

# RT3K66M

Composite Transistor  
For high speed switching  
Silicon N-channel MOSFET

## DESCRIPTION

RT3K66M is a composite transistor built with two INK0012AX chips in SC-88 package.

## FEATURE

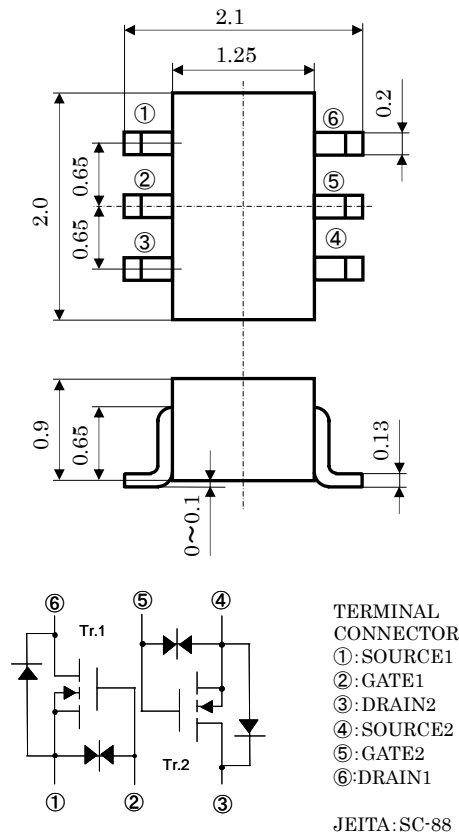
- Input impedance is high, and not necessary to consider a drive electric current.
- $V_{th}$  is low, and drive by low voltage is possible.  $V_{th}=1.0\sim 2.0V$
- Low on Resistance.  
 $R_{bs(on)}=1.7\Omega$  (TYP) @  $I_D=100mA$ ,  $V_{GS}=4.0V$   
 $R_{bs(on)}=1.0\Omega$  (TYP) @  $I_D=100mA$ ,  $V_{GS}=10V$
- High speed switching.
- Small package for easy mounting.

## APPLICATION

High speed switching , Analog switching

## OUTLINE DRAWING

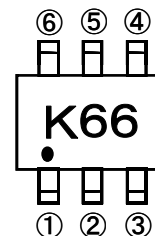
Unit:mm



## MAXIMUM RATING ( $T_a=25^\circ C$ )

| SYMBOL    | PARAMETER                                    | RATING   | UNIT       |
|-----------|--|----------|------------|
| $V_{DSS}$ | Drain-source voltage                         | 30       | V          |
| $V_{GSS}$ | Gate-source voltage                          | $\pm 20$ | V          |
| $I_D$     | Drain current                                | 200      | mA         |
| $P_D$     | Total power dissipation ( $T_a=25^\circ C$ ) | 150      | mW         |
| $T_{ch}$  | Channel temperature                          | +150     | $^\circ C$ |
| $T_{stg}$ | Range of Storage temperature                 | -55~+150 | $^\circ C$ |

