

INJ0303AC1

High Speed Switching
Silicon P-channel MOSFET

DESCRIPTION

INJ0303AC1 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

• Drive voltage $-2.0V$

• Low on resistance.

$R_{DS(ON)}=50m\Omega(TYP)$ @ $I_D=-1.5A$, $V_{GS}=-4.0V$

$R_{DS(ON)}=70m\Omega(TYP)$ @ $I_D=-1.5A$, $V_{GS}=-2.5V$

$R_{DS(ON)}=90m\Omega(TYP)$ @ $I_D=-1.5A$, $V_{GS}=-2.0V$

• High speed switching..

• Small package for easy mounting..

APPLICATION

Switching

MAXIMUM RATINGS ($T_a=25^\circ C$)

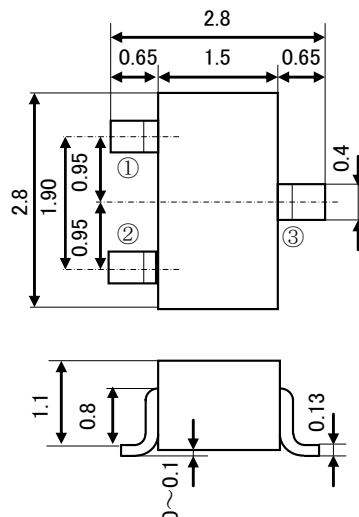
Parameter	Symbol	Rating	Unit
Drain-source voltage	V_{DSS}	-12	V
Gate-source voltage	V_{GSS}	± 8	V
Drain current(DC)	I_D	-3.0	A
Drain current(Pulse)	I_{DP}^{*1}	-6.0	A
Total power dissipation	P_D	200	mW
	P_D^{*2}	650	mW
Channel temperature	T_{ch}	+150	$^\circ C$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ C$

*1 $P_w \leq 10 \mu s$, Duty cycle $\leq 1\%$

*2 Package mounted on $20mm \times 20mm \times 1mm$ (Cu pad $100mm^2$)
glass-epoxy substrate

