

**DESCRIPTION**

RT3U22M is a composite transistor built with INK0002AX and INJ0002AX chips in SC-88 package.

**FEATURE**

- Input impedance is high, and not necessary to consider a drive electric current.
- Vth is low, and drive by low voltage is possible. Vth=0.6~1.2V
- Low on Resistance. Ron= 1.1 / 3Ω (Tr1/Tr2) TYP
- High speed switching.
- Small package for easy mounting.

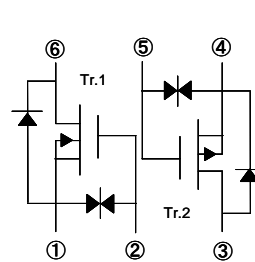
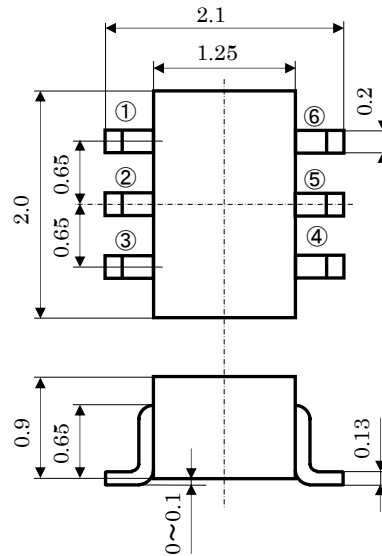
**APPLICATION**

high speed switching , Analog switching

\*P-channel MOSFET Tr2's minus sign is omitted

**OUTLINE DRAWING**

Unit:mm



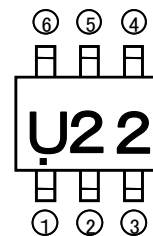
- TERMINAL CONNECTOR
- ①:SOURCE1
  - ②:GATE1
  - ③:DRAIN2
  - ④:SOURCE2
  - ⑤:GATE2
  - ⑥:DRAIN1

JEITA:SC-88

**MAXIMUM RATING (Ta=25°C)**

SYMBOL	PARAMETER	RATING	UNIT
VDSS	Drain-source voltage	30	V
VGSS	Gate-source voltage	±8	V
ID	Drain current	200	mA
PD	Total power dissipation (Ta=25°C)	150	mW
Tch	Channel temperature	+125	°C
Tstg	Range of Storage temperature	-55~+125	°C

**MARKING**

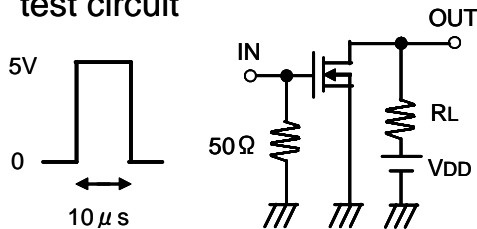


**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

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	$V_{GS}=\pm 5V, V_{DS}=0V$	-	-	$\pm 0.5$	$\mu A$	
$I_{DSS}$	Zero gate voltage drain current	$V_{DS}=30V, V_{GS}=0V$	-	-	50	$\mu A$	
$V_{th}$	Gate threshold voltage	$I_D=250\mu A, V_{DS}=V_{GS}$	0.6	-	1.2	V	
$ Y_{fs} $	Forward transfer admittance	$V_{DS}=10V, I_D=0.1A$	Tr1	-	300	-	mS
			Tr2	-	220	-	
$R_{DS(ON)}$	Static drain-source on-state resistance	$I_D=100mA, V_{GS}=4.0V$	Tr1	-	1.1	-	$\Omega$
			Tr2	-	3.0	-	
$C_{iss}$	Input capacitance	$V_{DS}=10V, V_{GS}=0V, f=1MHz$	Tr1	-	33	-	pF
			Tr2	-	35	-	
$C_{oss}$	Output capacitance	$V_{DS}=10V, V_{GS}=0V, f=1MHz$	Tr1	-	6.8	-	pF
			Tr2	-	7.3	-	
$t_{ON}$	Switching time	$V_{DD}=5V, I_D=10mA$ $V_{GS}=0\sim 5V$	Tr1	-	12	-	ns
$t_{OFF}$			Tr2	-	14	-	
			Tr1	-	80	-	
			Tr2	-	100	-	

