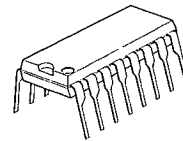


FULL BALANCED MIXER

■ GENERAL DESCRIPTION

The NJM2203D is a full balanced mixer integrated circuit for FM synthesizing tuner. The NJM2203D contains mixer, oscillator, buffer for oscillator output and IF amplifier circuits. By using this IC, RF circuit configuration is simplified and high reliability, stable operation, easy design and time saving adjustment are realized.

■ PACKAGE OUTLINE



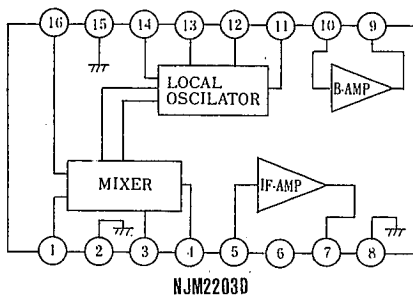
NJM2203D

■ FEATURES

- Minimum outer parts.
- Simplified circuit configuration
- Minimum frequency deviation with over input signal.
- Easy adjustment.
- Package Outline
- Bipolar Technology

DIP16

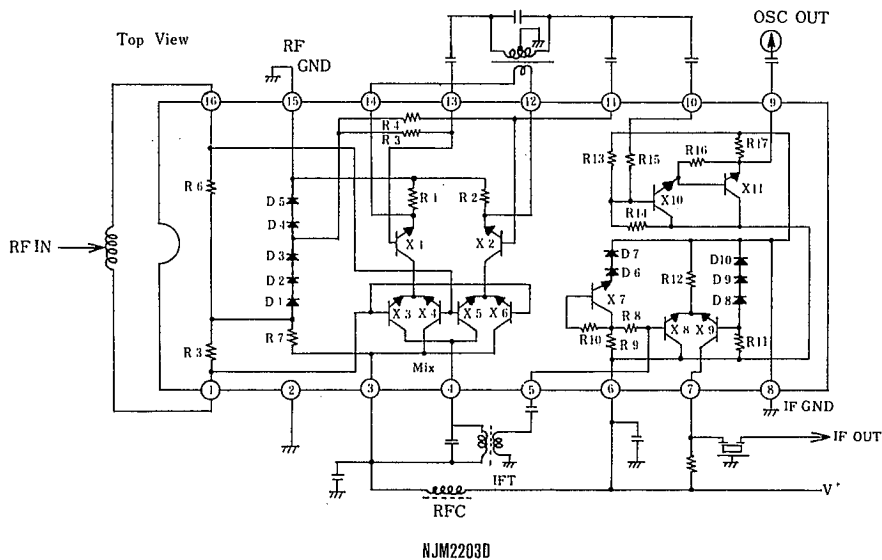
■ BLOCK DIAGRAM



PIN FUNCTION

- | | |
|--------------|----------------------|
| 1. RF INPUT1 | 9. OSC OUT |
| 2. GND | 10. OSC Buffer INPUT |
| 3. V_{+M} | 11. OSC1 |
| 4. Mix OUT | 12. OSC2 |
| 5. Mix INPUT | 13. OSC3 |
| 6. V_{+A} | 14. OSC4 |
| 7. IF OUT | 15. GND(RF) |
| 8. GND(IF) | 16. RF INPUT2 |

■ EQUIVALENT CIRCUIT



($T_a=25^{\circ}\text{C}$)