OUTLINE DRAWING

Unit: mm



JEITA: SC-59

JEDEC: Similar to TO-236

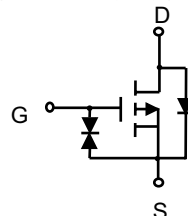
TERMINAL CONNECTER

①: GATE

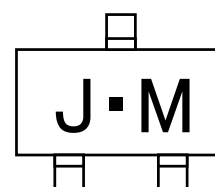
②: SOURCE

③: DRAIN

EQUIVALENT CIRCUIT



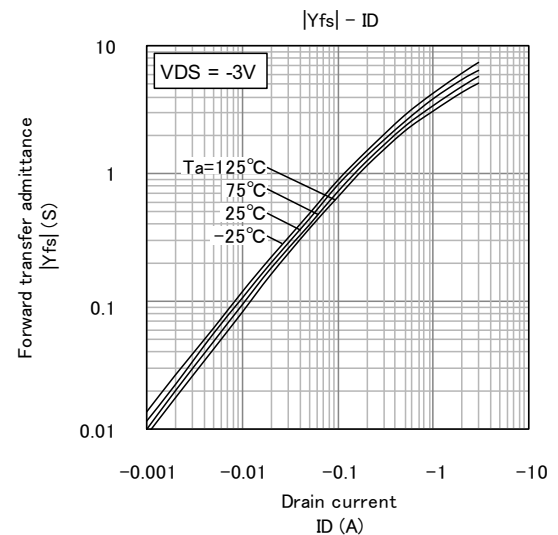
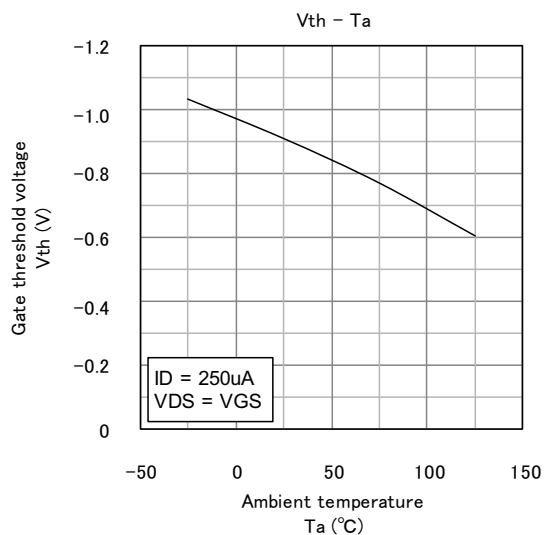
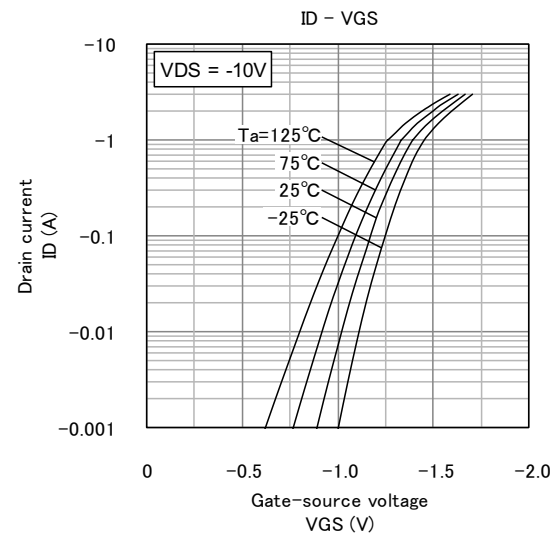
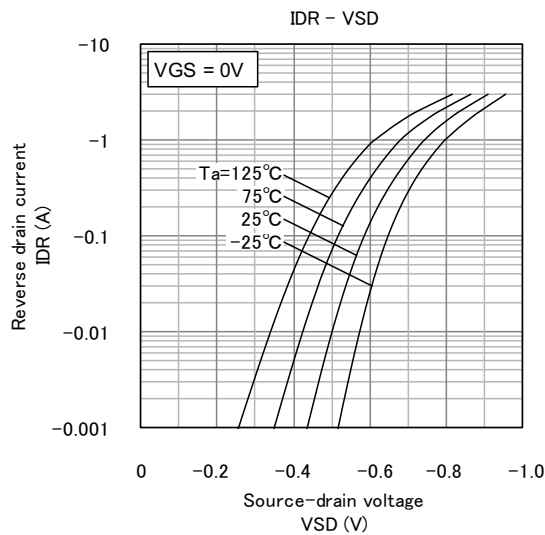
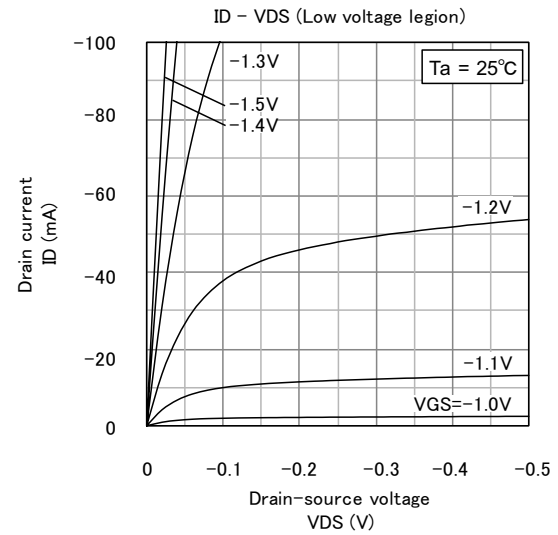
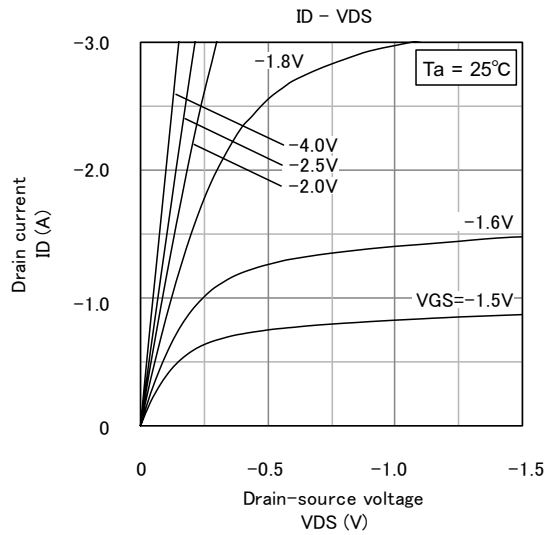
MARKING