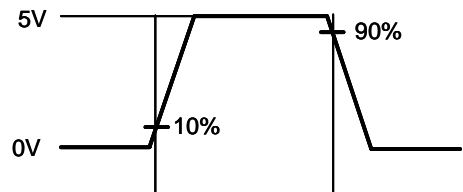
**Switching time test condition ( Tr.1 )**

**test circuit**

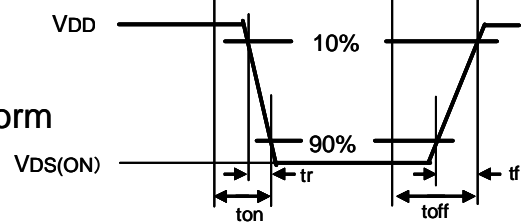


$V_{DD}=5V$   
 $D.U. \leq 1\%$   
Common source  
 $T_a=25^\circ C$

**input waveform**

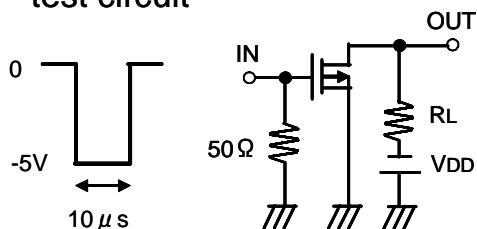


**output waveform**



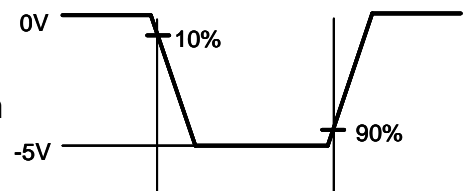
**Switching time test condition ( Tr.2 )**