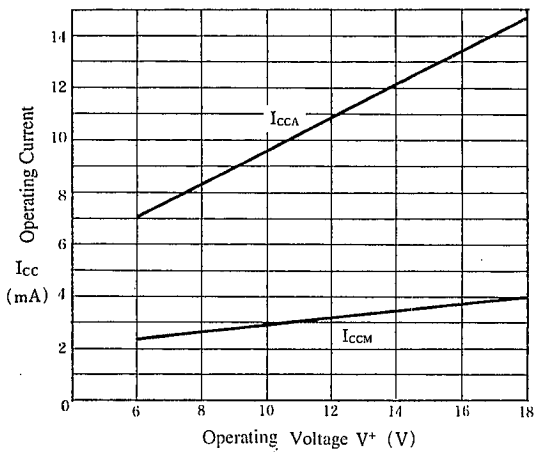
 $(V^+ = 12V, T_a = 25^\circ C)$

note: STC: Specified Test Circuit

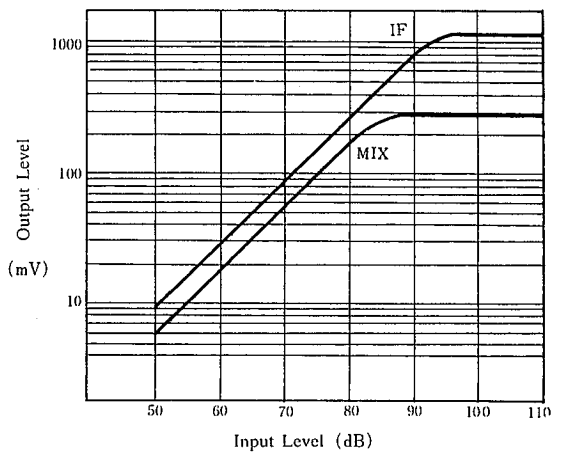
[illegible]