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

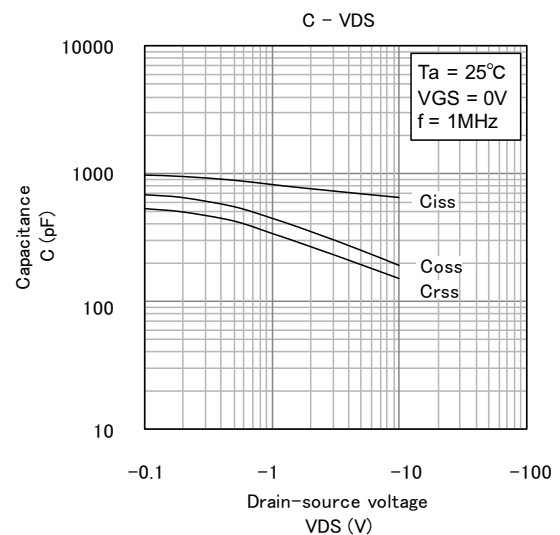
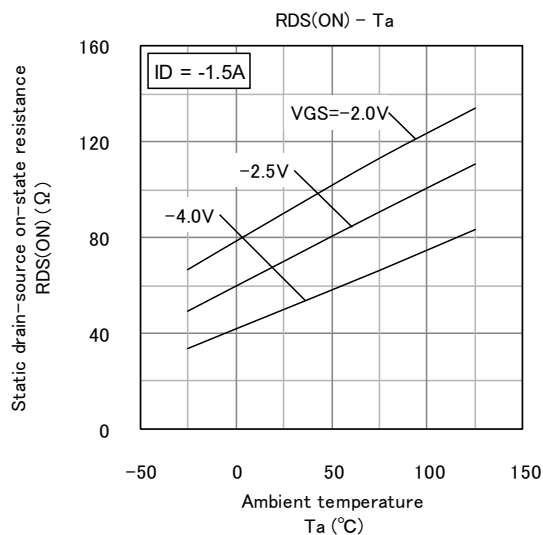
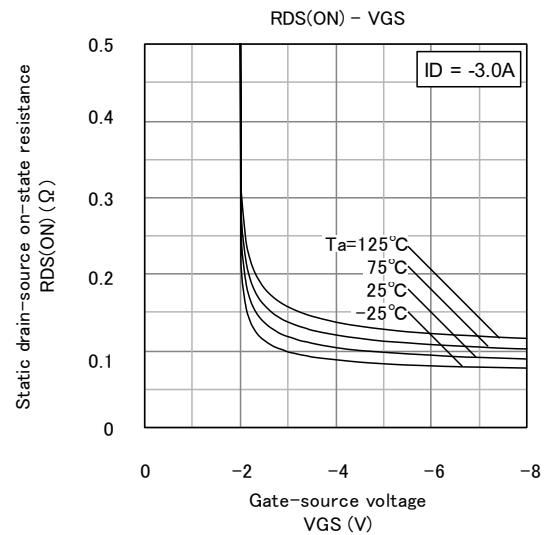
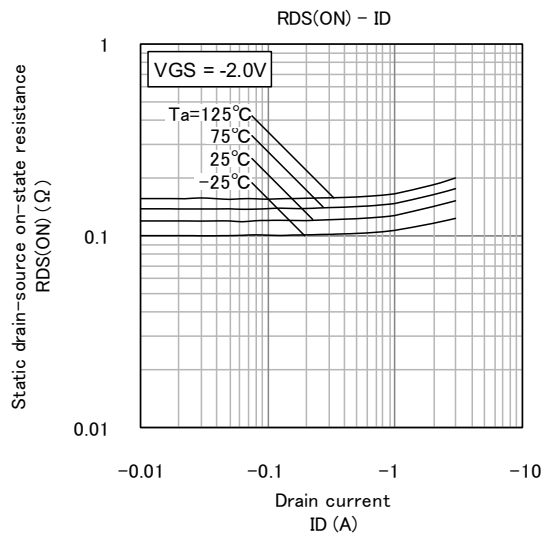
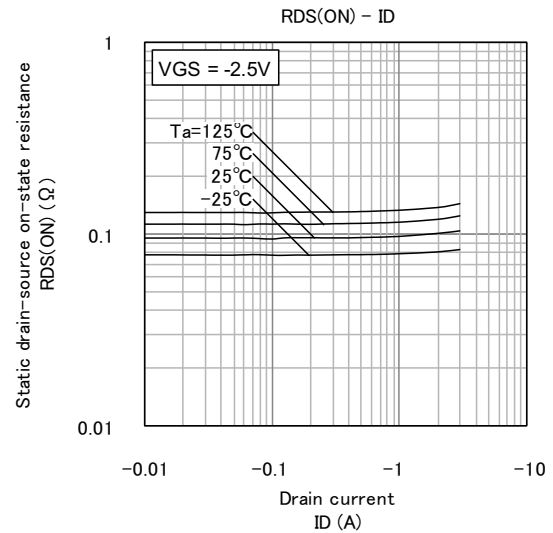
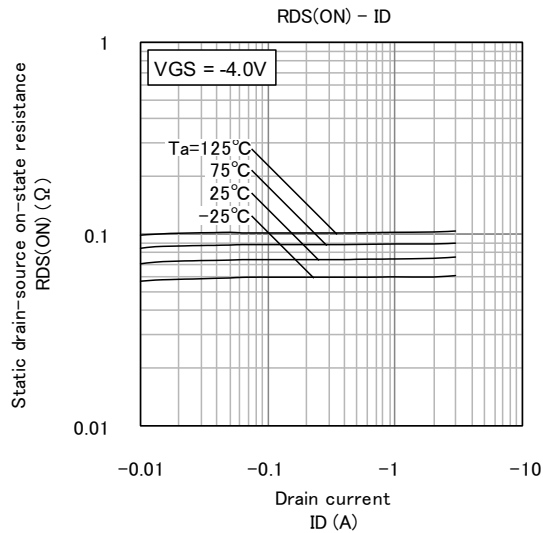
Parameter	Symbol	Test condition	Limit			Unit
			MIN	TYP	MAX	
Drain-source breakdown voltage	$V_{(BR)DSS}$	$I_D=-100 \mu A$, $V_{GS}=0V$	-12	-	-	V
Gate-source leak current	I_{GSS}	$V_{GS}=\pm 5V$, $I_{DS}=0A$	-	-	± 0.5	μA
Zero gate voltage drain current	I_{DSS}	$V_{DS}=-12V$, $V_{GS}=0V$	-	-	-1	μA
Gate threshold voltage	V_{th}	$I_D=-250 \mu A$, $V_{DS}=V_{GS}$	-0.4	-	-1.2	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=-3V$, $I_D=-1.5A$	3.6	-	-	S
Static drain-source on-state resistance	$R_{DS(ON)}$	$I_D=-1.5A$, $V_{GS}=-4.0V$	-	50	70	$m\Omega$
		$I_D=-1.5A$, $V_{GS}=-2.5V$	-	70	95	$m\Omega$
		$I_D=-1.5A$, $V_{GS}=-2.0V$	-	90	180	$m\Omega$
Input capacitance	C_{iss}	$V_{DS}=-10V$, $V_{GS}=0V$, $f=1MHz$	-	650	-	pF
Output capacitance	C_{oss}		-	190	-	pF
Reverse transfer capacitance	C_{rss}		-	150	-	pF
Switching time (turn on time)	t_{on}	$V_{DD}=-10V$, $I_D=-1A$	-	100	-	ns
Switching time (turn off time)	t_{off}	$V_{GS}=0 \sim -2.5V$	-	145	-	ns

