INJ0212AP1

High Speed Switching
Silicon P-channel MOSFET

DESCRIPTION

INJ0212AP1 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

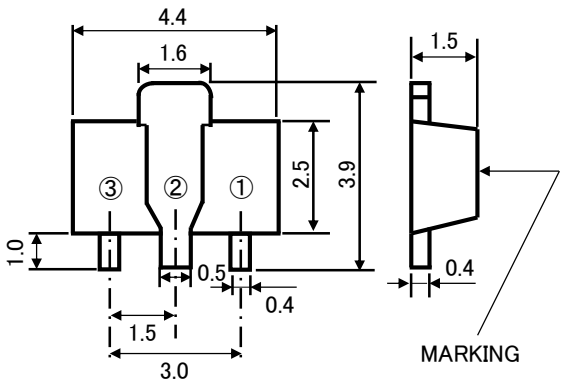
・Input impedance is high, and not necessary to consider a drive electric current.
・High drain current I_D=−2.3A
・V_{th} is low, and drive by low voltage is possible. V_{th}=−4V
・Low on Resistance. $R_{DS(on)}$=115mΩ(TYP).
・High speed switching.

APPLICATION

Switching

OUTLINE DRAWING

UNIT : mm



TERMINAL CONNECTER
①: GATE
②: DRAIN
③: SOURCE

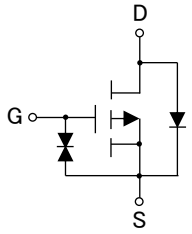
JEITA : SC-62
JEDEC : SOT-89

MAXIMUM RATING (Ta=25℃)

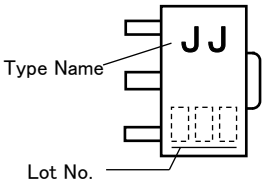
Symbol	Parameter	Rating	UNIT
VDSS	Drain-Source Voltage	−30	V
VGSS	Gate-Source Voltage	±20	V
ID	Drain Current (DC) ※1	−2.3	A
IDP	Drain Current(Pulse) ※3	−5	A
PD	Total Power Dissipation ※1	2	W
PD	Total Power Dissipation ※2	650	mW
Tch	Channel Temperature	+150	℃
Tstg	Storage Temperature	−55～+150	℃

※1 : 19mm×45mm×1mm package mounted on ceramic substrate
※2 : 19mm×45mm×1mm package mounted on glass-epoxy substrate
※3 : Pw≦10ms, Duty cycle≦1%

EQUIVALENT



MARKING

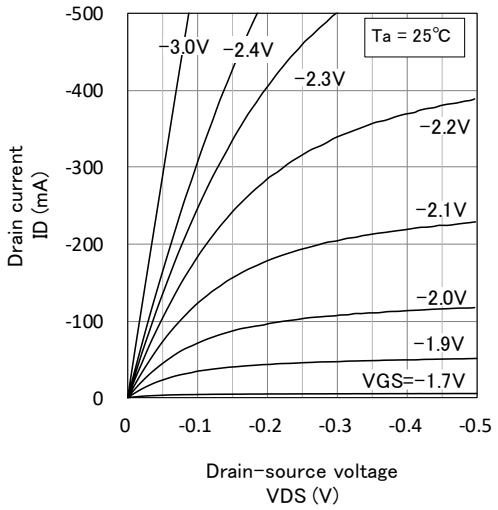


ELECTRICAL CHARACTERISTICS (Ta=25℃)

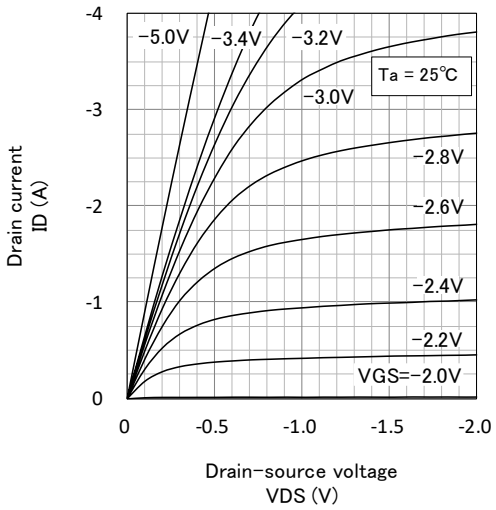
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	V(BR)DSS	ID=−100μA, VGS=0V	−30	−	−	V
Gate-Source Leak Current	IGSS	VGS=±20V, VDS=0V	−	−	±10	μA
Zero Gate Voltage Drain Current	IDSS	VDS=−30V, VGS=0V	−	−	−1.0	μA
Gate Threshold Voltage	Vth	ID=−250μA, VDS=VGS	−1.0	−	−2.5	V
Forward Transfer Admittance	|Yfs|	VDS=−10V, ID=−1.2A	−	2.6	−	S
Static Drain-Source On-State Resistance	RDS(ON)	ID=−2A, VGS=−4.5V	−	140	−	mΩ
		ID=−2A, VGS=−10V	−	115	−	
Input Capacitance	Ciss	VDS=−10V, VGS=0V, f=1MHz	−	550	−	pF
Output Capacitance	Coss		−	100	−	
Feedback Capacitance	Crss		−	70	−	
Switching Time	ton	VDD=−30V, ID=−2A, VGS=−0～−5V	−	35	−	ns
	toff		−	75	−	

