

AN7205/S

FM Front-end Circuit for Radios and Radio / Cassette Tape Recorders (3V Operation)

■ Description

The AN7205/S are the monolithic integrated circuit designed for FM front-end IC suitable for radios and radio cassette tape recorders at 3V operation. Together with IC for FM - AM IF (AN7227) and IC for MPX (AN7420N), a high sensitivity series can be obtained.

■ Features

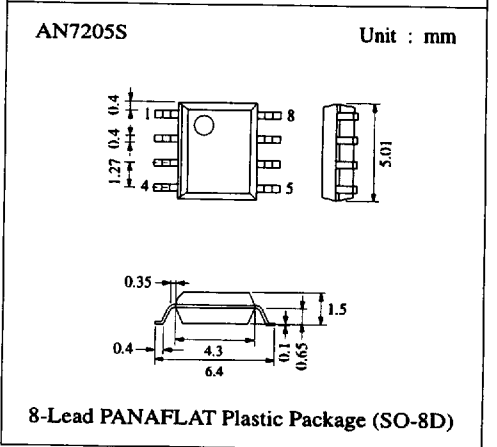
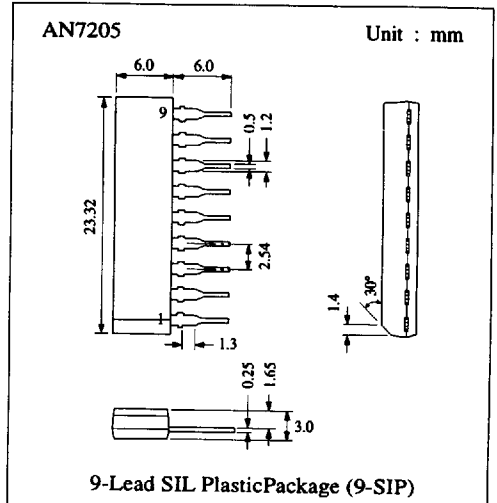
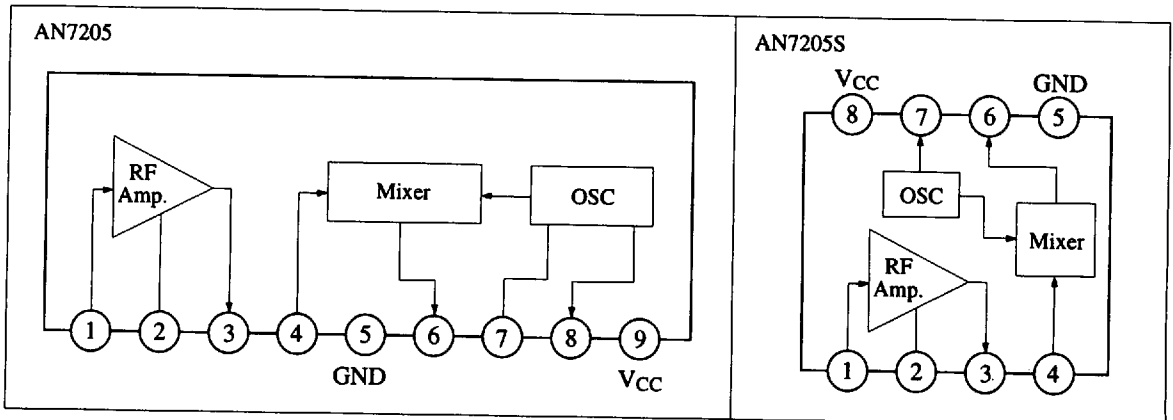
- Good intermodulation characteristics
- Frequency drift of local oscillator is small against supply voltage fluctuation and strong input signals
- Good AM rejection characteristics
- High sensitivity
- Built-in clamping diode for the mixer output

■ Pin

Pin No.	Pin Name
1 (1)	RF Input
2 (2)	RF By-pass Capacitor
3 (3)	RF Output
4 (4)	Mixer Input
5 (5)	GND
6 (6)	Mixer Output
7 (7)	Oscillator
8	Oscillator Tank
9 (8)	Vcc

Note) The pin number in () are for AN7205S.