TYPICAL CHARACTERISTICS



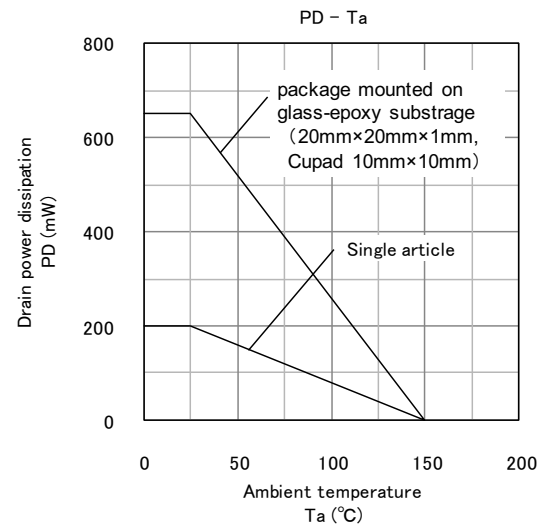
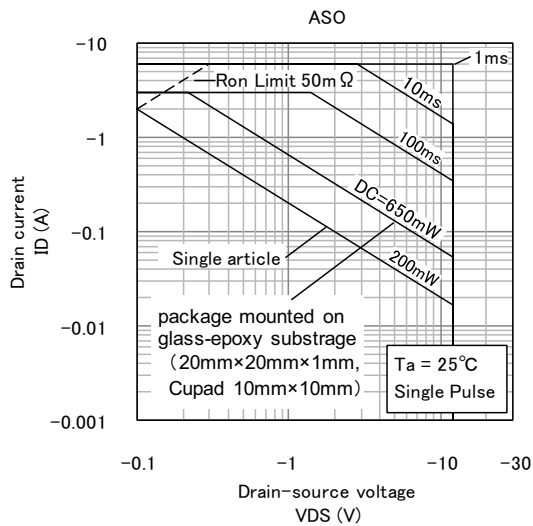
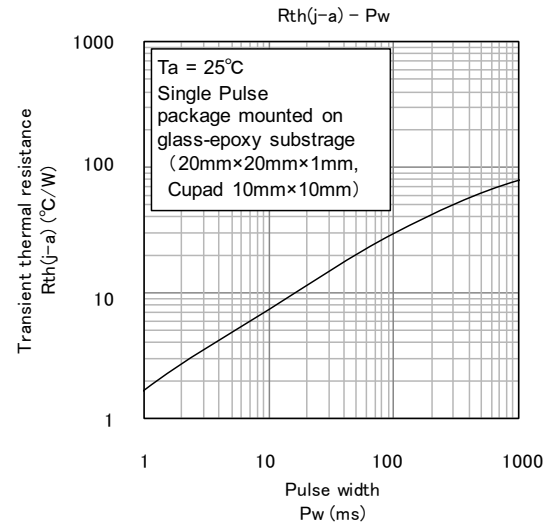
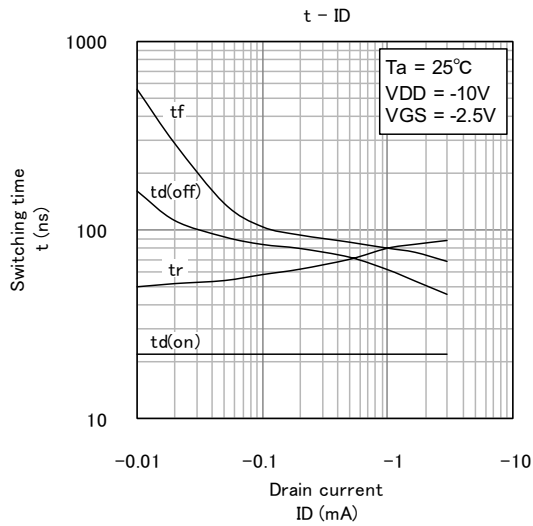
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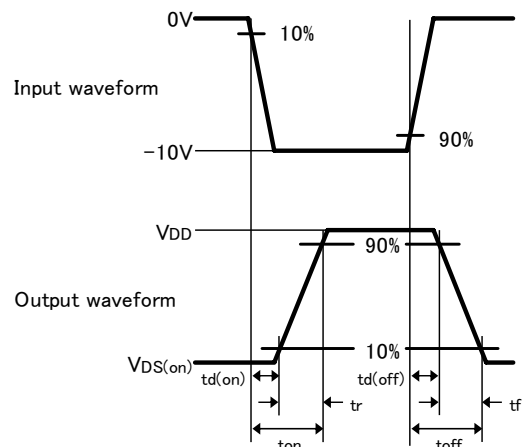
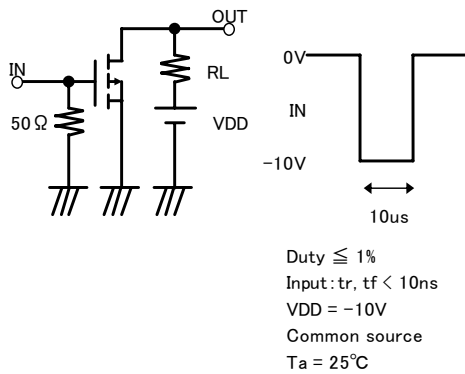


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Switching time test condition





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