INJ0011AC1-T150

High Speed Switching
Silicon P-channel MOSFET

AEC-Q101 COMPLIANCE

DESCRIPTION

INJ0011AC1 is a Silicon P-channel MOSFET.

This product is most suitable for use such as portable machinery, because of low voltage drive and low on resistance.

FEATURE

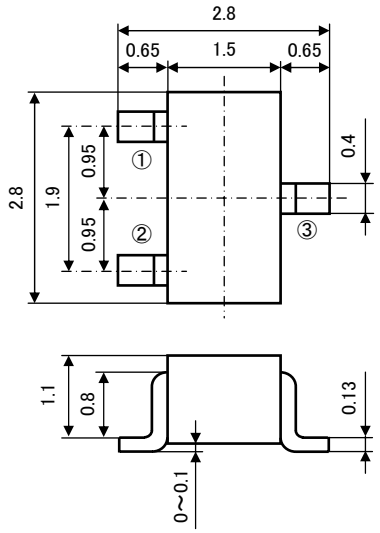
・Input impedance is high, and not necessary to consider a drive electric current.
・Drive voltage −4V
・Low on Resistance.
$R_{DS(ON)}$=7.0Ω(TYP) @I_D=−100mA, V_{GS}=−4.0V
$R_{DS(ON)}$=4.8Ω(TYP) @I_D=−100mA, V_{GS}=−10V
・High speed switching.
・Small package for easy mounting.

APPLICATION

High speed switching , Analog switching

OUTLINE DRAWING

UNIT:mm



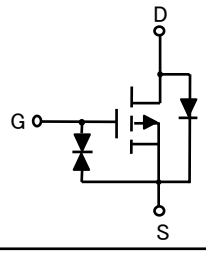
JEITA:SC-59
JEDEC:Similar toTO-236
TERMINAL CONNECTOR
①:Gate
②:SOURCE
③:DRAIN

MAXIMUM RATING(Ta=25℃)

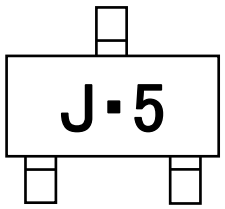
SYMBOL	PARAMETER	RATING	UNIT
VDSS	Drain-source voltage	−50	V
VGSS	Gate-source voltage	±20	V
ID	Drain current(DC)	−100	mA
IDP	Drain current(Pulse) ※1	−400	mA
PD	Total power dissipation	200	mW
Tch	Channel temperature	+150	℃
Tstg	Range of Storage temperature	−55～+150	℃

※1:Pw≦10μs, Duty cycle≦1%

EQUIVALENT CIRCUIT



MARKING

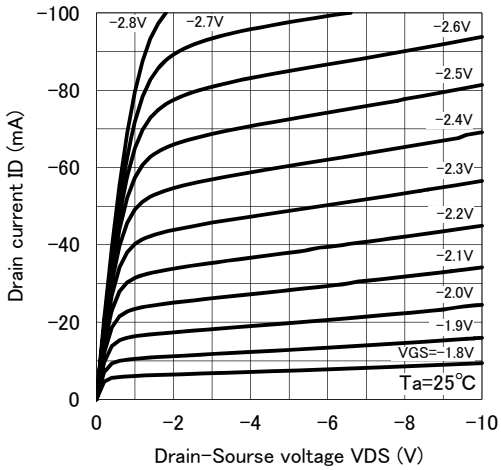


ELECTRICAL CHARACTERISTICS(Ta=25℃)

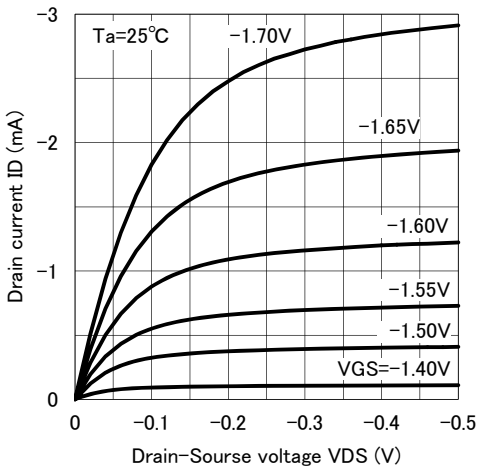
PARAMETER	SYMBOL	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
Drain-source breakdown voltage	$V_{(BR)DSS}$	I_D=−100μA, V_{GS}=0V	−50	−	−	V
Gate-source leak current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	−	−	±1.0	μA
Zero gate voltage drain current	I_{DSS}	V_{DS}=−50V, V_{GS}=0V	−	−	−1.0	μA
Gate threshold voltage	V_{th}	I_D=−250μA, V_{DS}= V_{GS}	−1.0	−	−2.0	V
Forward transfer admittance	| Y_{fs} |	V_{DS}=−10V, I_D=−100mA	−	145	−	mS
Static drain-source on-state resistance	$R_{DS(ON)}$	I_D=−100mA, V_{GS}=−4.0V	−	7.0	−	Ω
		I_D=−100mA, V_{GS}=−10V	−	4.8	−	
Input capacitance	C_{iss}	V_{DS}=−10V, V_{GS}=0V, f=1MHz	−	25	−	pF
Output capacitance	C_{oss}		−	6.0	−	pF
Switching time	ton	V_{DD}=−5V, I_D=−10mA V_{GS}=0～5V	−	35	−	ns
	toff		−	90	−	ns

