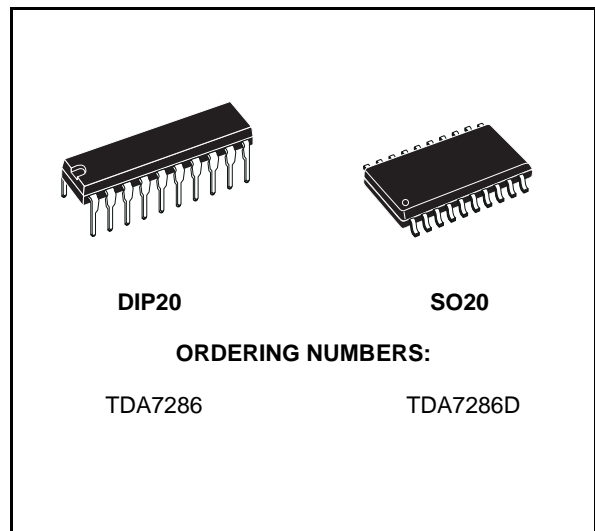
TDA7286

SINGLE CHIP PREAMPLIFIER FOR DOUBLE DECK RADIO CASSETTE RECORDER

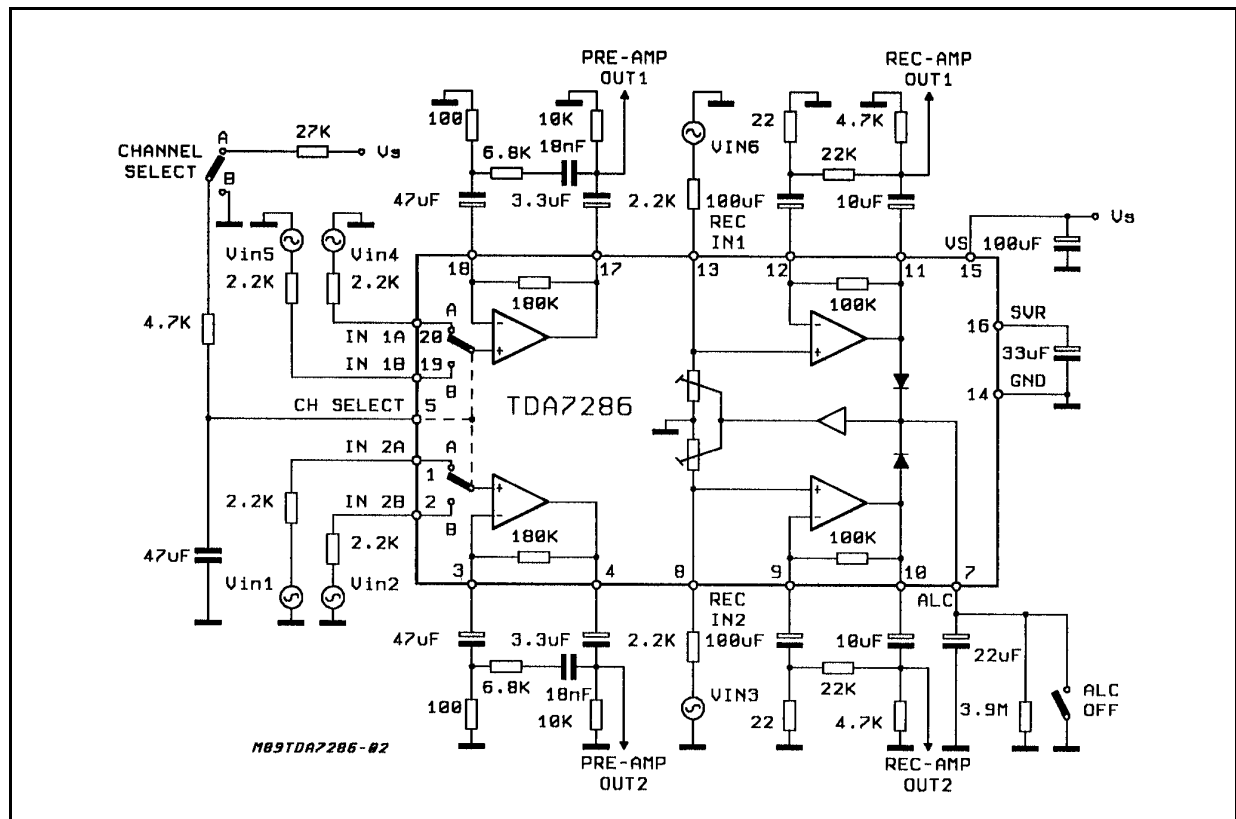
- HIGH OPEN-LOOP GAIN (80dB)
- VERY LOW INPUT NOISE
- LOW TURN ON/OFF POP
- LOW SUPPLY CURRENT
- PLAYBACK AMPLIFIER WITH HEAD INPUT SWITCH
- RECORDING AMPLIFIER WITH BUILT-IN ALC
- ALC TIME CONSTANT PIN CAN BE USED AS ALC SWITCH
- GOOD SUPPLY RIPPLE REJECTION

