

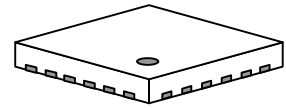
## DP7T ANTENNA SWITCH GaAs MMIC

### ■ GENERAL DESCRIPTION

NJG1658K34 is a GaAs DP7T antenna switch IC designed for WCDMA/GSM multimode handsets. This switch can be operated by six bits control signal from 1.3V of logic high voltage. This switch features low insertion loss and low distortion. Also, the ESD protection circuit is integrated into the IC to achieve high ESD tolerance.

The small and thin QFN24-34 package is adopted.

### ■ PACKAGE OUTLINE

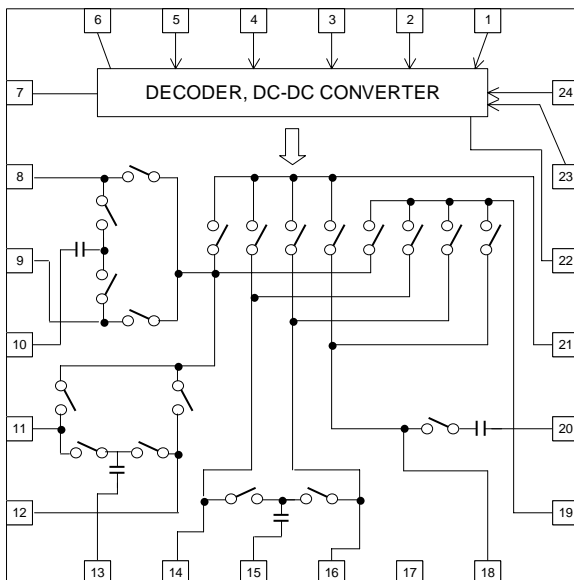


NJG1658K34

### ■ FEATURES

- Low insertion loss
  - 0.35dB typ. @WCDMA800 TRX (WTRX\_V)
  - 0.45dB typ. @WCDMA1700/1500 TRX (WTRX\_IX\_XI)
  - 0.45dB typ. @WCDMA2000 TRX (WTRX\_I)
  - 0.60dB typ. @GSM850/900 TX (GTX\_Lo)
  - 0.80dB typ. @ GSM850/900 RX (GRX\_Lo)
  - 0.85dB typ. @GSM1800/1900 TX (GTX\_Hi)
  - 1.10dB typ. @GSM1800/1900 RX (GRX\_Hi)
- Low distortion
  - 2fo=-44dBm typ. @GSM850/900TX (GTX\_Lo), P<sub>IN</sub>=34.5dBm
  - 3fo=-40dBm typ. @GSM850/900TX (GTX\_Lo), P<sub>IN</sub> =34.5dBm
  - 2fo=-47dBm typ. @GSM1800/1900TX (GTX\_Hi), P<sub>IN</sub> =33dBm
  - 3fo=-45dBm typ. @GSM1800/1900TX (GTX\_Hi), P<sub>IN</sub> =33dBm
- Small and thin package
- Halogen free

### ■ PIN CONFIGURATION



#### Pin connection

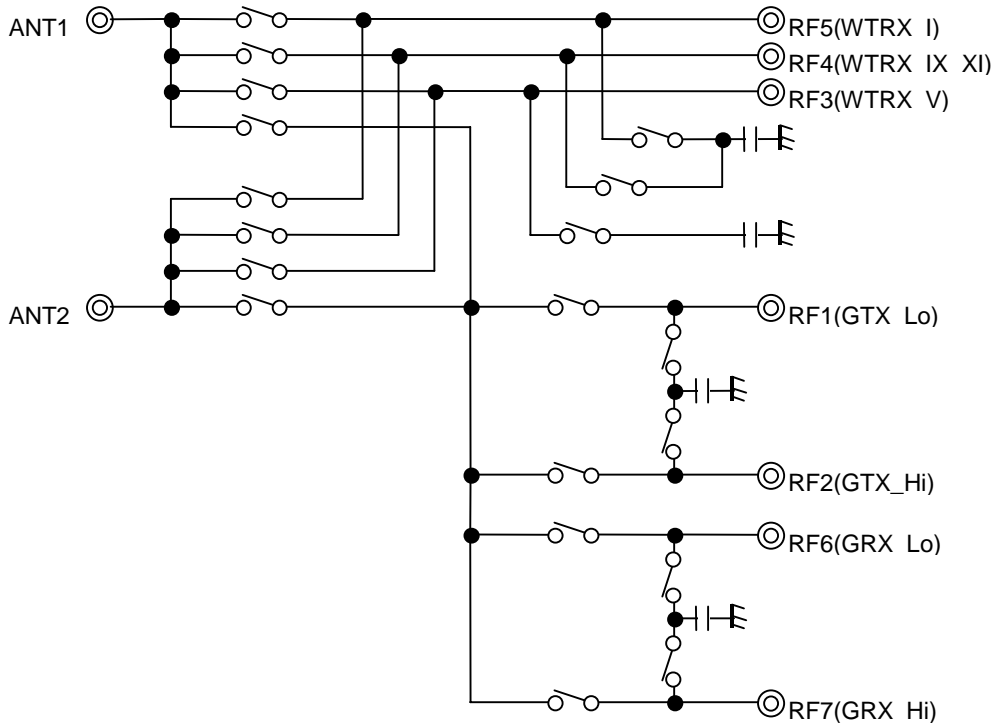
- |                  |                      |
|------------------|----------------------|
| 1. CTL4          | 13. GND              |
| 2. CTL3          | 14. RF4 (WTRX_IX_XI) |
| 3. CTL2          | 15. GND              |
| 4. CTL1          | 16. RF5 (WTRX_I)     |
| 5. VDD           | 17. GND              |
| 6. GND           | 18. RF3 (WTRX_V)     |
| 7. GND           | 19. ANT1             |
| 8. RF2 (GTX_Hi)  | 20. GND              |
| 9. RF1 (GTX_Lo)  | 21. ANT2             |
| 10. GND          | 22. GND              |
| 11. RF6 (GRX_Lo) | 23. CTL6             |
| 12. RF7 (GRX_Hi) | 24. CTL5             |

**NOTE:** The Information are description listed is this datasheet are subject to change without notice.

# NJG1658K34

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## ■ BLOCK DIAGRAM



### Cautions on using this product

This product contains Gallium-Arsenide (GaAs) which is a harmful material.

- Do NOT eat or put into mouth.
- Do NOT dispose in fire or break up this product.
- Do NOT chemically make gas or powder with this product.
- To waste this product, please obey the relating law of your country.

### [CAUTION]

The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.

This product may be damaged with electric static discharge (ESD) or spike voltage. Please handle with care to avoid these damages.