TYPICAL CHARACTERISTICS

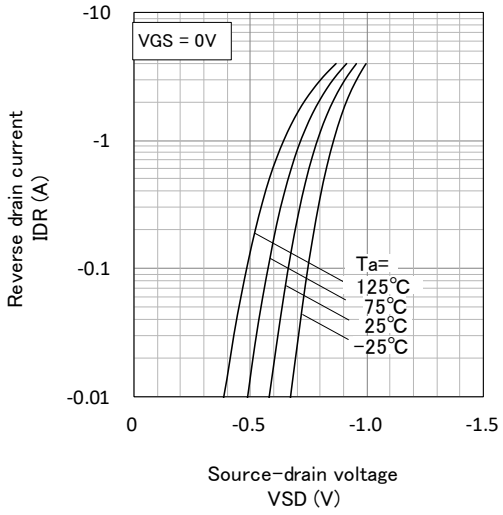
ID – VDS(low voltage region)



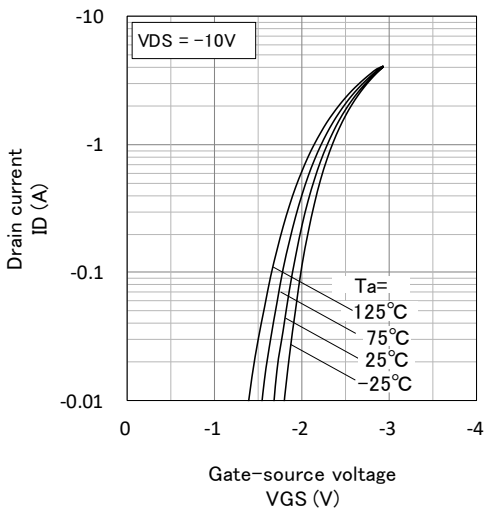
ID – VDS



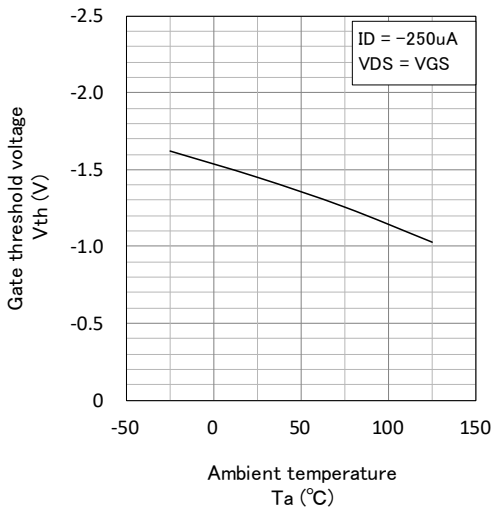
IDR – VSD



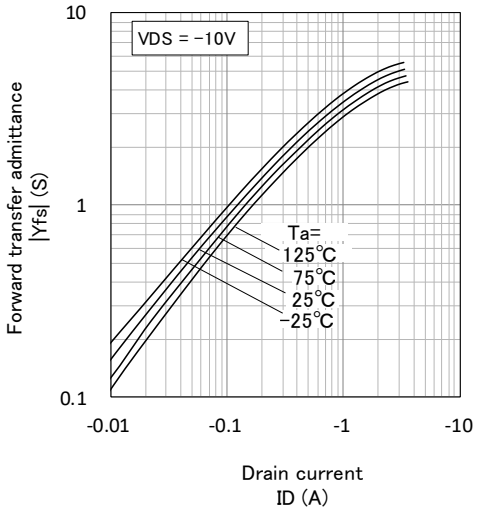
ID – VGS



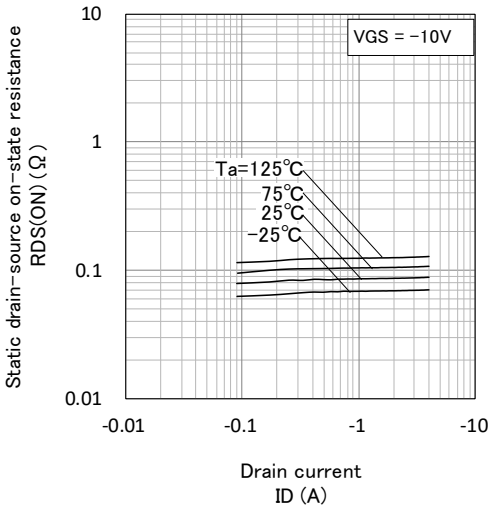
Vth – Ta