■ TYPICAL CHARACTERISTICS

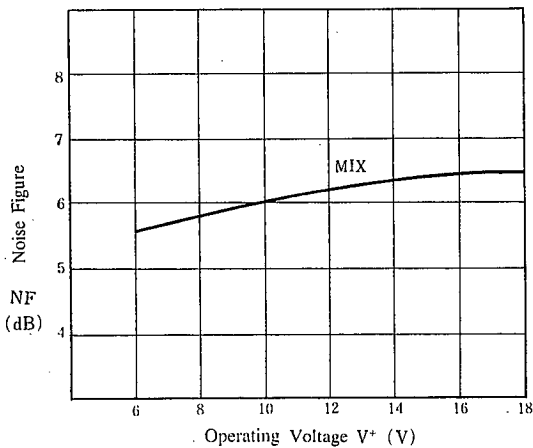
Operating Current vs. Supply Voltage



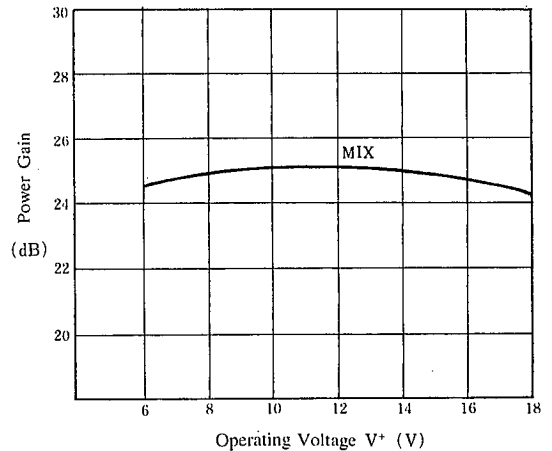
Output Level vs. Input Level



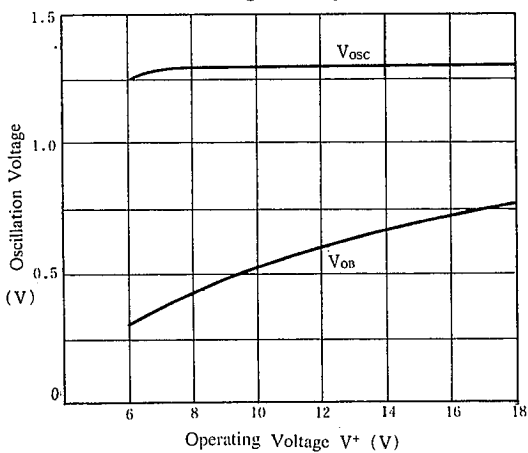
Noise Figure vs. Operating Voltage



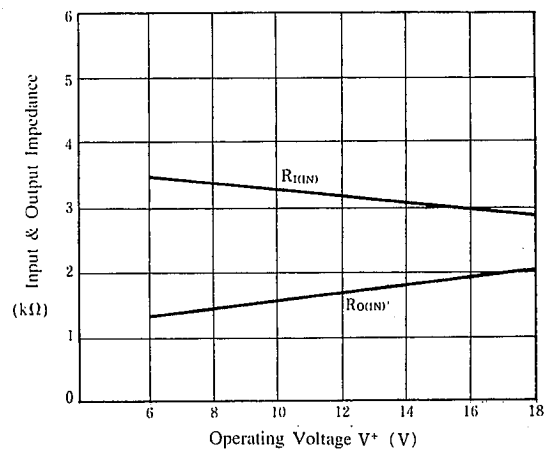
Power Gain vs. Operating Voltage



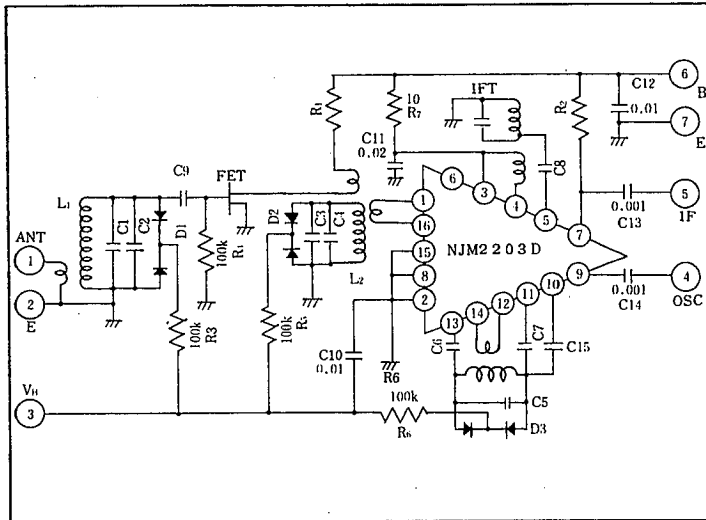
Oscillation Voltage vs. Operating Voltage



Input & Output Impedance vs. Operating Voltage



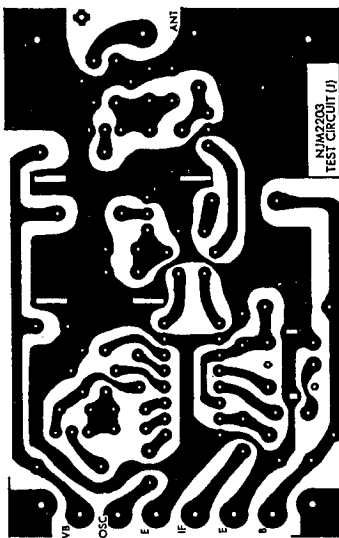
TYPICAL APPLICATION



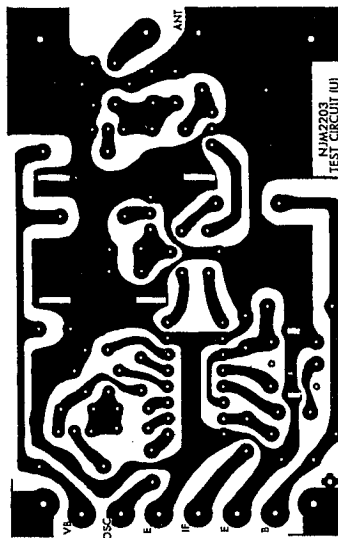
	76~90MHz	88~108MHz	
L1	VS-32	VS-35	TAIKI
L2	VS-33	VS-36	"
L3	VS-34	VS-37	"
D1, 2, 3	SVC202A, B	SVC202A, B	
C1	6	1.5	
C2	6	4	
C3	7	6	
C4	12	7	
C5	15	15	
C6, 7	5	10	
C8	120	120	
R1	150	150	
R2	330	330	
FET	2SK168E, F	2SK168E, F	HITACHI
IFT	154FC-41921N		TOKO

PATTERN EXAMPLE OF ABOVE CIRCUIT

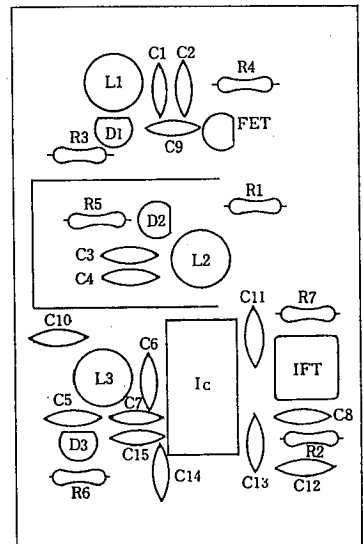
Japan Band



U.S.A. Band



Parts Arrangement



(Backside View)

MEMO

[CAUTION]

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