TYPICAL CHARACTERISTICS

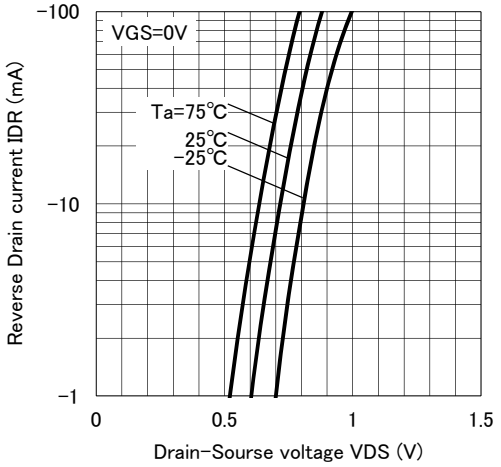
ID-VDS



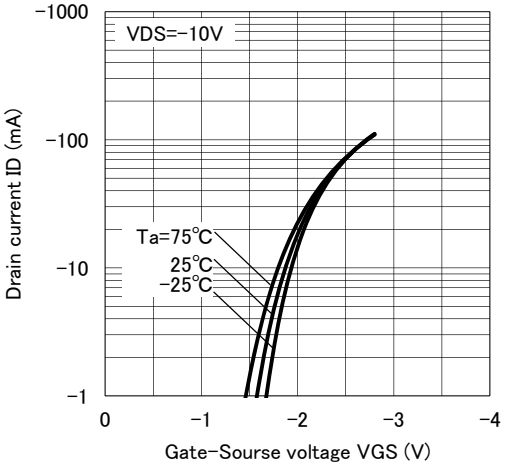
ID-VDS (Low voltage region)