DESCRIPTION

The TDA7286 is a monolithic integrated circuit in DIP20 and SO20 packages designed for 6V, 9V and 12V AC/DC double deck cassette applications.



BLOCK DIAGRAM

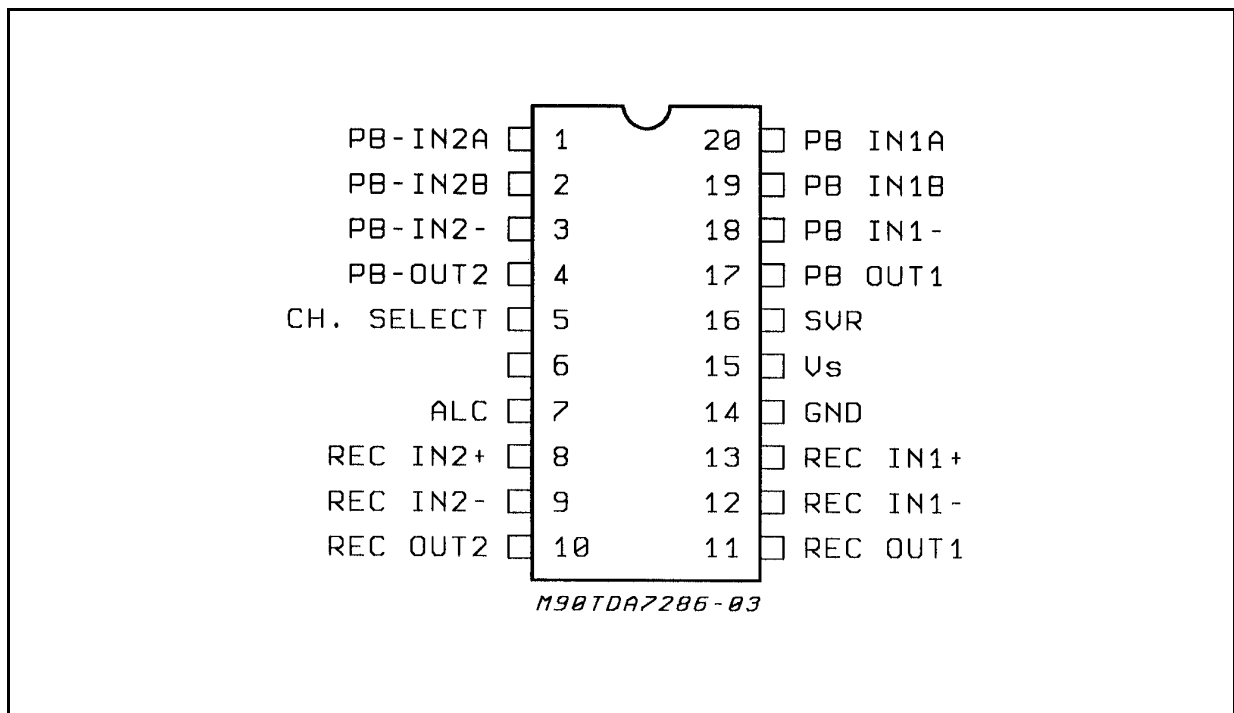


TDA7286

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | Unit |
|----------------|--------------------------------|-------------|------|
| V_S | Supply Voltage | 14 | V |
| V_{IN} | Input DC Voltage | -0.4 to 0.5 | V |
| T_{op} | Operating Temperature | -20 to 70 | °C |
| T_{stg}, T_j | Storage & Junction Temperature | -40 to 150 | °C |

