

## **LA1186N**

# FM Front End for Radio-Cassette Recorders, Music Centers

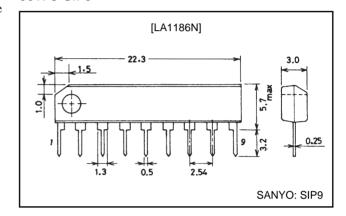
#### **Features and Functions**

- Contains RF amplifier, MIX, OSC, AFC diode.
- Operating voltage: 1.8 to 8.0V.
- Improvement in cross modulation characteristic due to the use of double-balanced MIX.
- Improvement in strong input characteristic.
- Minimum number of external parts required.
- Less spurious radiation from local OSC.
- TV (1 to 12 channel) receive capability.

#### **Package Dimensions**

unit: mm

#### 3017C-SIP9



# **Specifications**

Maximum Ratings at Ta=25°C

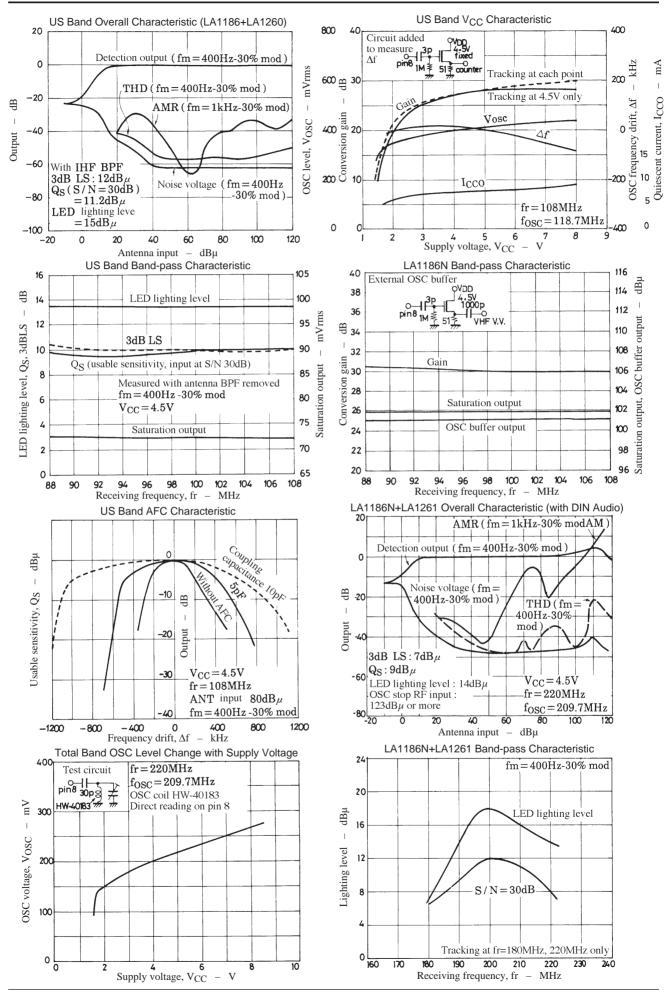
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V <sub>CC</sub> max		8.0	V
Maximum pin voltage	V3-5		12	V
	V6-5		V <sub>CC</sub> +0.8	V
Allowable power dissipation	Pd max	Ta≤80°C	150	mW
Operating temperature	Topr		-20 to +80	°C
Storage temperature	Tstg		-40 to +125	°C

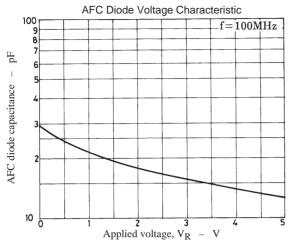
#### Operating Conditions at Ta=25°C

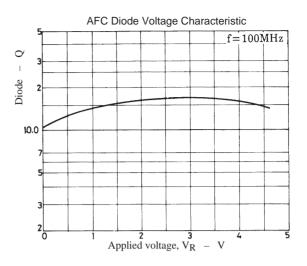
Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V <sub>CC</sub>		4.5	V
Operating voltage range	V <sub>CC</sub> op		1.8 to 7.5	V

