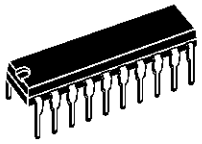
SGS-THOMSON MICROELECTRONICS

TDA7286

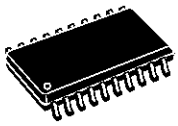
SINGLE CHIP PREAMPLIFIER FOR DOUBLE DECK RADIO CASSETTE RECORDER

PRODUCT PREVIEW

- 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



DIP20



SO20

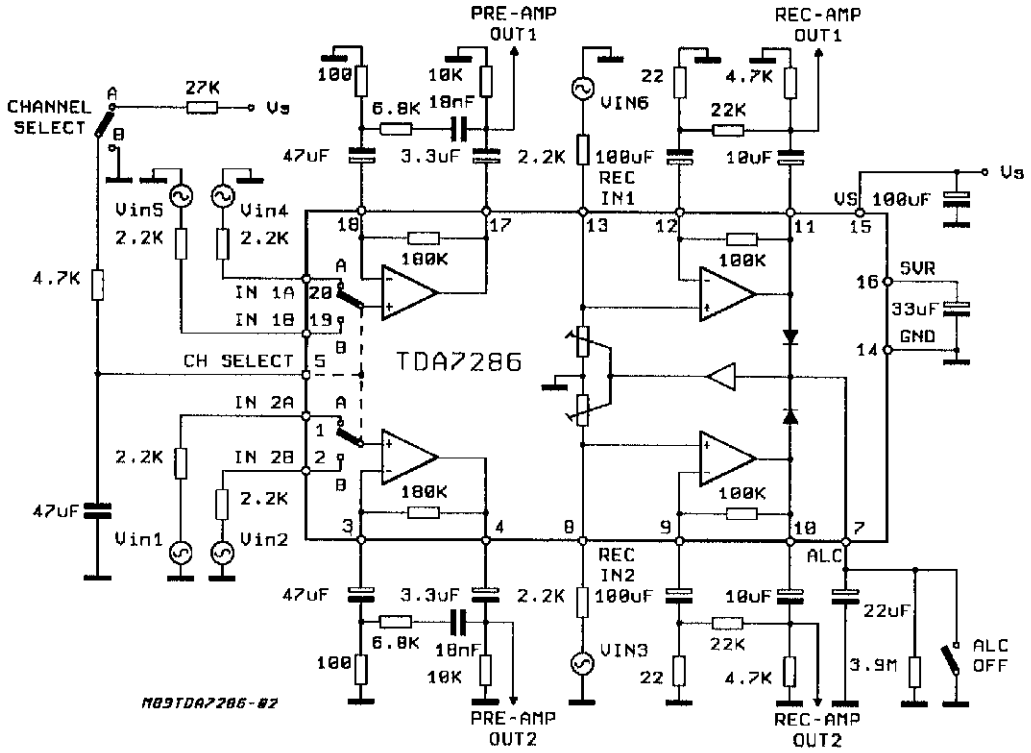
ORDERING NUMBERS:

TDA7286 TDA7286D

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.

