

**LA1185**

FM Front-end for Radio-cassette Recorder, Home Stereo Applications

Overview

The LA1185 is an FM receiver front-end IC for radio-cassette recorder, music center applications. Its mixer is of double-balanced type. The built-in oscillator and buffer amplifier improves the strong input characteristic.

Use

- FM front-end IC for radio-cassette recorders and music centers

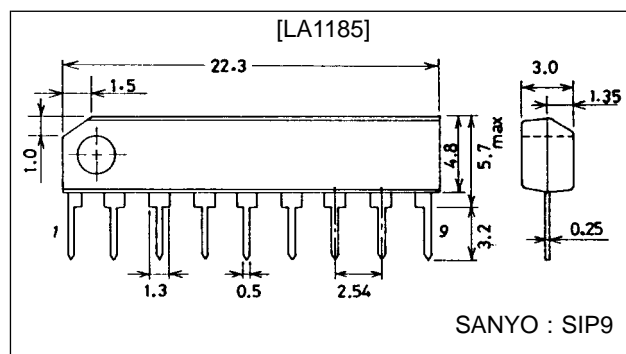
Functions and Features

- RF amplifier, mixer, local oscillator
- Improvement in cross modulation characteristics due to the use of double-balanced mixer.
- Improvement in strong input characteristic.
- Minimum number of external parts required.
- Less spurious radiation from local oscillator.
- Operating voltage range : 1.5 to 8.0 V

Package Dimensions

unit : mm

3017C-SIP9



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		8	V
Maximum pin voltage	V_{3-5}		12	V
	V_{6-5}		$V_{CC} + 0.8$	V
Allowable power dissipation	P_d max	$T_a \leq 80^\circ\text{C}$	150	mW
Operating temperature	T_{opr}		-20 to +80	°C
Storage temperature	T_{stg}		-40 to +125	°C

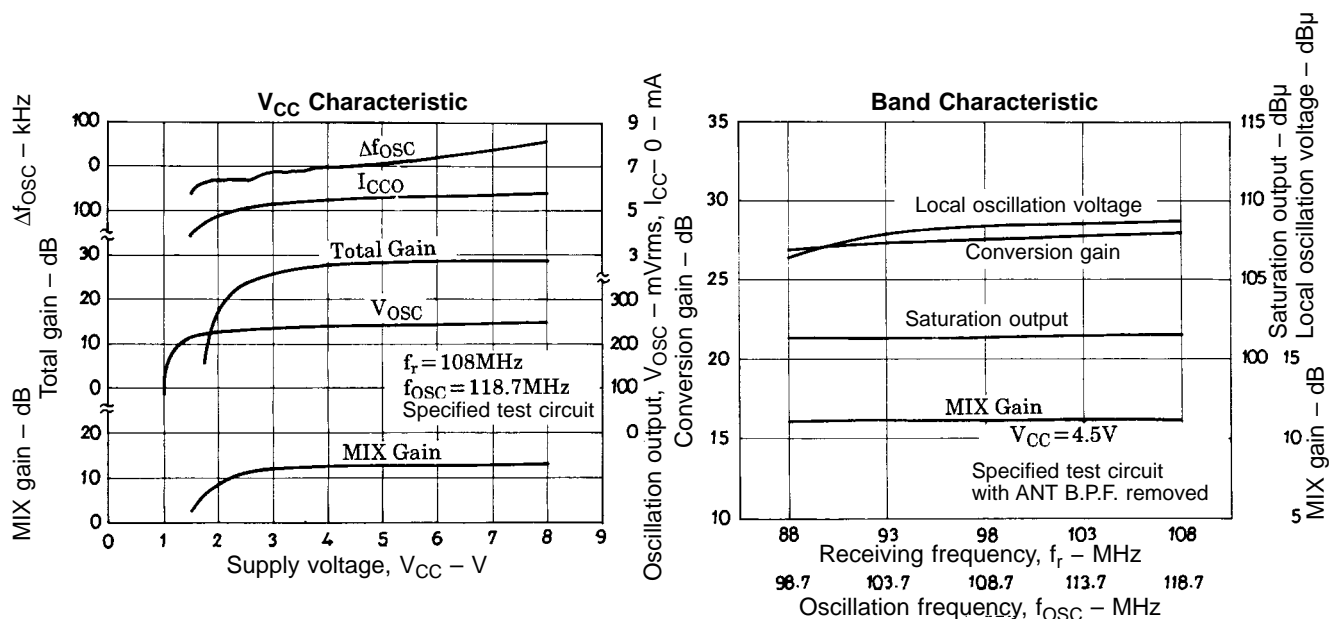
Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		4.5	V
Operating voltage range	V_{CCop}		1.5 to 8.0	V