PIN CONNECTION (Top view)



THERMAL DATA

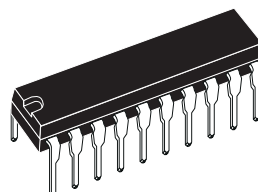
| Symbol | Parameter | | DIP20 | SO20 | Unit |
|---------------|--|------|-------|------|------|
| $R_{thj-amb}$ | Thermal Resistance Junction to Ambient | Max. | 100 | 200 | °C/W |

ELECTRICAL CHARACTERISTICS ($V_S = 6V$, $T_{amb} = 25^{\circ}C$; $f = 1KHz$; $R_L = 4.7k\Omega$; $R_g = 2.2k\Omega$, unless otherwise specified.)

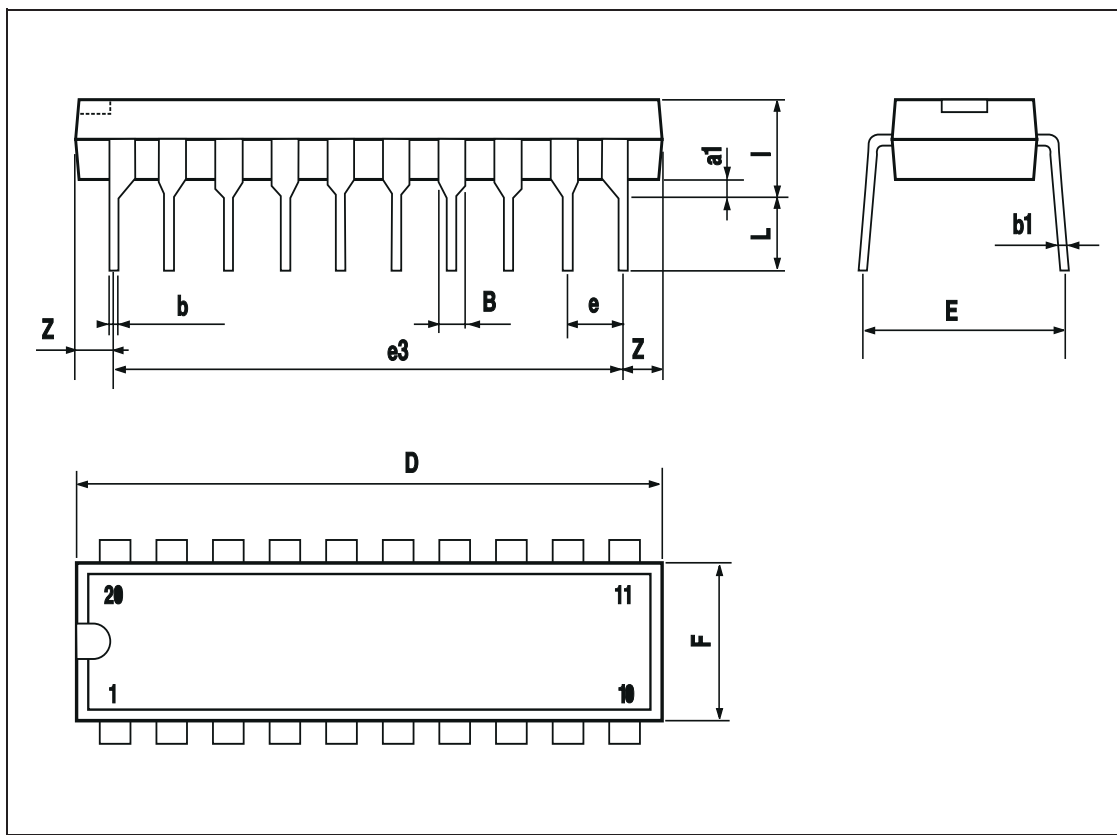
| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Unit |
|----------------------------|---------------------------|-----------------------------------|-----------|----------|------|--------------|
| V_S | Supply Voltage | | 4 | | 12 | V |
| I_d | Quiescent Current | | | 7 | 15 | mA |
| PLAYBACK AMPLIFIER | | | | | | |
| G_{VO} | Open Loop Gain | | | 80 | | dB |
| V_{CD} | Output DC Voltage | | 1.2 | 1.5 | 1.7 | V |
| V_O | Output AC Voltage | THD = 1% | 700 | 950 | | mVrms |
| SVR | Supply Voltage Rejection | $f = 100Hz$ | 35 | 45 | | dB |
| C_T | Cross Talk | | | 60 | | dB |
| E_N | Total Output Noise | $R_g = 0$, BW = 22 to 22kHz | | 300 | | μV |
| R_E | Internal Feedback Res | | | 180 | | k Ω |
| RECORDING AMPLIFIER | | | | | | |
| G_{VO} | Open Loop Gain | | | 80 | | dB |
| R_i | Input resistance | | 30 | 50 | 70 | k Ω |
| V_{DC} | Output DC Voltage | | 2.0 | 2.4 | 2.8 | V |
| V_O | Output AC Voltage | THD = 1% ALC = OFF ALC = ON | 1 0.75 | 1.4 1 | 1.25 | Vrms Vrms |
| THD | Total Harmonic Distortion | $V_O = 0.5V_{rms}$; ALC = OFF | | 0.2 | 0.5 | % |
| | ALC Range | $\Delta V_O = 3dB$ | | 48 | | dB |
| CB | Channel Balance | ALC = ON | | 0 | 2 | dB |
| SVR | Supply Voltage Rejection | $f = 100Hz$ | 28 | 32 | | dB |
| C_T | Cross Talk | $f = 1KHz$ | | 60 | | dB |
| HEAD SELECT INPUT | | | | | | |
| | Input LOW Level | chB selected | | | 0.6 | V |
| | Input HIGH level | chA selected | 1.4 | | | V |