**test circuit**

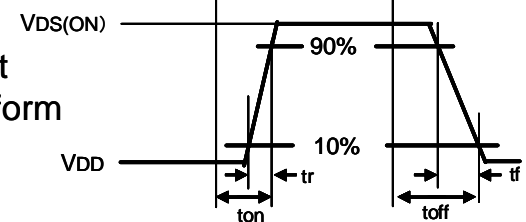


$V_{DD}=-5V$   
 $D.U. \leq 1\%$   
Common source  
 $T_a=25^\circ C$

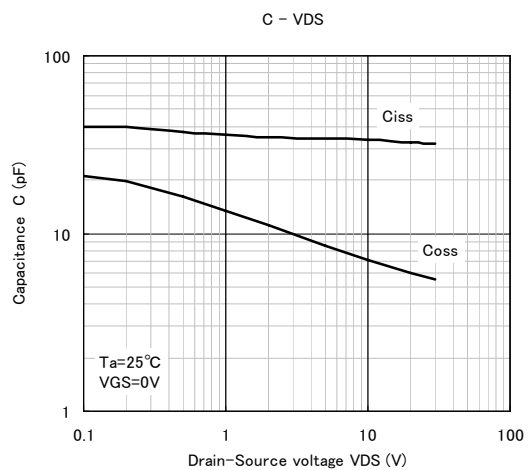
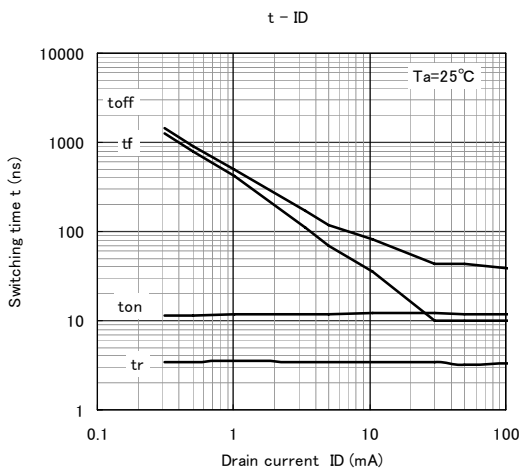
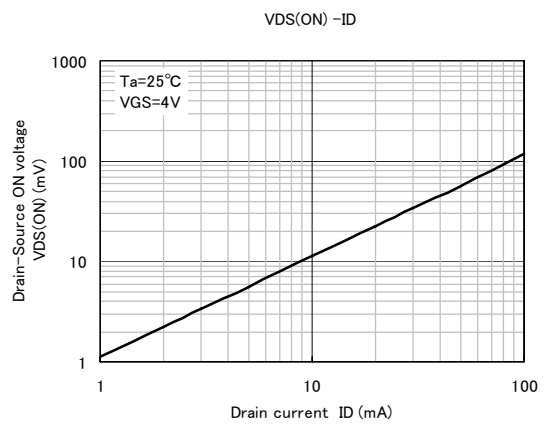