## MARKING



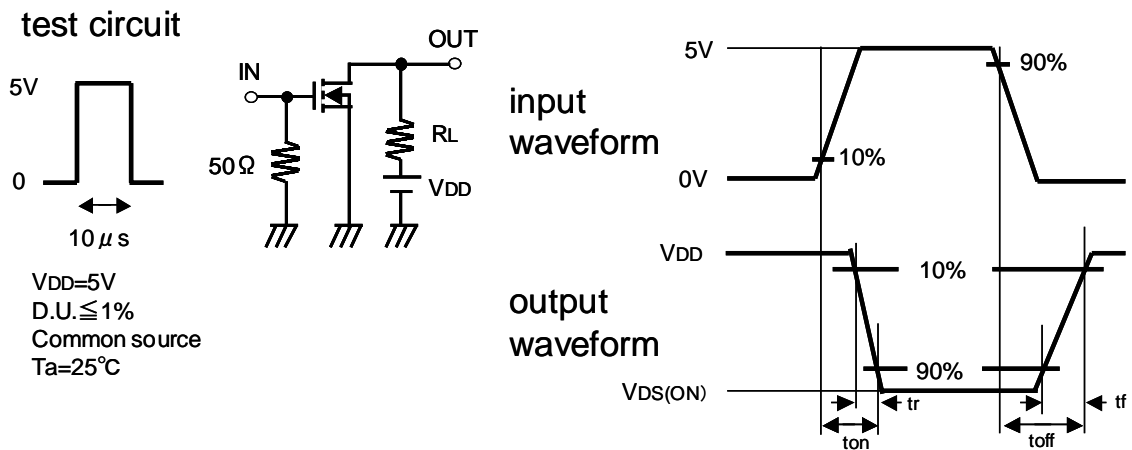
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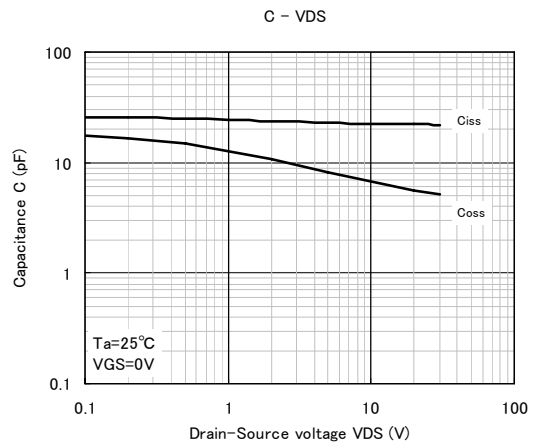
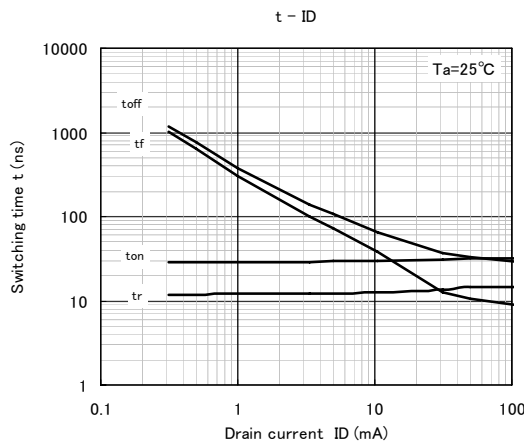
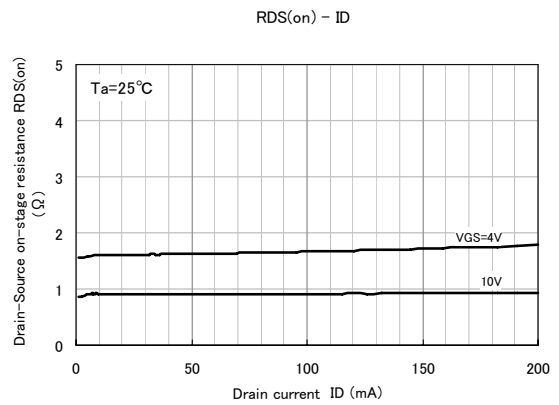
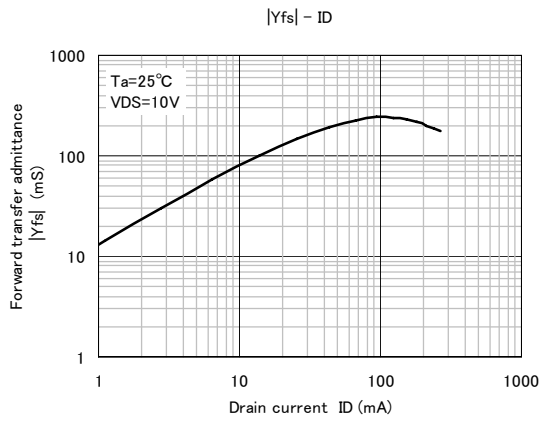
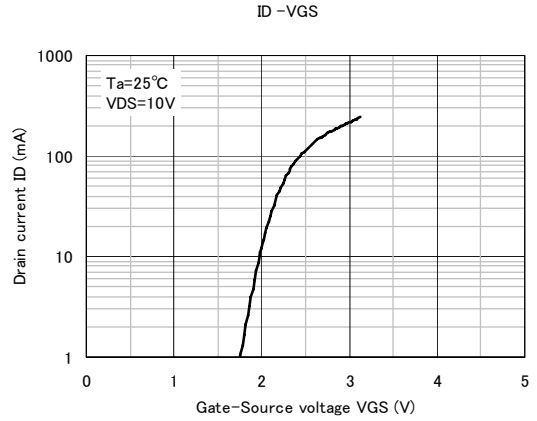
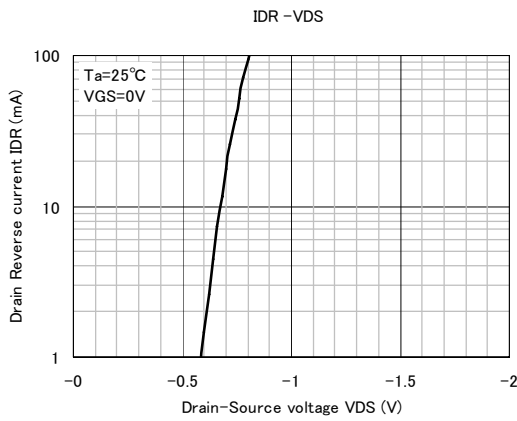
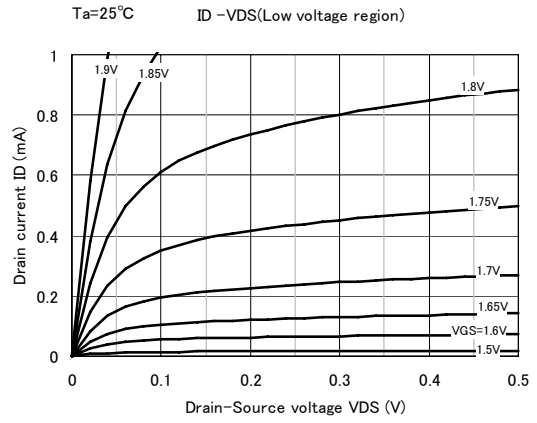
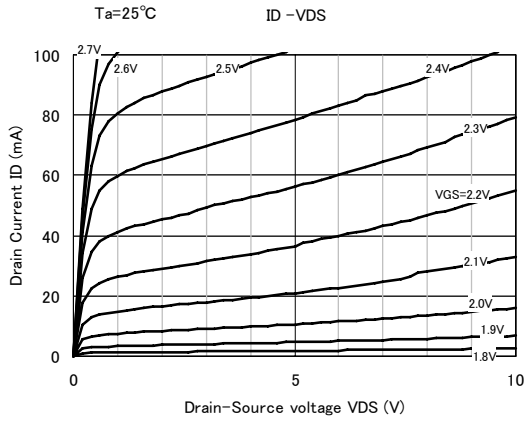
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Symbol        | Parameter                               | Test conditions                            | Limits |     |           | Unit     |
|---------------|---|--|--------|-----|-----------|----------|
|               |   |  | Min    | Typ | Max       |          |
| $V_{(BR)DSS}$ | Drain-source breakdown voltage          | $I_D=100\mu A, V_{GS}=0V$                  | 30     | -   | -         | V        |
| $I_{GSS}$     | Gate-source leak current                | $V_{GS}=\pm 15V, V_{DS}=0V$                | -      | -   | $\pm 1.0$ | $\mu A$  |
| $I_{DSS}$     | Zero gate voltage drain current         | $V_{DS}=30V, V_{GS}=0V$                    | -      | -   | 1.0       | $\mu A$  |
| $V_{th}$      | Gate threshold voltage                  | $I_D=250\mu A, V_{DS}=V_{GS}$              | 1.0    | -   | 2.0       | V        |
| $ Y_{fs} $    | Forward transfer admittance             | $V_{DS}=10V, I_D=100mA$                    | -      | 245 | -         | mS       |
| $R_{DS(on)}$  | Static drain-source on-state resistance | $I_D=100mA, V_{GS}=4.0V$                   | -      | 1.7 | -         | $\Omega$ |
|               |   | $I_D=100mA, V_{GS}=10.0V$                  | -      | 1.0 | -         |          |
| $C_{iss}$     | Input capacitance                       | $V_{DS}=10V, V_{GS}=0V, f=1MHz$            | -      | 23  | -         | pF       |
| $C_{oss}$     | Output capacitance                      |  | -      | 7.0 | -         | pF       |
| $t_{ON}$      | Switching time                          | $V_{DD}=5V, I_D=10mA$<br>$V_{GS}=0\sim 5V$ | -      | 30  | -         | ns       |
| $t_{OFF}$     |   |  | -      | 66  | -         |          |

### Switching time test condition



# TYPICAL CHARACTERISTICS





*Marketing division, Marketing planning department*

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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