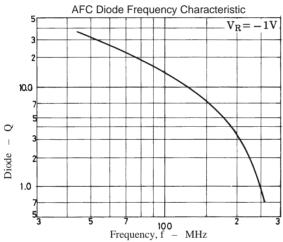
## **Electrical Characteristics** at Ta=25°C, V<sub>CC</sub>=4.5V, f<sub>r</sub>=108MHz, f<sub>OSC</sub>=118.7MHz, See specified Test Circuit.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current dissipation	Icc	Quiescent		7.0	9.5	mA
Output saturation voltage	Vo	V <sub>IN</sub> =100dBµ	95	115	135	V
Local OSC voltage	Vosc	V <sub>CC</sub> =2V	200	315		mVrms
Oscillation stop voltage				1.4	1.8	V

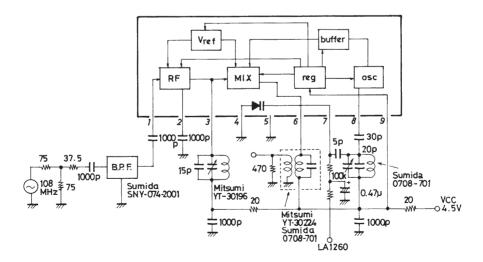






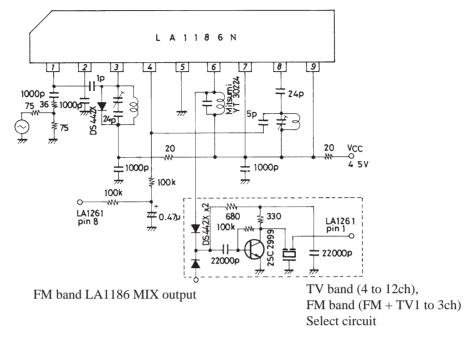


## **US Band Test Circuit**

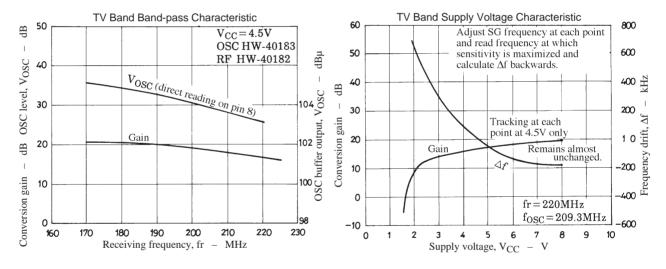


Unit (resistance :  $\Omega$ , capacitance : F)

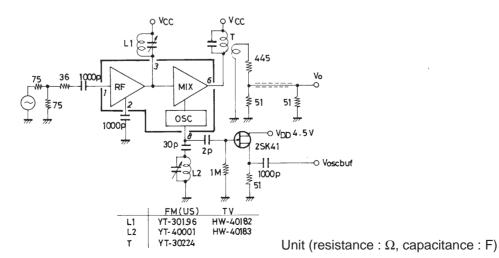
## Sample Application Circuit for TV Band

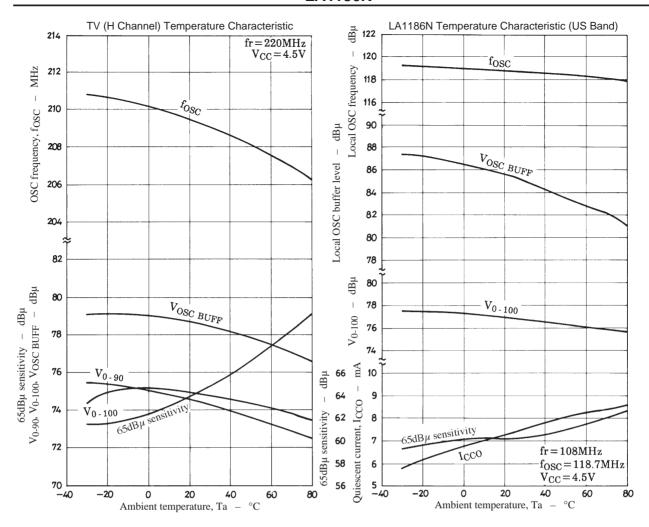


Unit (resistance :  $\Omega$ , capacitance : F)



#### **LA1186N Temperature Characteristic Test Circuit**





(Note) 65dBμ sensitivity : Input at 65 dBμ in Temperature Characteristic Test Circuit

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