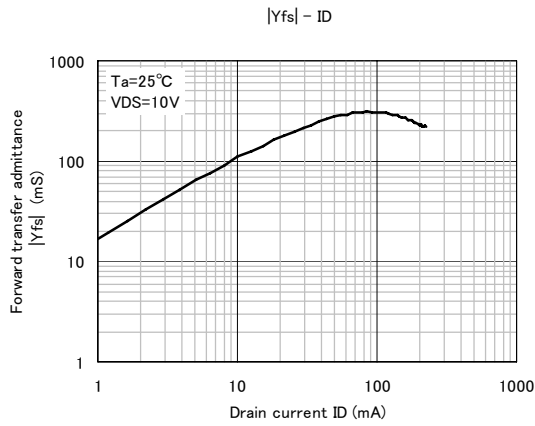
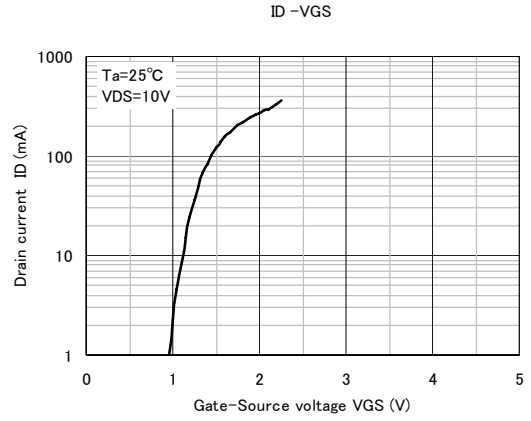
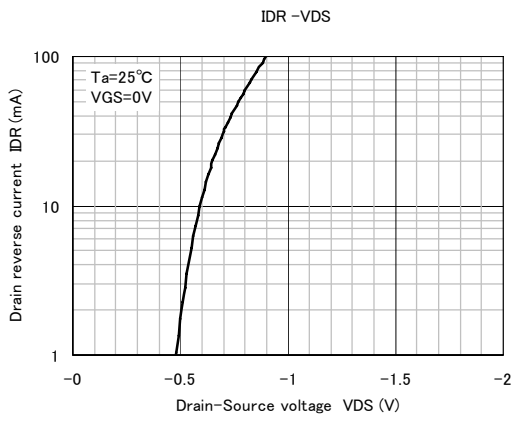
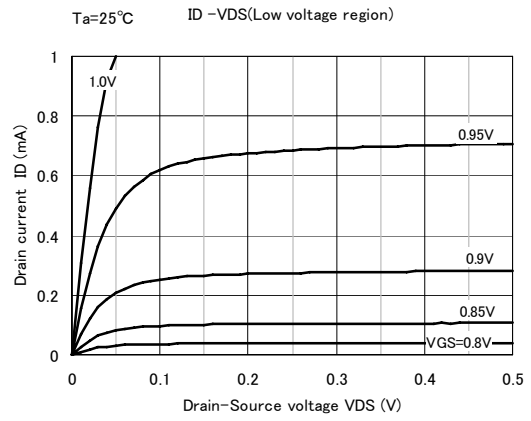
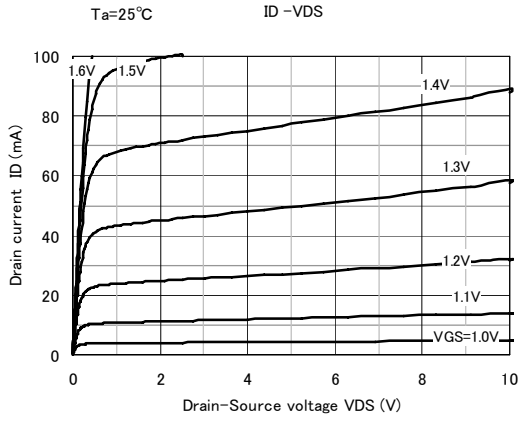
**input waveform**



