INJ021AAP1

High Speed Switching
Silicon P-channel MOSFET

DESCRIPTION

INJ021AAP1 is a Silicon P-channel MOSFET.

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

FEATURE

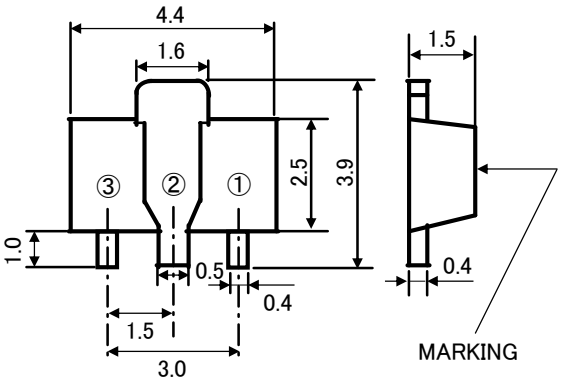
・Input impedance is high, and not necessary to consider a drive electric current.
・High drain current ID=−1.2A
・Drive voltage −4.0V
・Low on Resistance. RDS(on)=0.7Ω(TYP).
・High speed switching.

APPLICATION

Switching

OUTLINE DRAWING

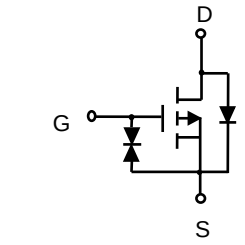
UNIT:mm



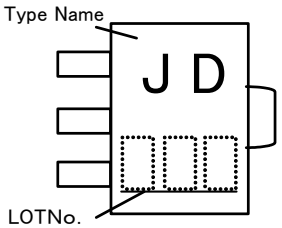
TERMINAL CONNECTOR
①:GATE
②:DRAIN
③:SOURCE

JEITA:SC-62
JEDEC:SOT-89

EQUIVALENT CIRCUIT



MARKING



MAXIMUM RATINGS(Ta=25℃)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	−100	V
Gate-Source Voltage	V_{GSS}	±20	V
Drain Current(DC)	I_D	−1.2	A
Drain Current(Pulse) (※1)	I_{DP}	−3	A
Total Power Dissipation	P_D	0.5	W
		1.2(※2)	
Channel Temperature	T_{ch}	+150	℃
Storage Temperature	T_{stg}	−55～+150	℃

※1:Single pulse, Pw≦1ms

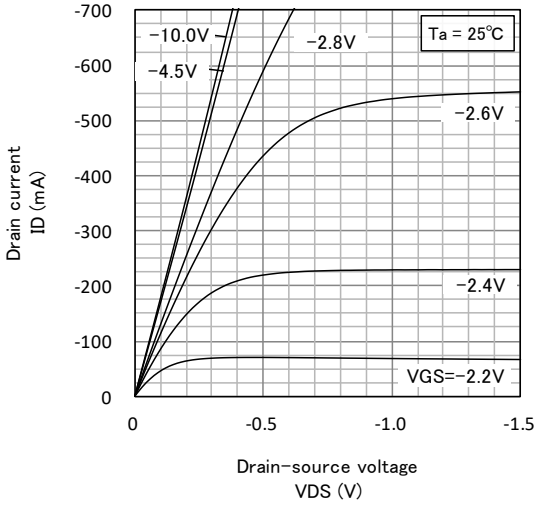
※2:package mounted on glass-epoxy substrate
(20mm×20mm×1mm,Cu pad 100mm²)

ELECTRICAL CHARACTERISTICS(Ta=25℃)

