INJ0003AX SERIES

High speed switching
Silicon P-channel MOSFET

DESCRIPTION

INJ0003AX is a Silicon P-channel MOSFET. This product is most suitable for low voltage use such as portable machinery , because of low voltage drive and low on resistance.

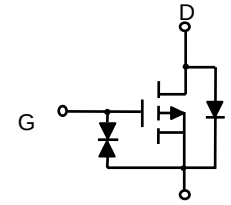
FEATURE

- Input impedance is high, and not necessary to consider a drive electric current.
- Drive voltage −2.5V
- Low on Resistance.
  $R_{DS(ON)}$=2Ω (TYP) @I_D=−100mA, V_{GS}=−4.0V
- High speed switching.
- Small package for easy mounting.

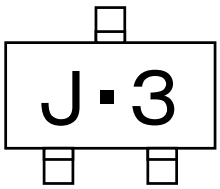
APPLICATION

High speed switching , Analog switching

EQUIVALENT CIRCUIT

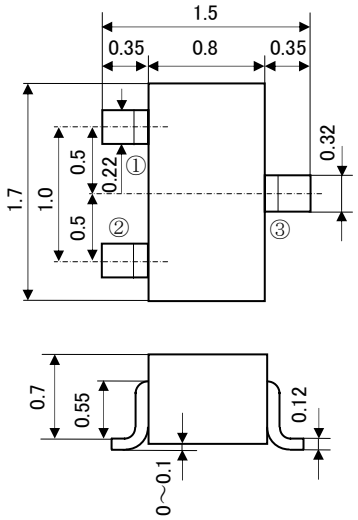


MARKING



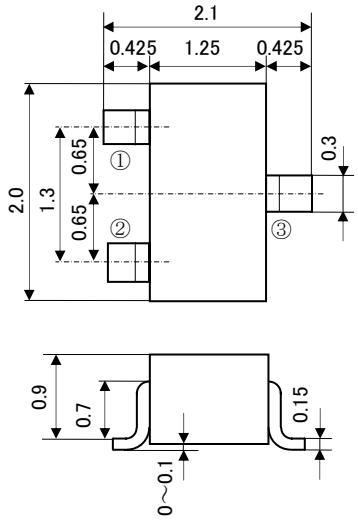
OUTLINE DRAWING (Unit : mm)

INJ0003AU1



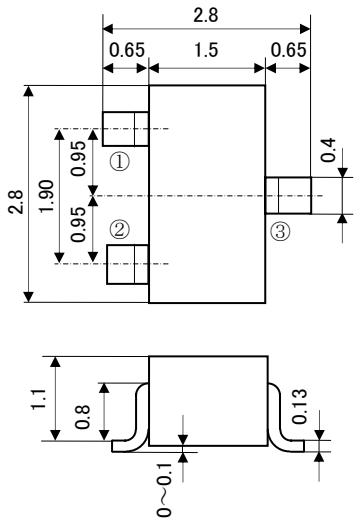
JEITA : SC-75A
JEDEC : —
TERMINAL CONNECTOR
①: GATE
②: SOURCE
③: DRAIN

INJ0003AM1



JEITA : SC-70
JEDEC : —
TERMINAL CONNECTOR
①: GATE
②: SOURCE
③: DRAIN

INJ0003AC1



JEITA : SC-59
JEDEC : Similar to TO-236
TERMINAL CONNECTOR
①: GATE
②: SOURCE
③: DRAIN

INJ0003AX SERIES

High speed switching
Silicon P-channel MOSFET

MAXIMUM RATING(Ta＝25℃)

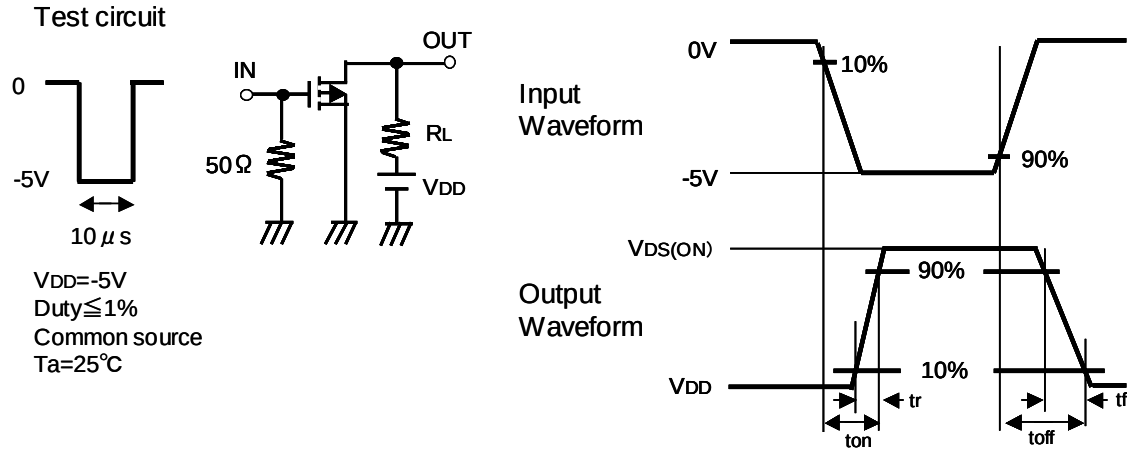
SYMBOL	PARAMETER	RATING			UNIT
		INJ0003AU1	INJ0003AM1	INJ0003AC1	
V_{DSS}	Drain-source voltage	−20			V
V_{GSS}	Gate-source voltage	±8			V
I_D	Drain current(DC)	−200			mA
I_{DP}	Drain current(Pulse)	−400(※1)			mA
P_D	Total power dissipation	150	200		mW
T_{ch}	Channel temperature	+150			℃
T_{stg}	Range of Storage temperature	−55～+150			℃

