INK011BAP1

High Speed Switching
Silicon N-channel MOSFET

DESCRIPTION

INK011BAP1 is a Silicon N-channel MOSFET.
This product is most suitable for use such as portable machinery , because voltage drive and low on resistance.

FEATURE

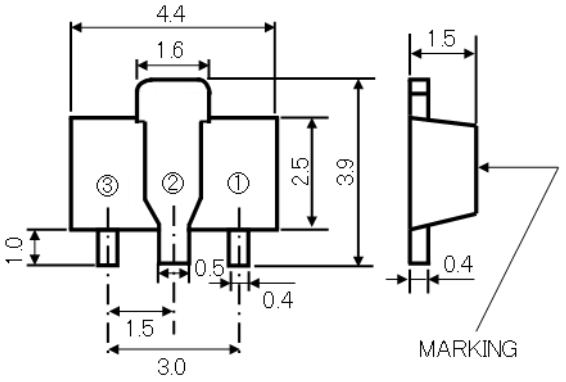
・Input impedance is high, and not necessary to consider a drive electric current.
・High drain current I_D=1.2A
・Drive voltage 4.0V
・High power dissipation P_D=1.0W (package mounted on substrate)

FEATURE

Switching

OUTLINE DRAWING

UNIT:mm



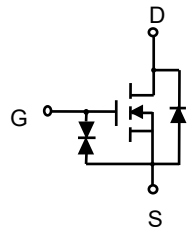
TERMINAL CONNECTER
①:GATE
②:DRAIN
③:SOURCE

JEITA:SC-62
JEDEC:SOT-89

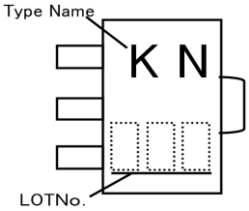
MAXIMUM RATINGS(Ta=25℃)

Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	150	V
V_{GSS}	Gate-Source Voltage	±20	V
I_D	Drain Current(DC)	1.2	A
P_D	Total Power Dissipation※2	0.5	W
		1.0(※1)	
T_{ch}	Channel Temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

EQUIVALENT CIRCUIT



MARKING



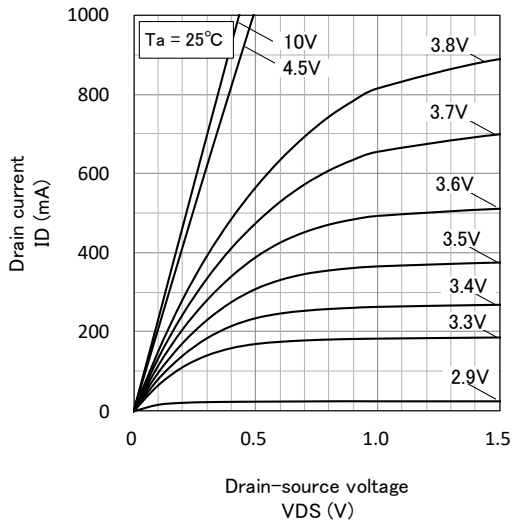
※1:package mounted on glass-epoxy substrate (20mm×20mm×1mm,Cu pad 257mm^2).

ELECTRICAL CHARACTERISTICS(Ta=25℃)

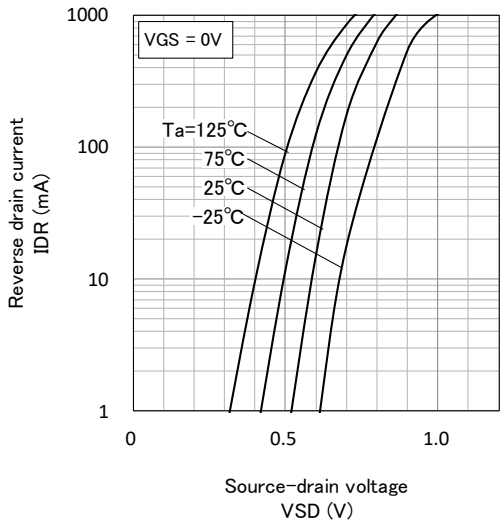
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=100μA, V_{GS}=0V	150	−	−	V
Gate-Source Leak current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	−	−	±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=150V ,V_{GS}=0V	−	−	1.0	μA
Gate Threshold Voltage	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	−	3.0	−	S
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	I_D=0.5A, V_{GS}=4.5V	−	0.5	0.8	Ω
Input Capacitance	C_{iss}	V_{DS}=10V, V_{GS}=0V, f=1MHz	−	220	−	pF
Output Capacitance	C_{oss}		−	55	−	pF
Switching Time	t_{on}	V_{DD}=30V, I_D=1A V_{GS}=0～5V	−	260	−	ns
	t_{off}		−	1660	−	ns