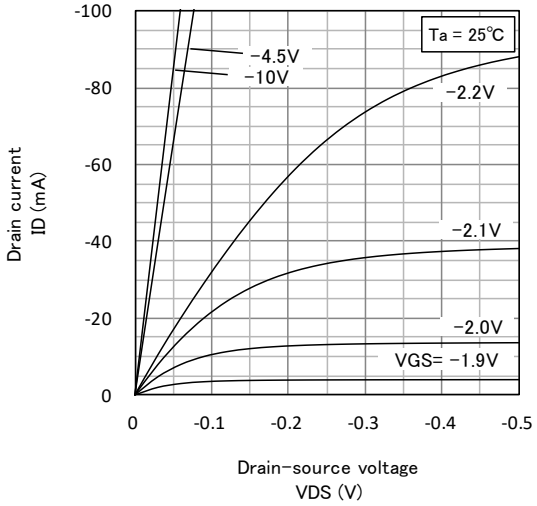
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=−100μA, V_{GS}=0V	−100	−	−	V
Gate-Source Leak current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V	−	−	±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=−100V, V_{GS}=0V	−	−	−10	μA
Gate Threshold Voltage	V_{th}	I_D=−250μA, V_{DS}=V_{GS}	−1.0	−	−2.5	V
Forward Transfer Admittance	$\|Y_{fs}\|$	V_{DS}=−10V, I_D=−1A	−	2.0	−	S
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	I_D=−0.5A, V_{GS}=−10V	−	0.7	−	Ω
Input Capacitance	C_{iss}	V_{DS}=−10V, V_{GS}=0V, f=1MHz	−	800	−	pF
Output Capacitance	C_{oss}		−	90	−	
Switching Time	t_{on}	V_{DD}=−10V, I_D=−1A	−	250	−	ns
	t_{off}	V_{GS}=0～−5V	−	530	−	

TYPICAL CHARACTERISTICS

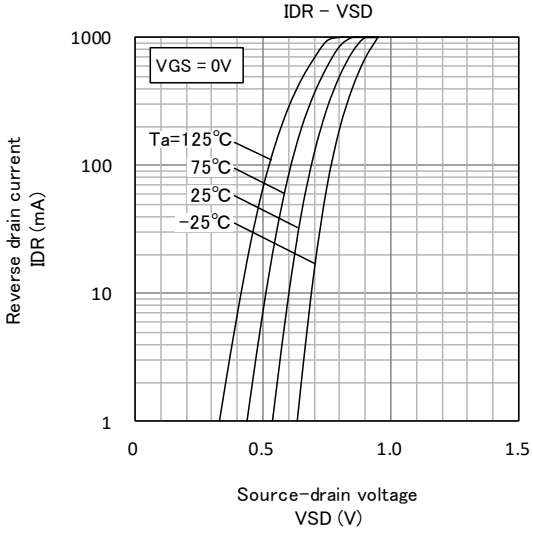
ID – VDS



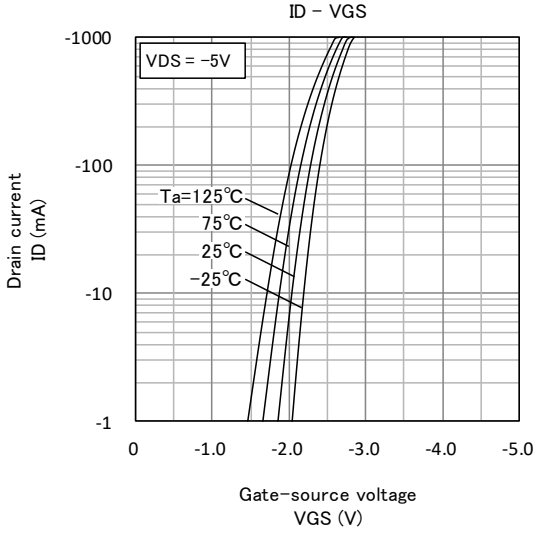
ID – VDS (Low voltage legion)