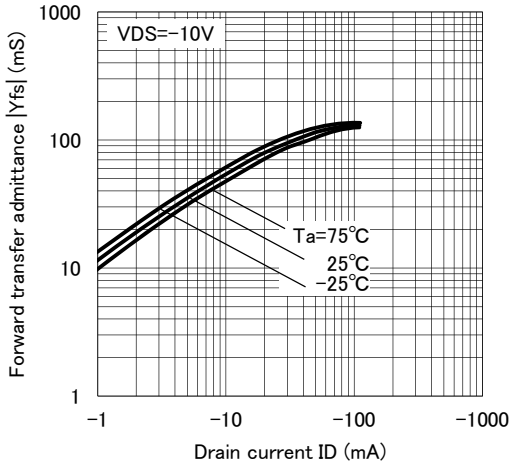
IDR-VDS



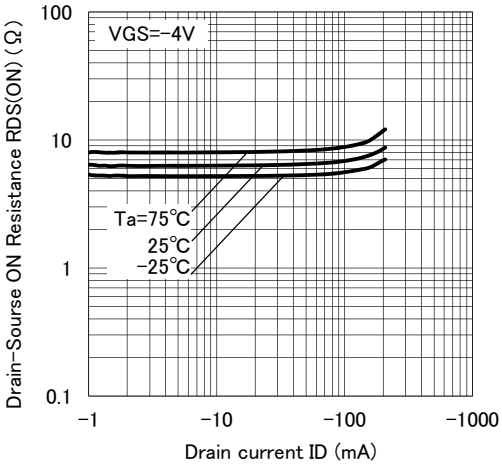
ID-VGS



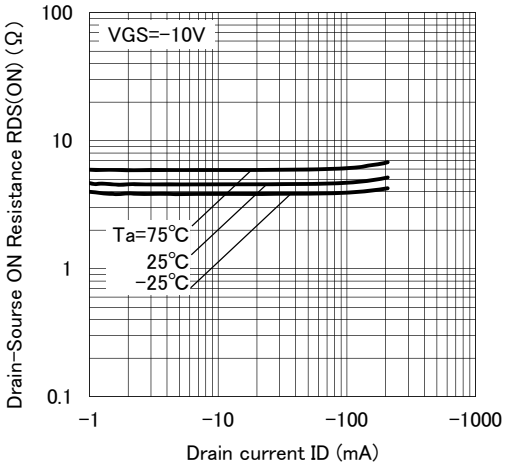
|Yfs|-ID



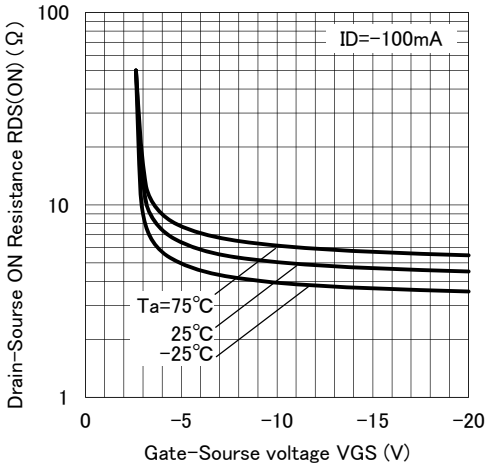
RDS(ON)-ID



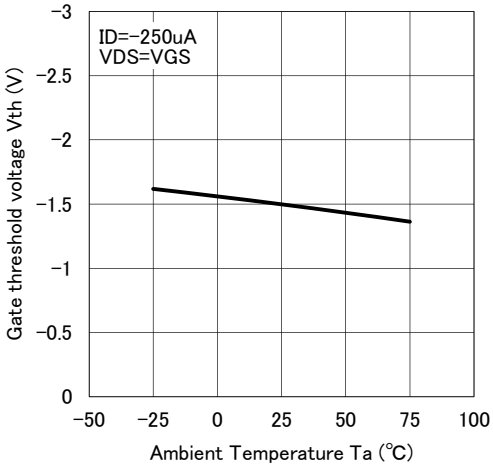
RDS(ON)-ID



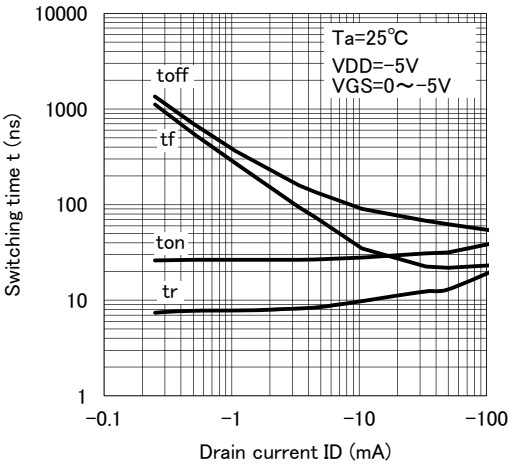
RDS(ON)-VGS



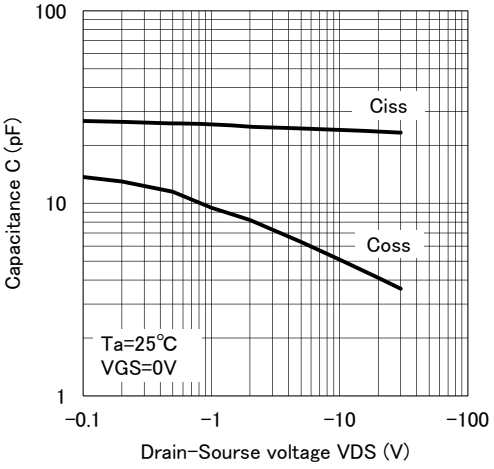
Vth-Ta



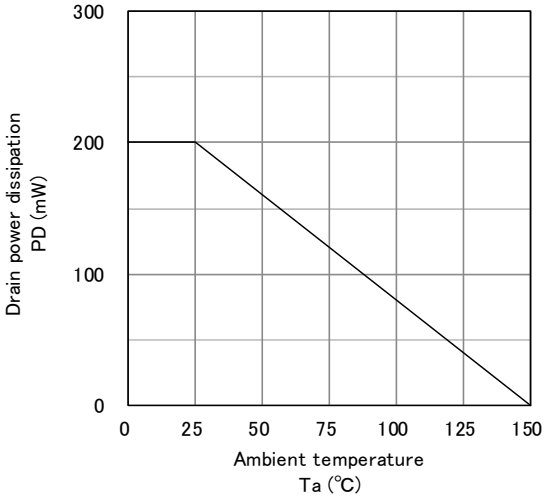
t-ID



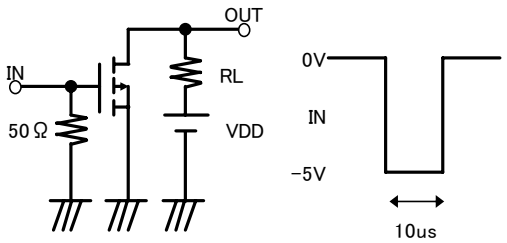
C-VDS



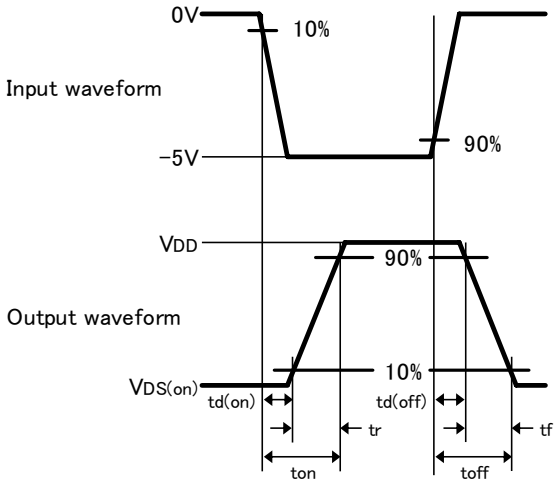
PD - Ta



Switching time test condition



Duty ≦ 1%
VDD = −5V
Common source
Ta = 25℃



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