TYPICAL CHARACTERISTICS

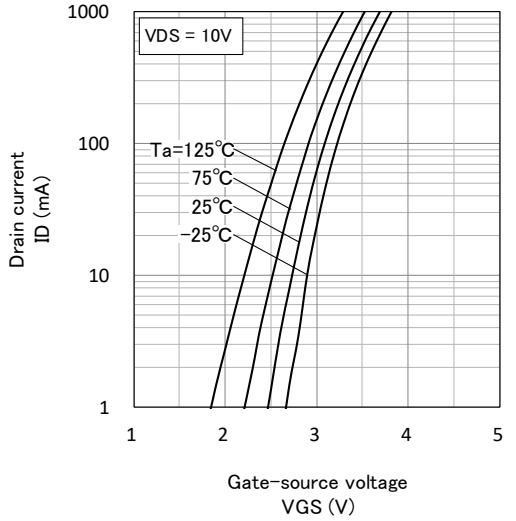
ID – VDS



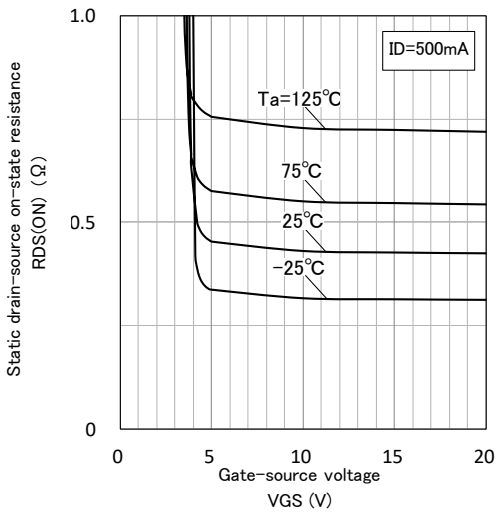
IDR – VSD



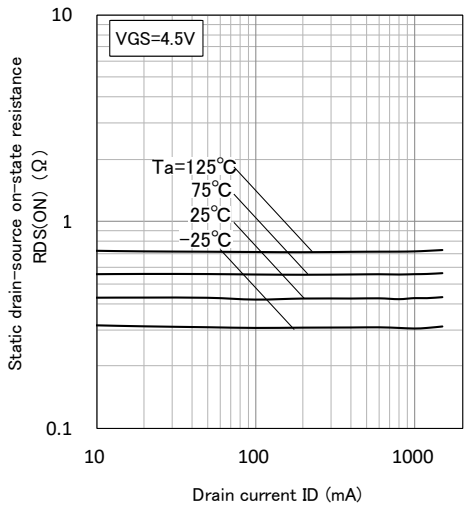
ID – VGS



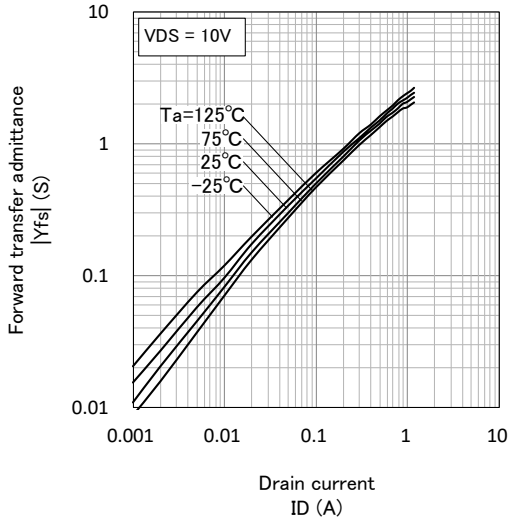
RDS(ON)–VGS



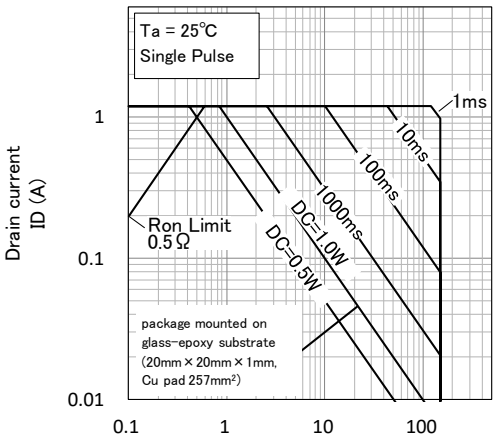
RDS(ON)–ID



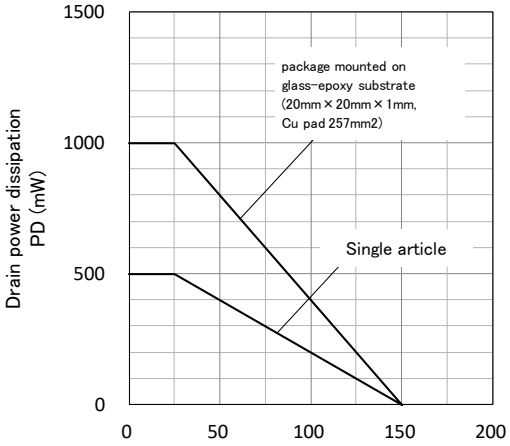
|Yfs| – ID