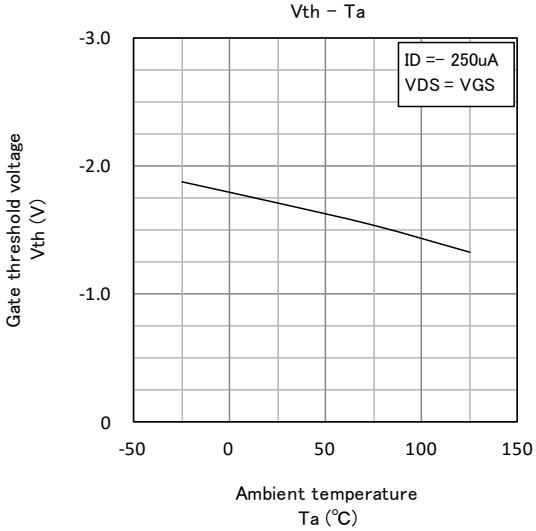
IDR – VSD



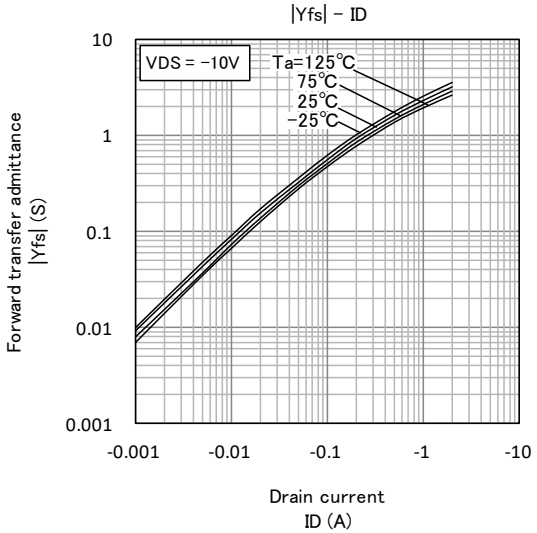
ID – VGS



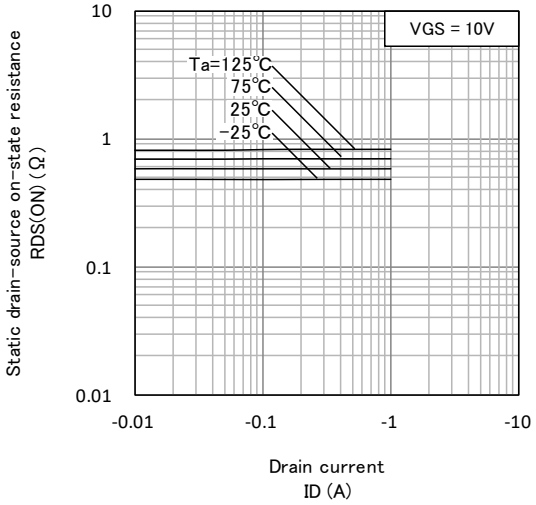
Vth – Ta



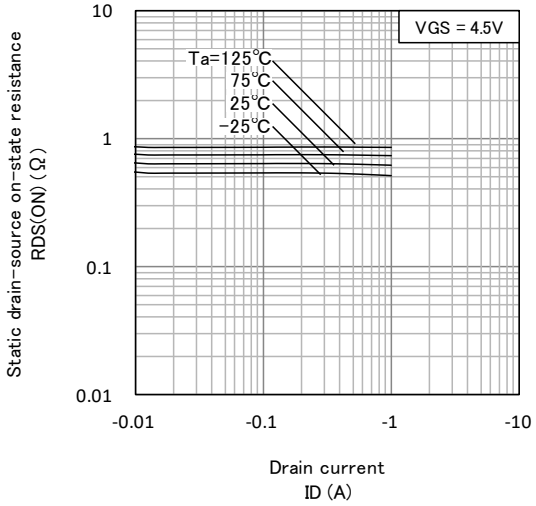
|Yfs| – ID



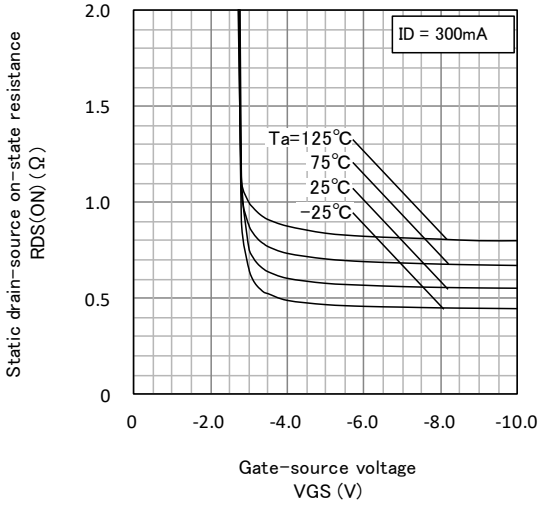
RDS(ON) - ID