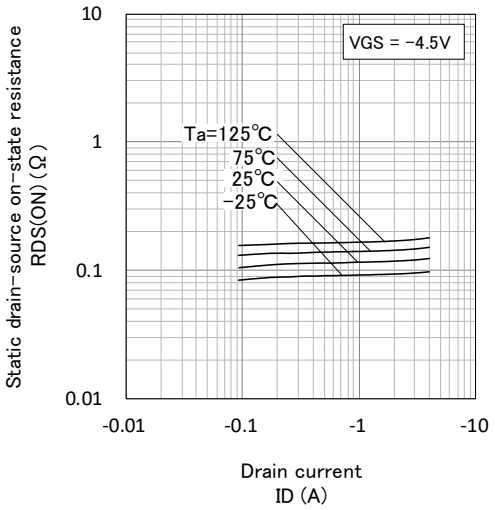
|Yfs| – ID



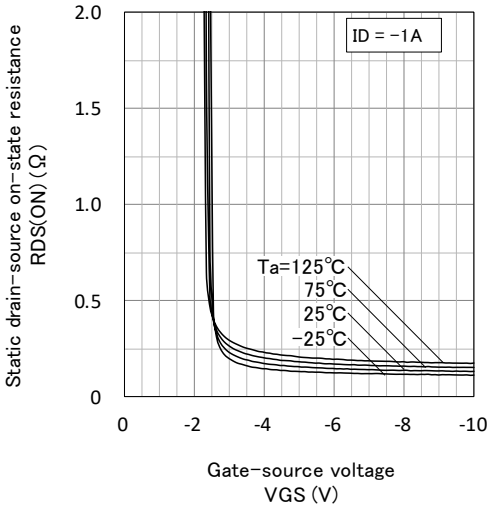
RDS(ON) – ID



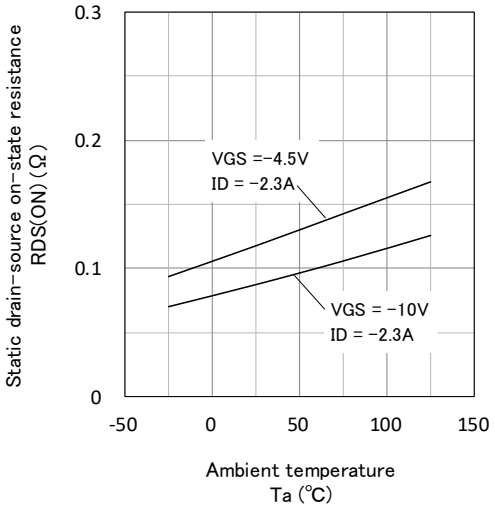
RDS(ON) – ID



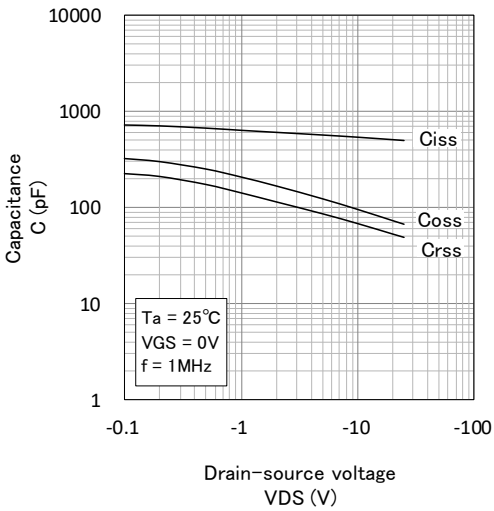
RDS(ON) – VGS



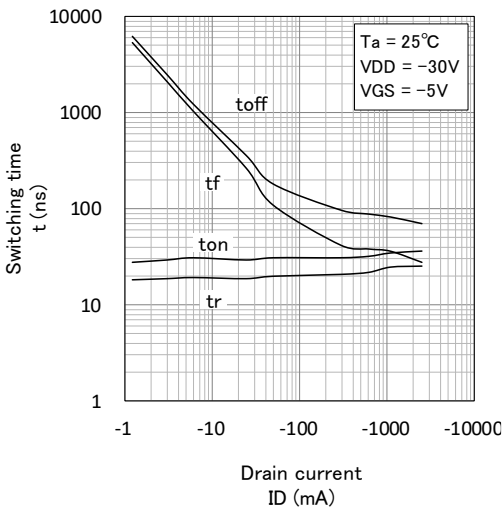
RDS(ON) – VGS

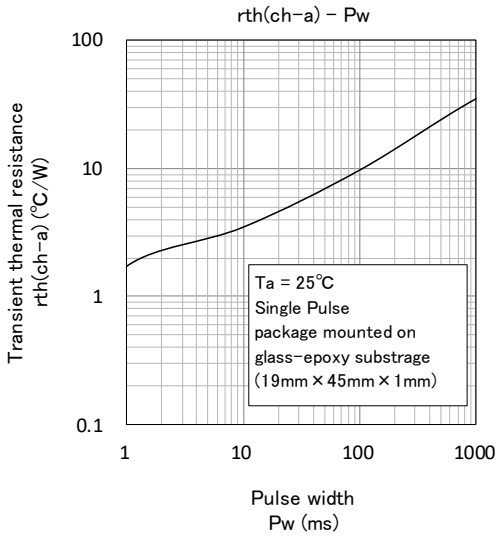