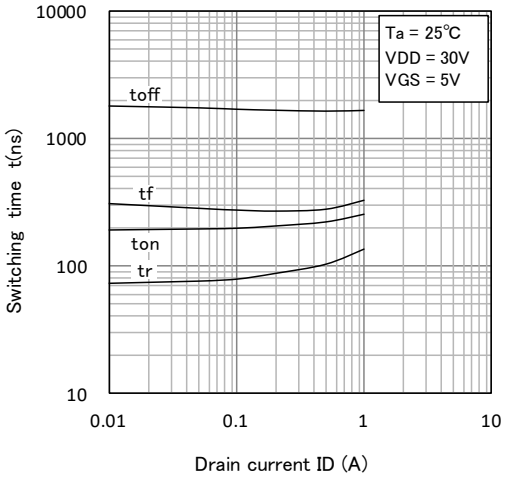
ASO



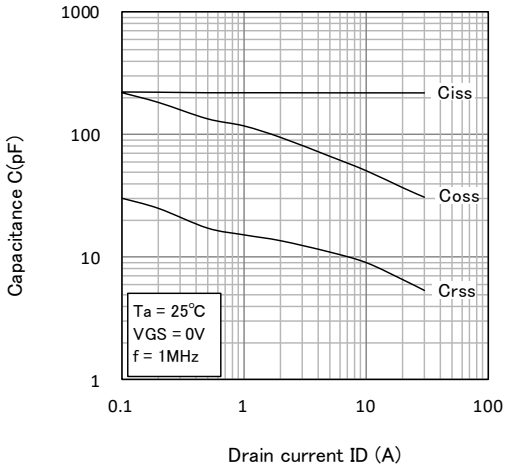
PD – Ta



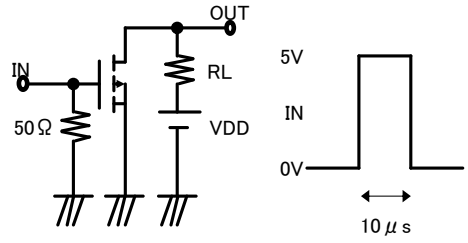
t – ID



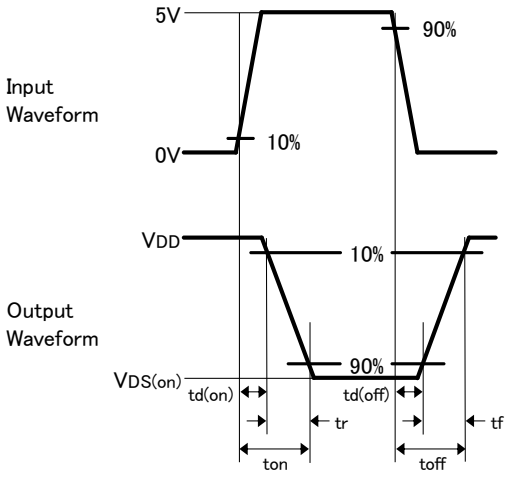
C – VDS



Switching time test circuit



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



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