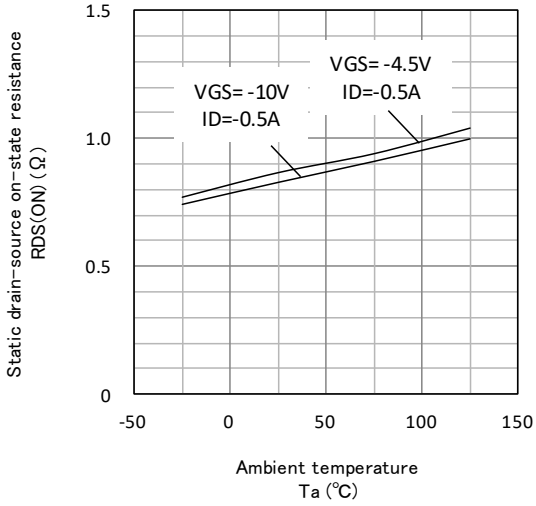
RDS(ON) - ID



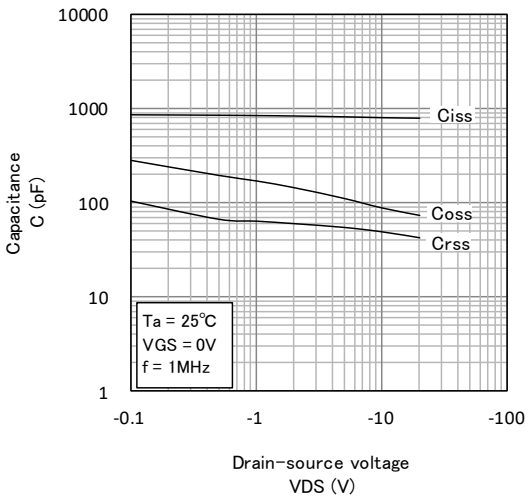
RDS(ON) - VGS



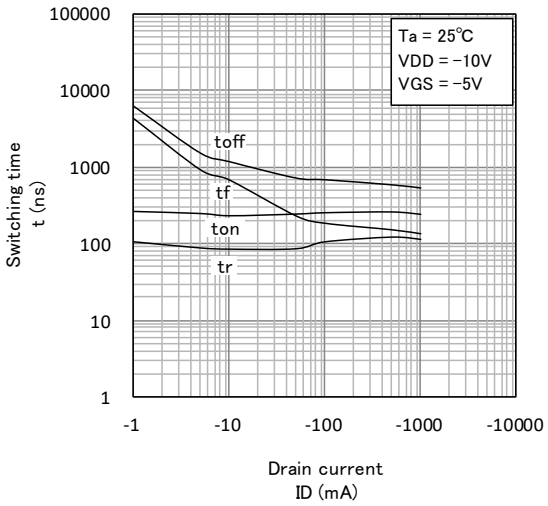
RDS(ON) - Ta



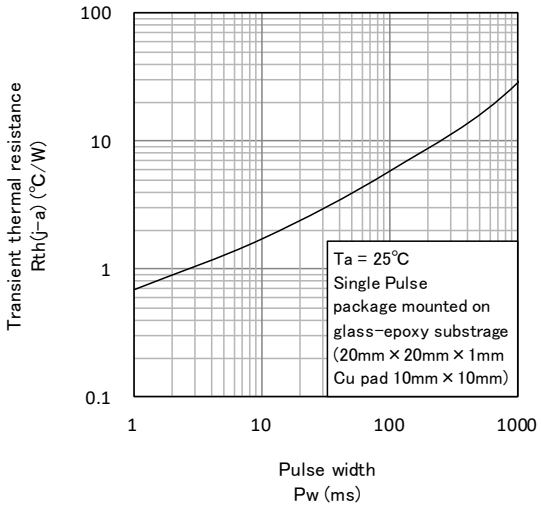
C - VDS



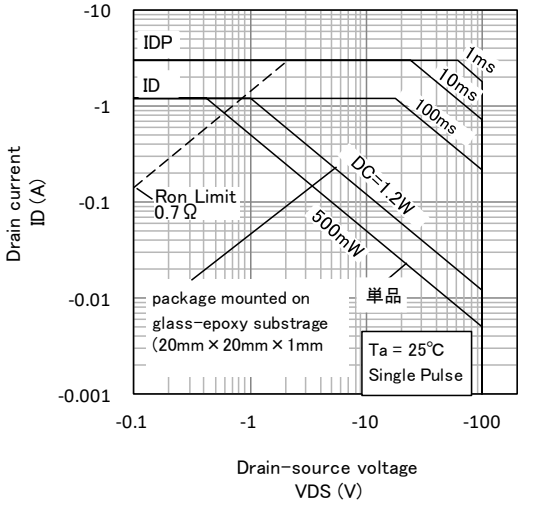
t – ID