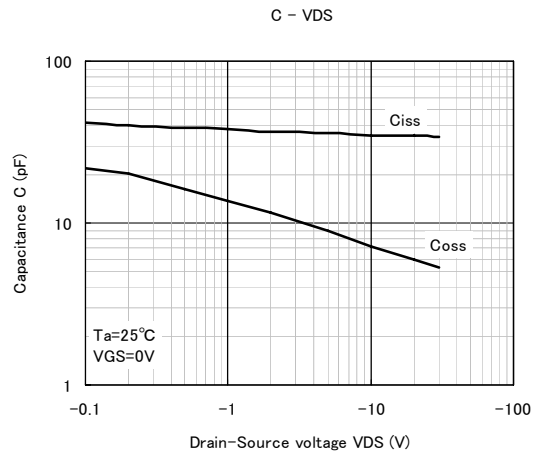
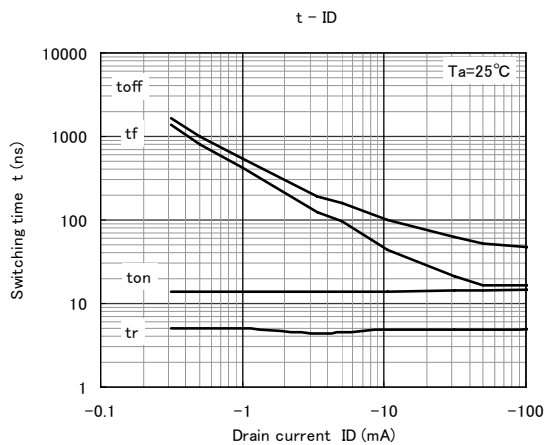
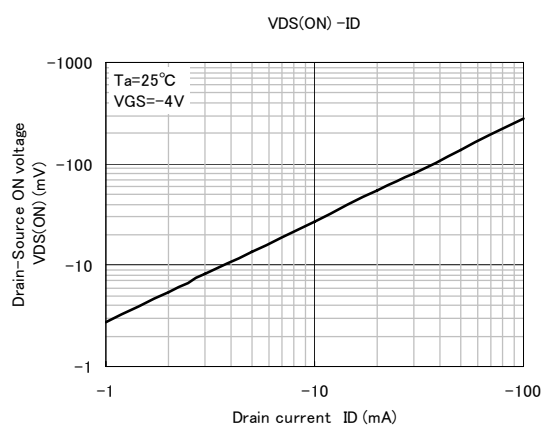
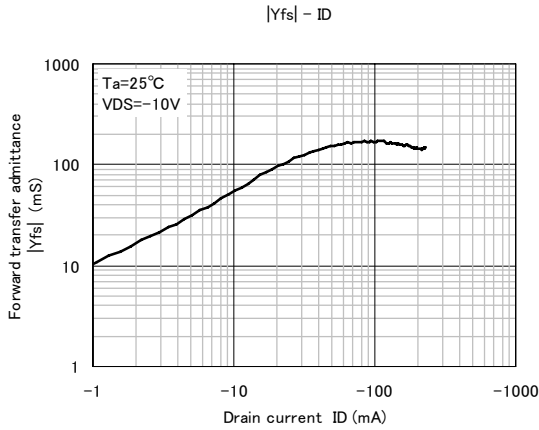
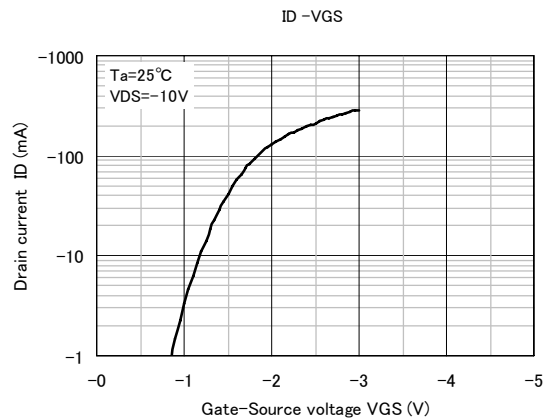
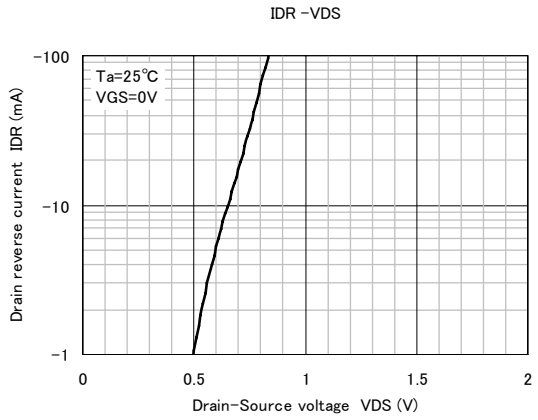
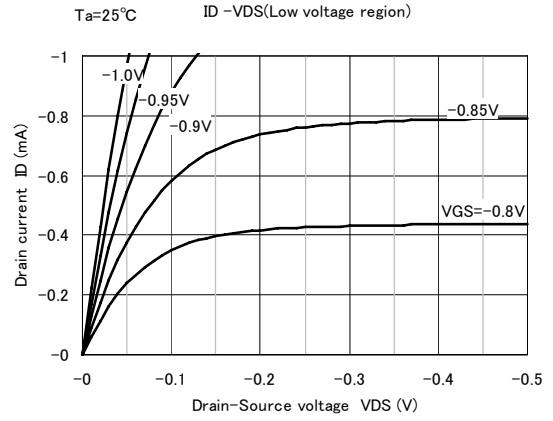
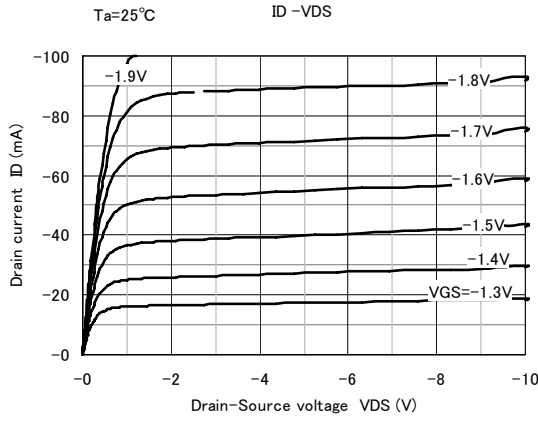
**output waveform**



# TYPICAL CHARACTERISTICS ( Tr.1 )



# TYPICAL CHARACTERISTICS ( Tr.2 )





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