

# RT3J55M

Composite Transistor  
For high speed switching  
Silicon P-channel MOSFET

## DESCRIPTION

RT3J55M is a composite transistor built with two INJ0011AX chips in SC-88 package.

## FEATURE

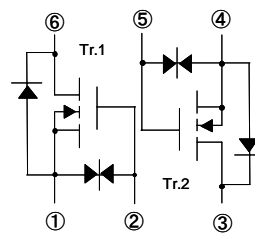
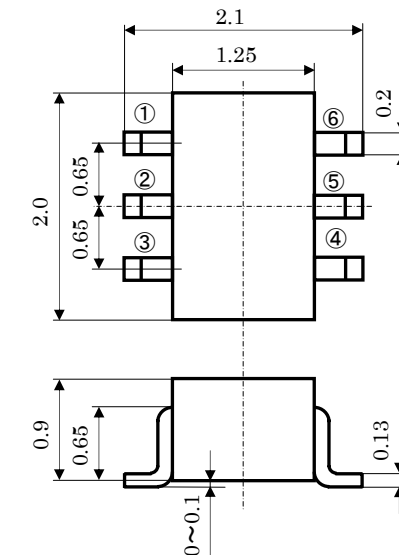
- Input impedance is high, and not necessary to consider a drive electric current.
- $V_{th}$  is low, and drive by low voltage is possible.  
 $V_{th} = -1.0 \sim -2.0V$
- Low on Resistance.  
 $R_{ds(on)} = 7.0 \Omega$  (TYP) @  $I_D = -100mA$ ,  $V_{GS} = -4.0V$   
 $R_{ds(on)} = 4.8 \Omega$  (TYP) @  $I_D = -100mA$ ,  $V_{GS} = -10V$
- High speed switching.
- Small package for easy mounting.

## APPLICATION

High speed switching , Analog switching

## OUTLINE DRAWING

Unit:mm



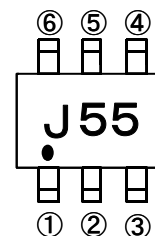
TERMINAL CONNECTOR  
①:SOURCE1  
②:GATE1  
③:DRAIN2  
④:SOURCE2  
⑤:GATE2  
⑥:DRAIN1

JEITA:SC-88

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

SYMBOL	PARAMETER	RATING	UNIT
$V_{DSS}$	Drain-source voltage	-50	V
$V_{GSS}$	Gate-source voltage	$\pm 20$	V
$I_D$	Drain current	-100	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



# RT3J55M

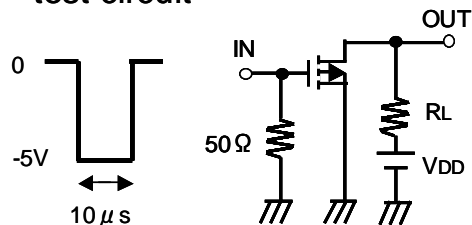
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## ELECTRICAL CHARACTERISTICS (Ta=25°C)

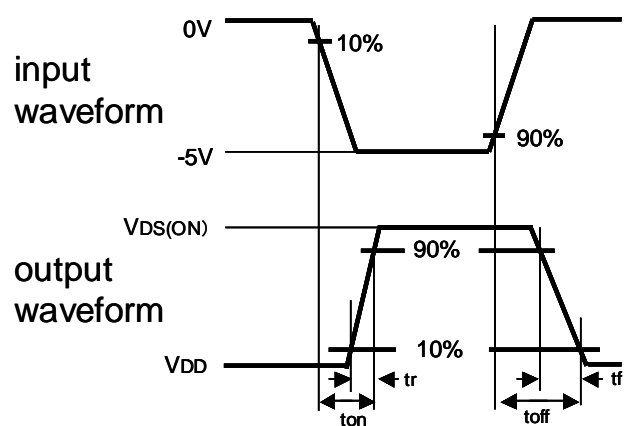
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)DSS}$	Drain-source breakdown voltage	$I_D = -100 \mu A, V_{GS} = 0V$	-50	-	-	V
$I_{GSS}$	Gate-source leak current	$V_{GS} = \pm 20V, V_{DS} = 0V$	-	-	$\pm 10$	$\mu A$
$I_{DSS}$	Zero gate voltage drain current	$V_{DS} = -50V, V_{GS} = 0V$	-	-	-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	$V_{DS} = -10V, I_D = -100mA$	-	145	-	mS
$R_{DS(on)}$	Static drain-source on-state resistance	$I_D = -100mA, V_{GS} = -4.0V$	-	7.0	-	$\Omega$
		$I_D = -100mA, V_{GS} = -10V$	-	4.8	-	
$C_{iss}$	Input capacitance	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$	-	25	-	pF
$C_{oss}$	Output capacitance		-	6.0	-	pF
$t_{ON}$	Switching time	$V_{DD} = -5V, I_D = -10mA$ $V_{GS} = 0 \sim -5V$	-	35	-	ns
$t_{OFF}$			-	90	-	