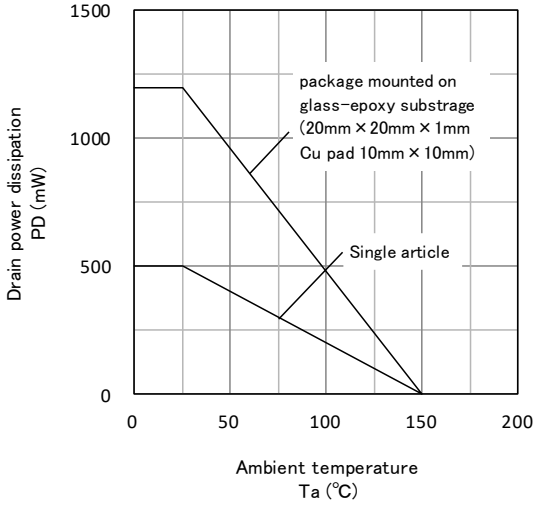
Rth(j-a) – Pw



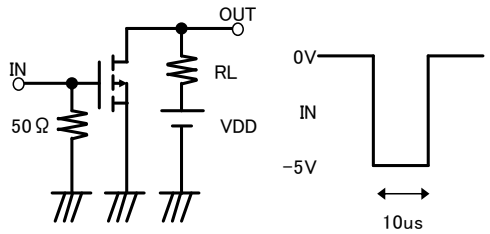
ASO



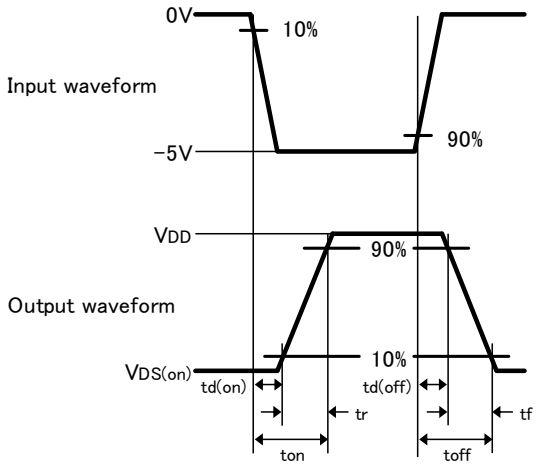
PD – Ta



Switching time test condition



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



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