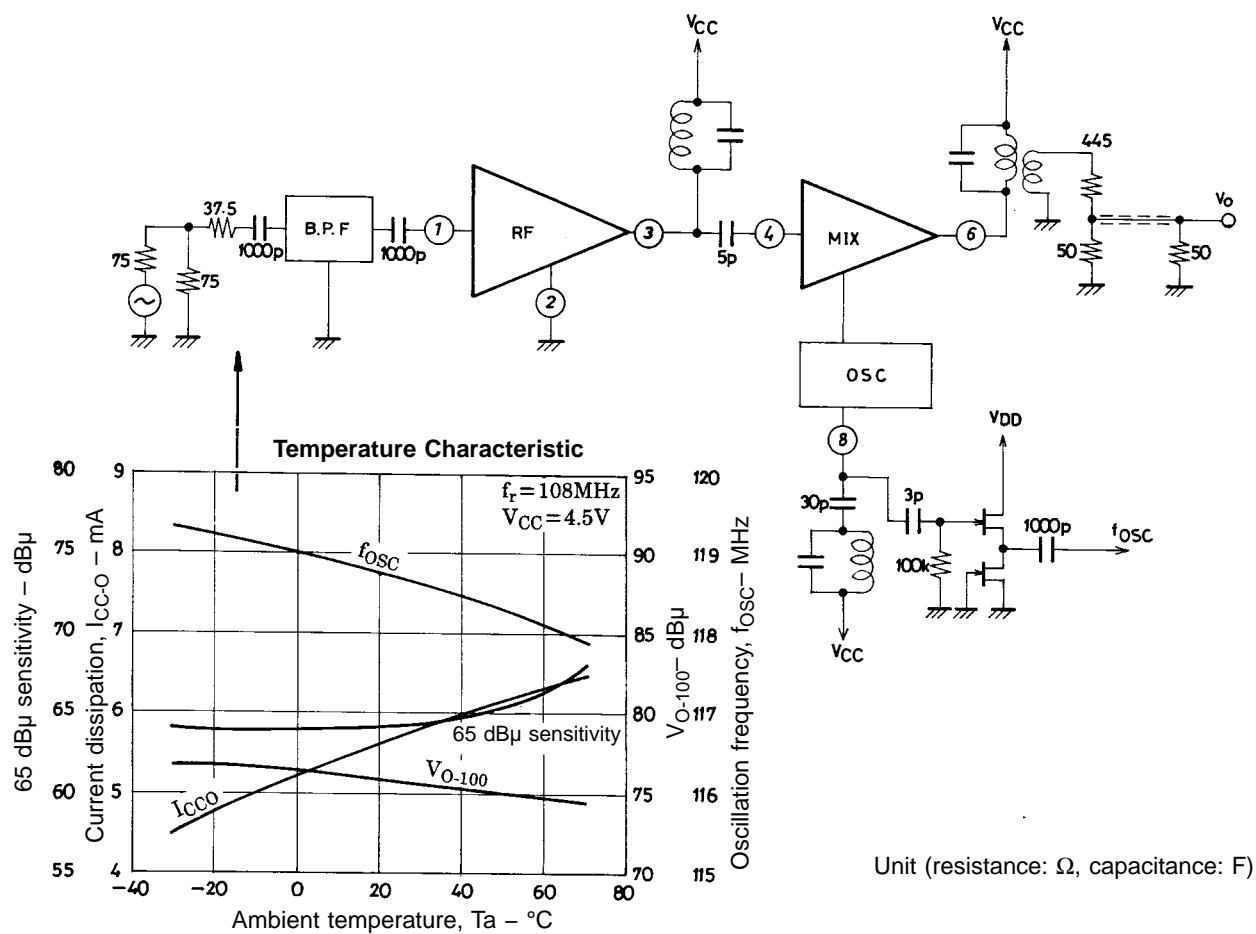
**Operating Characteristics at Ta = 25°C, V_{CC} = 4.5 V, fr = 108 MHz, f_{OSC} = 118.7 MHz,
See specified Test Circuit**

The graph shows the relationship between ambient temperature (T_a) and allowable power dissipation ($P_d \text{ max}$). The x-axis represents ambient temperature in degrees Celsius, ranging from -20 to 100. The y-axis represents allowable power dissipation in milliwatts, ranging from 0 to 160. The curve is a horizontal line at approximately 150 mW from -20°C to 80°C, and then drops vertically to 0 mW at 80°C.