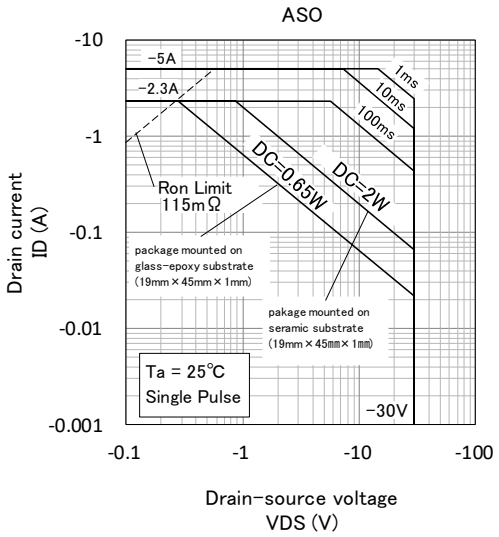
C – VDS

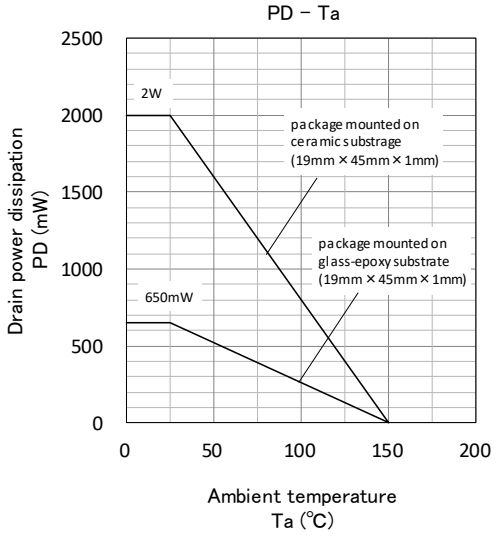


t – ID

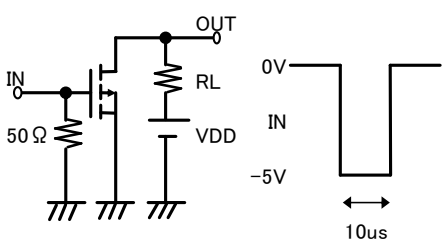




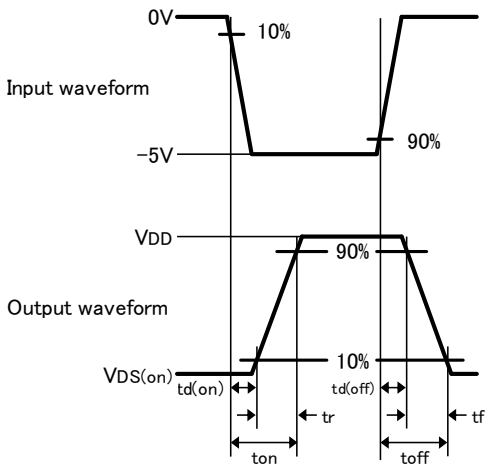




Switching time test condition



Duty ≦ 1%
Input:tr, tf < 10ns
VDD = -30V
Common source
Ta = 25℃



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