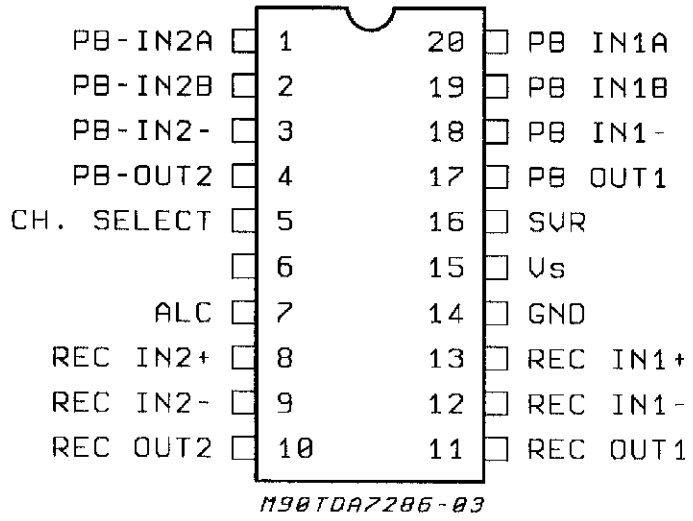
BLOCK DIAGRAM



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

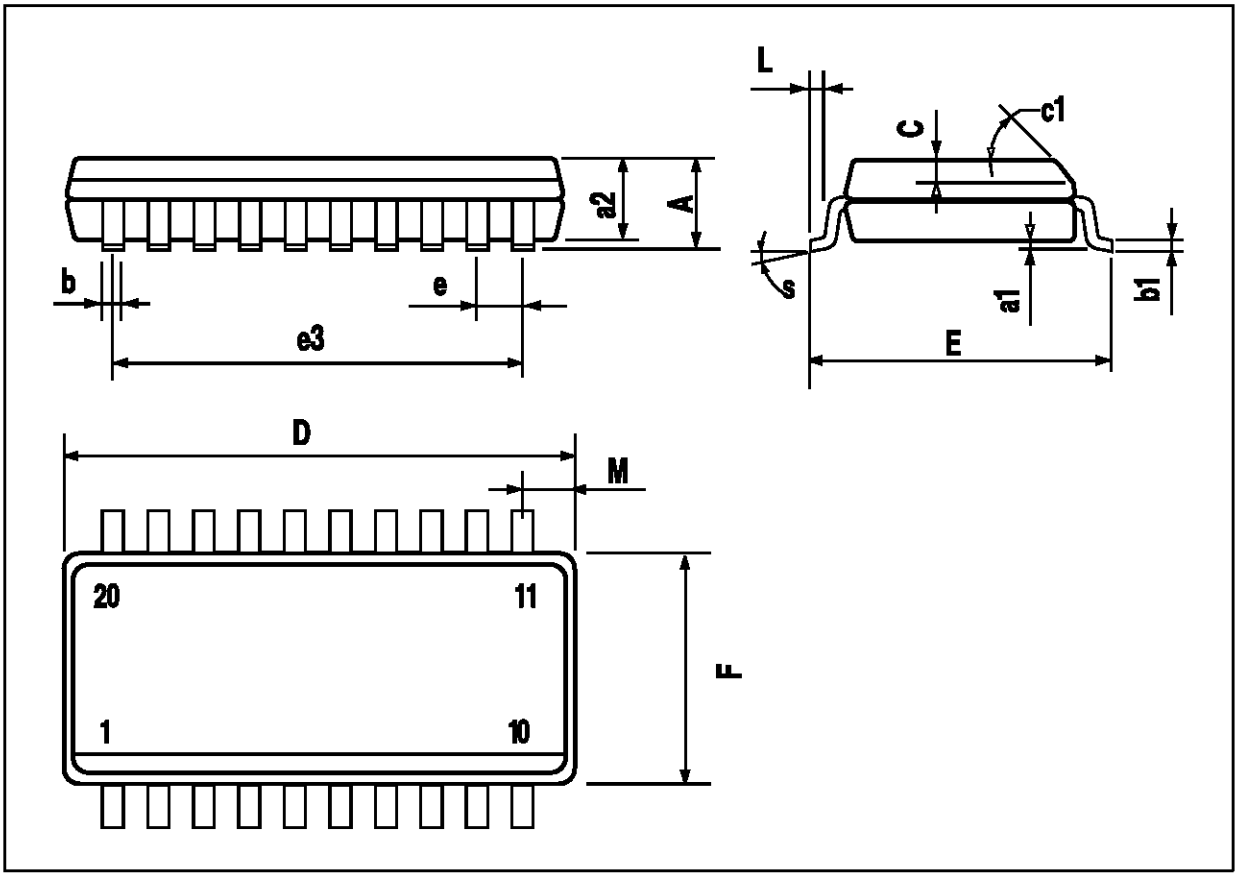
Symbol	Parameter		DIP20	SO20	Unit
$R_{th\ j\text{-}amb}$	Thermal Resistance Junction to Ambient	Max.	100	200	°C/W

ELECTRICAL CHARACTERISTICS (V_S = 6V, T_{amb} = 25°C; f = 1KHz; R_L = 4.7kΩ; R_g = 2.2kΩ, 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		kΩ
RECORDING AMPLIFIER						
G_{VO}	Open Loop Gain			80		dB
R_i	Input resistance		30	50	70	kΩ
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 = 0.5Vrms; ALC = OFF		0.2	0.5	%
	ALC Range	ΔV_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 seleced	1.4			V

SO20 PACKAGE MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			2.65			0.104
a1	0.1		0.3	0.004		0.012
a2			2.45			0.096
b	0.35		0.49	0.014		0.019
b1	0.23		0.32	0.009		0.013
C		0.5			0.020	
c1	45 (typ.)					
D	12.6		13.0	0.496		0.512
E	10		10.65	0.394		0.419
e		1.27			0.050	
e3		11.43			0.450	
F	7.4		7.6	0.291		0.299
L	0.5		1.27	0.020		0.050
M			0.75			0.030
S	8 (max.)					



DIP20 PACKAGE MECHANICAL DATA

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