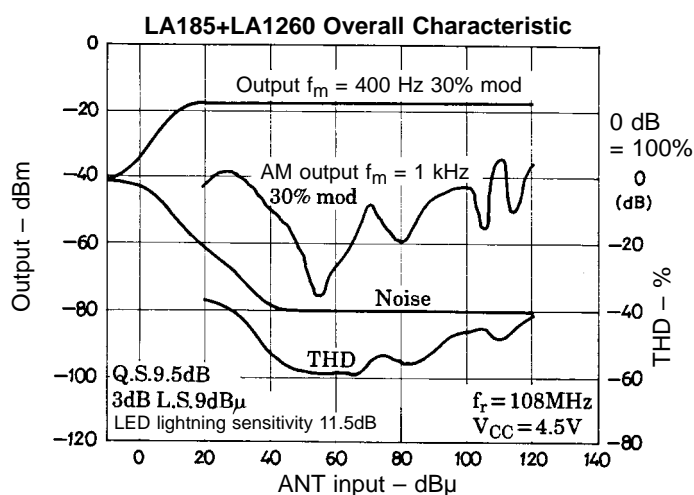
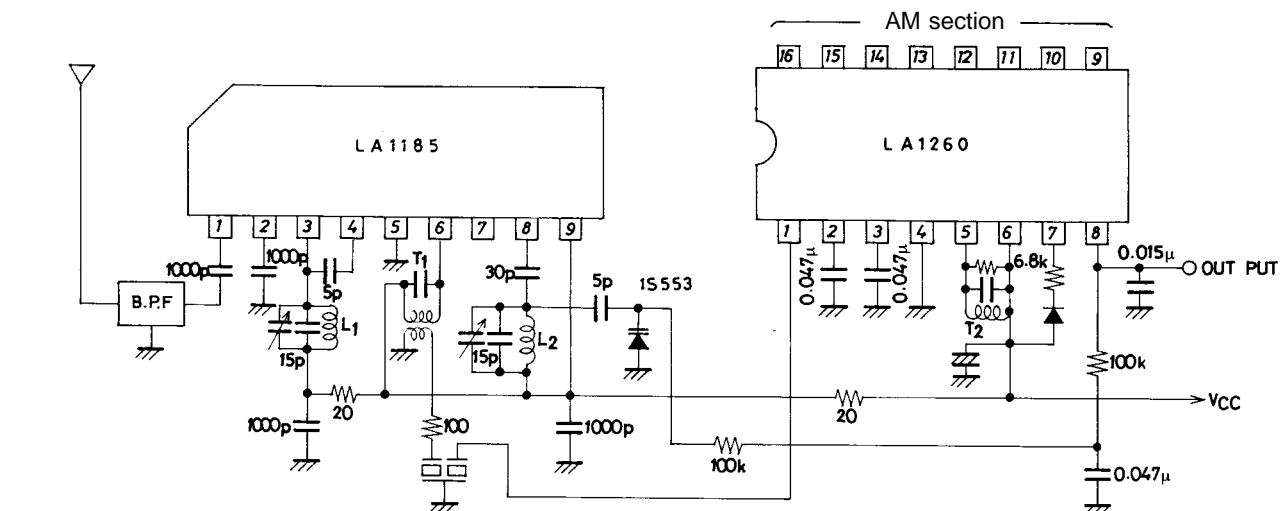
Ambient temperature, T_a - °C	Allowable power dissipation, $P_d \text{ max}$ - mW
-20	150
0	150
20	150
40	150
60	150
80	150
80	0
100	0



Temperature Characteristic Test Circuit

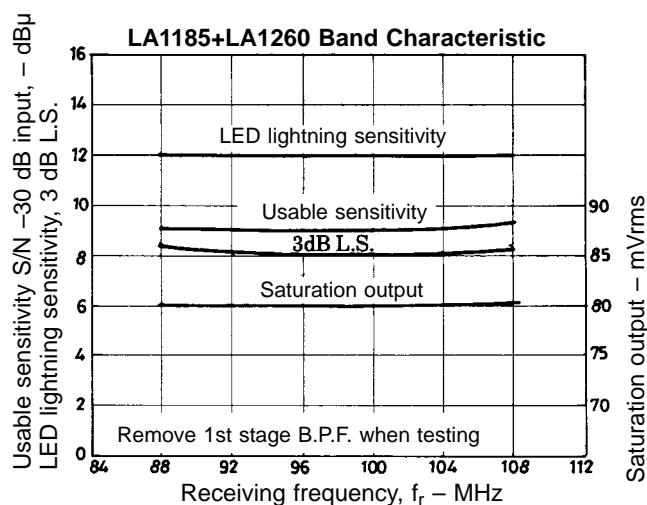


Sample Application Circuit: LA1185 + LA1260 US band



Unit (resistance: Ω , capacitance: F)

	Mitsumi	Sumida
T1	YT-30224	2153-4016-006
T2	YT-30194	2153-4095-339
L1	YT-30196	0708-700
L2	YT-40001	0708-701
B.P.F.	YT-30025	SNY-074-2001



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