### Switching time test condition

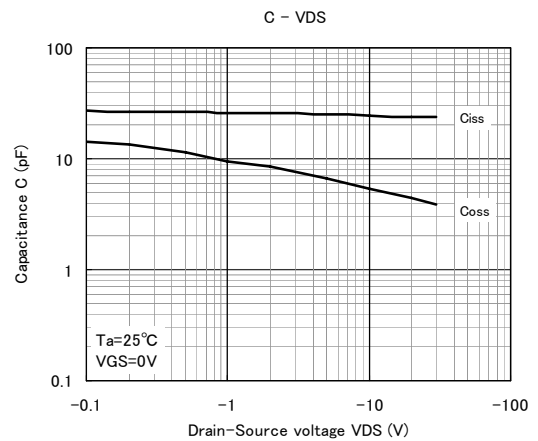
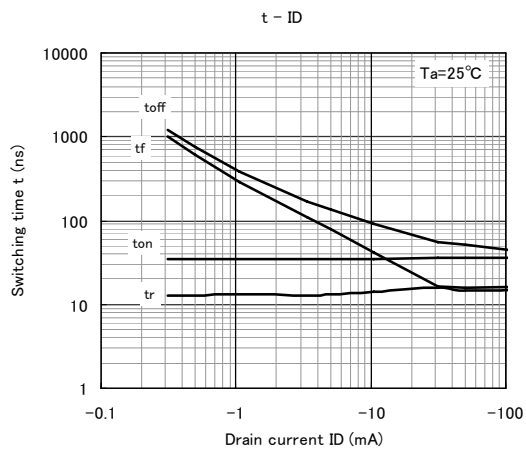
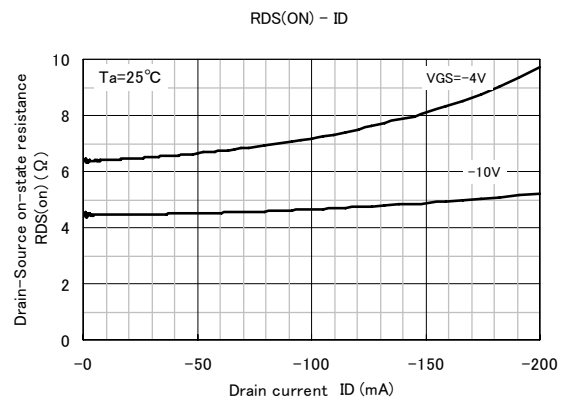
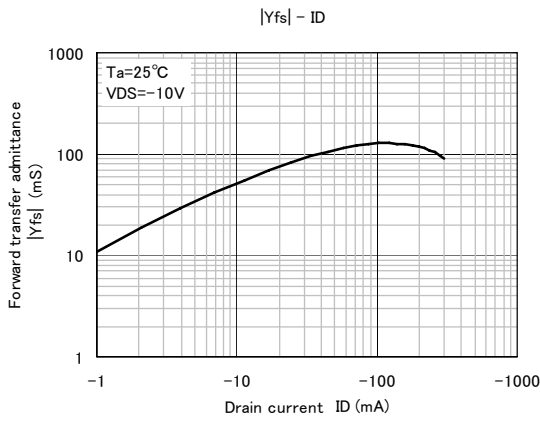
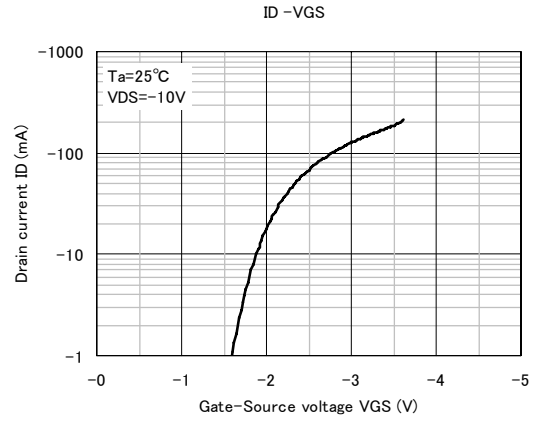
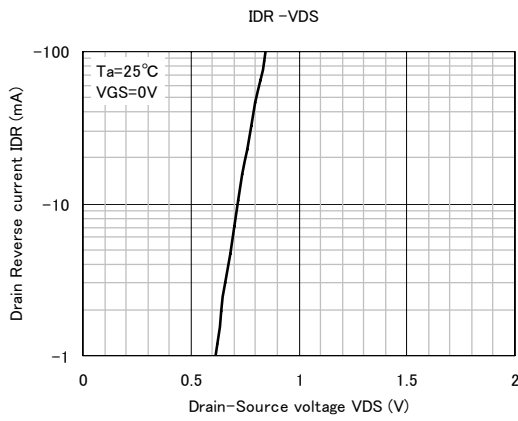
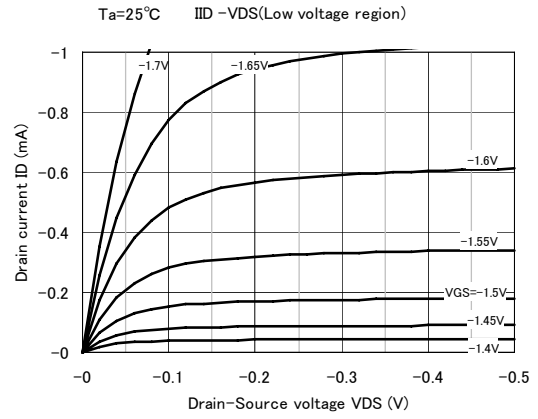
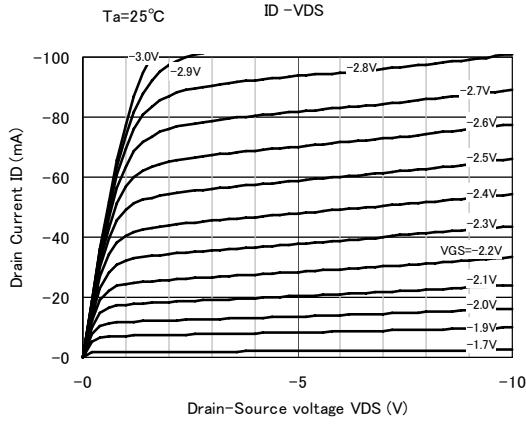
#### test circuit



$V_{DD} = -5V$   
D.U.  $\leq 1\%$   
Common source  
 $T_a = 25^\circ C$



# TYPICAL CHARACTERISTICS





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