※1：Pw≦10μs, Duty cycle≦1%

ELECTRICAL CHARACTERISTICS(Ta＝25℃)

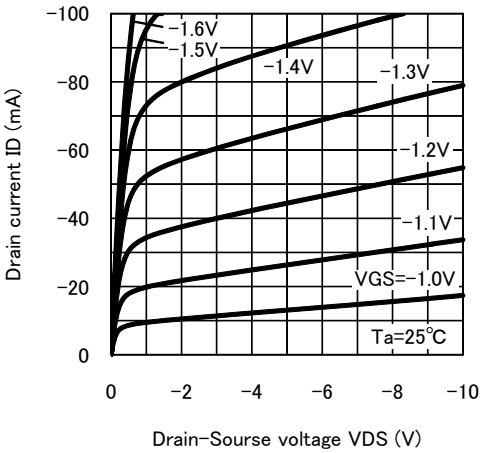
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)DSS}$	Drain-source breakdown voltage	I_D=−100μA, V_{GS}=0V	−20	−	−	V
I_{GSS}	Gate-source leak current	V_{GS}=±5V, V_{DS}=0V	−	−	±0.5	μA
I_{DSS}	Zero gate voltage drain current	V_{DS}=−20V, V_{GS}=0V	−	−	−1.0	μA
V_{th}	Gate threshold voltage	I_D=−250μA, V_{DS}=V_{GS}	−0.6	−	−1.2	V
$\lvert Y_{fs} \rvert$	Forward transfer admittance	V_{DS}=−10V, I_D=−0.1A	−	280	−	mS
$R_{DS(ON)}$	Static drain-source on-state resistance	I_D=−100mA, V_{GS}=−4.0V	−	2.0	−	Ω
C_{iss}	Input capacitance	V_{DS}=−10V, V_{GS}=0V, f=1MHz	−	37	−	pF
C_{oss}	Output capacitance		−	12	−	
t_{on}	Switching time	V_{DD}=−5V, I_D=−10mA V_{GS}=0～−5V	−	16	−	ns
t_{off}			−	110	−	

Switching time test condition

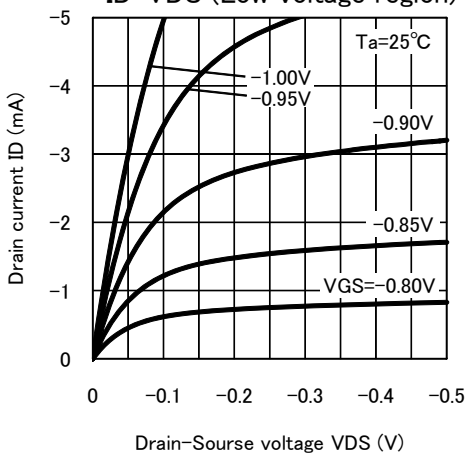


TYPICAL CHARACTERISTICS

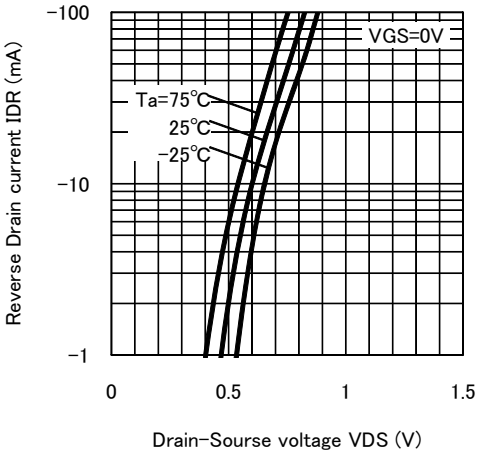
ID-VDS



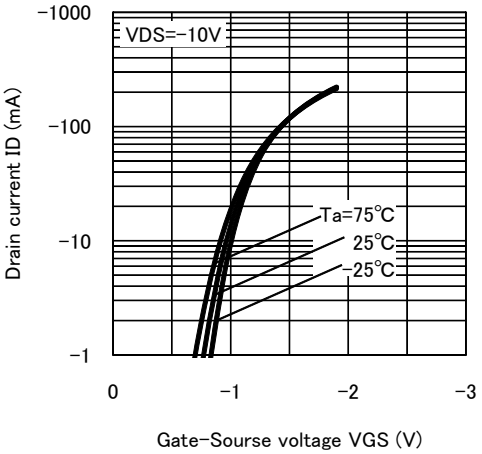
ID-VDS (Low voltage region)