| DIM. | mm | | | inch | | |
|------|-------|-------|------|-------|-------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| a1 | 0.254 | | | 0.010 | | |
| B | 1.39 | | 1.65 | 0.055 | | 0.065 |
| b | | 0.45 | | | 0.018 | |
| b1 | | 0.25 | | | 0.010 | |
| D | | | 25.4 | | | 1.000 |
| E | | 8.5 | | | 0.335 | |
| e | | 2.54 | | | 0.100 | |
| e3 | | 22.86 | | | 0.900 | |
| F | | | 7.1 | | | 0.280 |
| I | | | 3.93 | | | 0.155 |
| L | | 3.3 | | | 0.130 | |
| Z | | | 1.34 | | | 0.053 |

OUTLINE AND MECHANICAL DATA

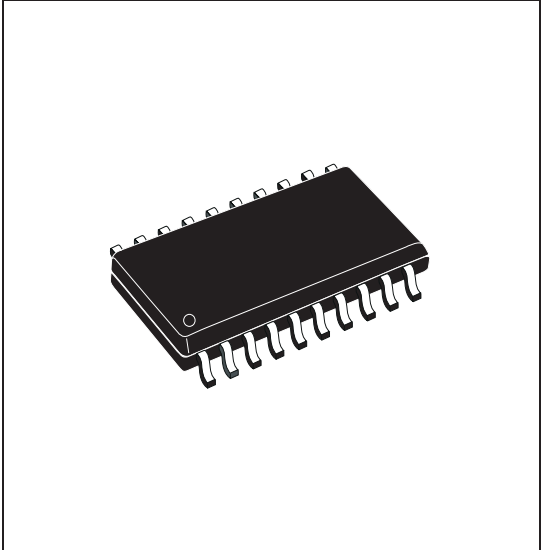


DIP20

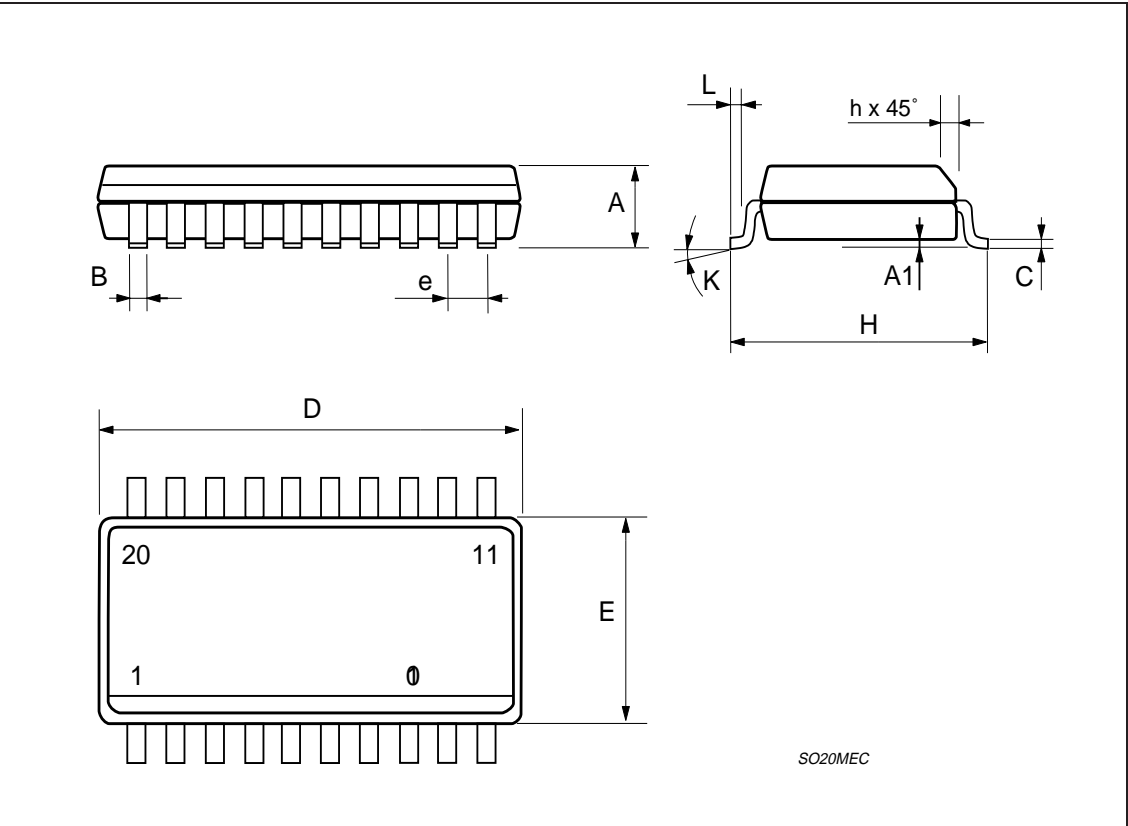


| DIM. | mm | | | inch | | |
|------|--------------------|------|-------|-------|-------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| A | 2.35 | | 2.65 | 0.093 | | 0.104 |
| A1 | 0.1 | | 0.3 | 0.004 | | 0.012 |
| B | 0.33 | | 0.51 | 0.013 | | 0.020 |
| C | 0.23 | | 0.32 | 0.009 | | 0.013 |
| D | 12.6 | | 13 | 0.496 | | 0.512 |
| E | 7.4 | | 7.6 | 0.291 | | 0.299 |
| e | | 1.27 | | | 0.050 | |
| H | 10 | | 10.65 | 0.394 | | 0.419 |
| h | 0.25 | | 0.75 | 0.010 | | 0.030 |
| L | 0.4 | | 1.27 | 0.016 | | 0.050 |
| K | 0° (min.)8° (max.) | | | | | |

OUTLINE AND MECHANICAL DATA



SO20



SO20MEC

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