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit	
Supply Voltage	V _{CC}	7	V	
Supply Current	I _{CC}	13	mA	
Power Dissipation	P _D	100	mW	
Operating Ambient Temperature	Topr	-20 ~ +75	°C	
Storage Temperature	AN7205	Tstg	-55 ~ +150	°C
	AN7205S	Tstg	-55 ~ +125	°C

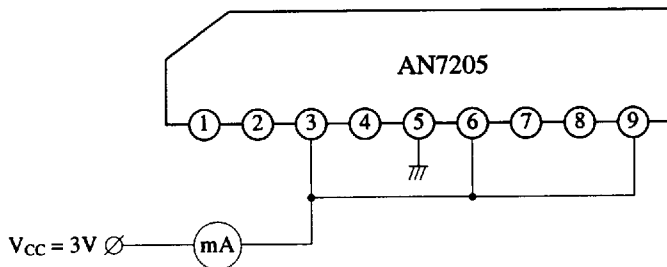
Operating Supply Voltage Range: V_{CC} = 1.5V ~ 7.0V

■ Electrical Characteristics (Ta=25°C)

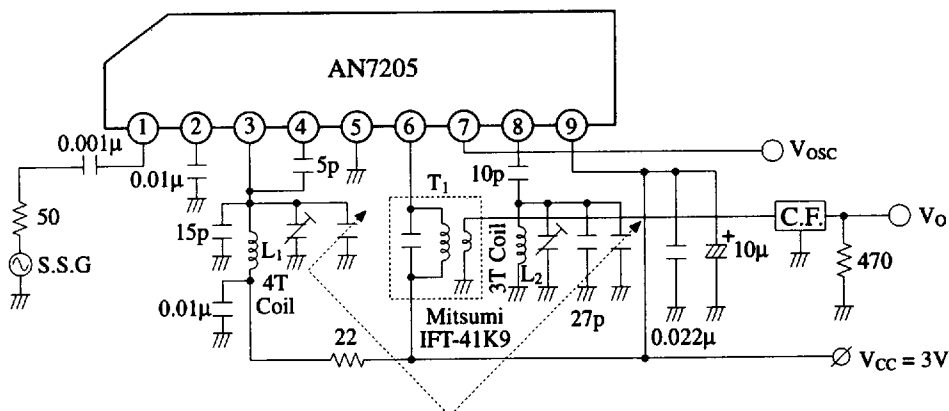
Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Quiescent Current	I _{CQ}	1	V _{CC} = 3V, without signal	3.50		8.25	mA
Output Voltage	V _O	2	V _{CC} = 3V, V _{in} = 55dBμ, 106MHz*	10.6		25.6	mV
Local Oscillation Voltage	V _{OSC}	2	V _{CC} = 1.5V, f _{osc} = 116.7MHz	72.8			mV

* Max. output voltage value is obtained by changing input signal frequency $\pm\Delta f$ at 106MHz

Test Circuit 1

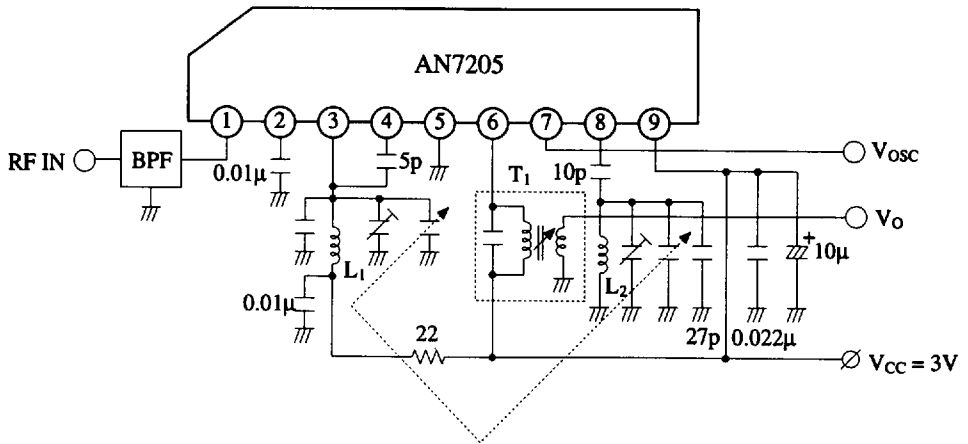


Test Circuit 2



Note : Coil data for T₁, L₁ and L₂, please refer to AN7204.

■ Application Circuit



■ Characteristics Curve