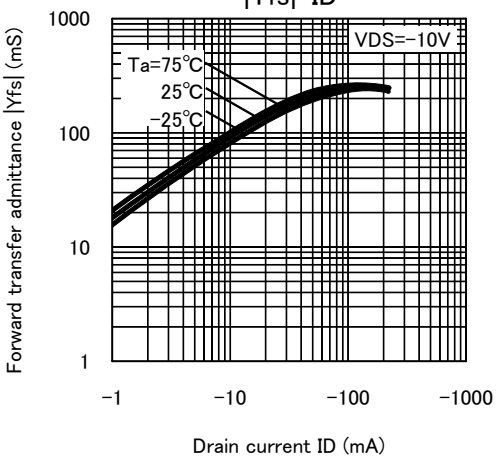
IDR-VDS



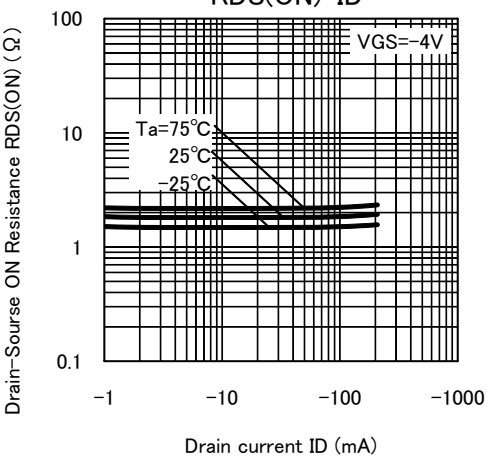
ID-VGS



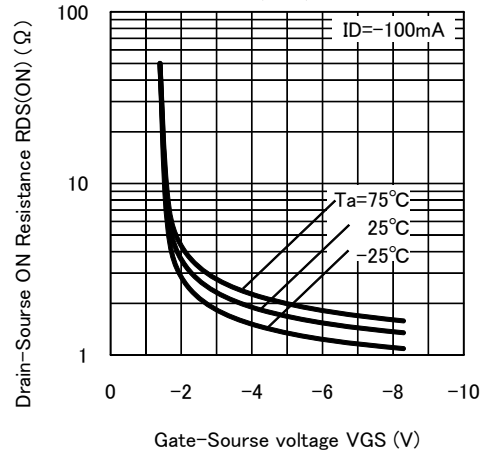
|Yfs|-ID



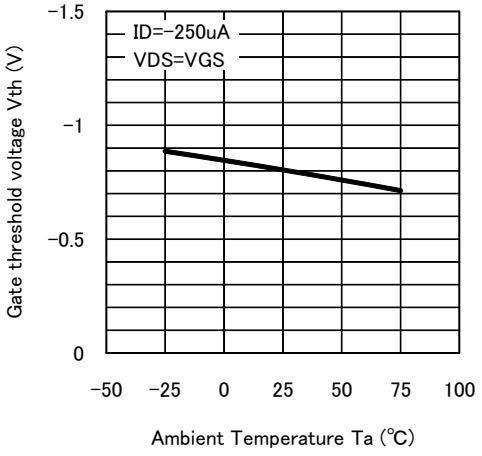
RDS(ON)-ID



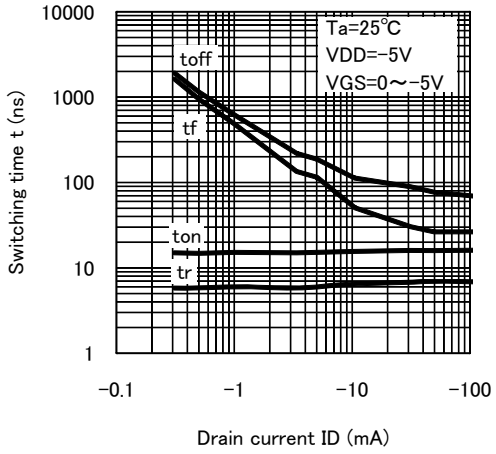
RDS(ON)-VGS



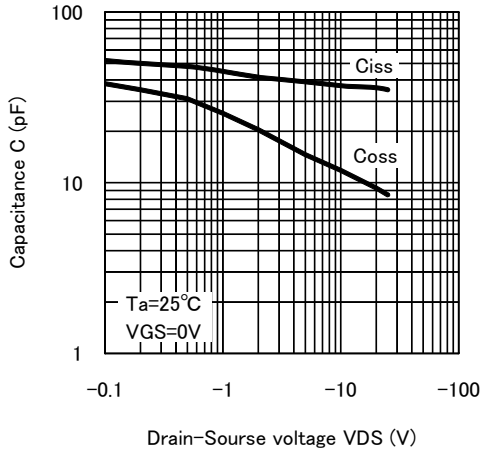
Vth-Ta



t-ID



C-VDS



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