PRELIMINARY

Notice : This is not a final specification
Some parametric are subject to change.

INJ0E22AG1

High Speed Switching
Silicon P-channel MOSFET

DESCRIPTION

INJ0E22AG1 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

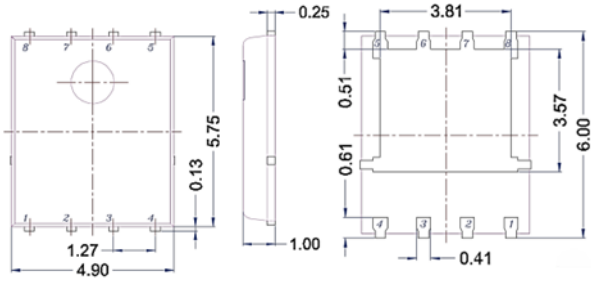
・Low on-resistance RDS(ON): max. 12mΩ @V_{GS}=10V、I_D=-17A.
・High drain current I_D=-17A
・Drive voltage -4.0V
・High speed switching.

APPLICATION

Switching Regulator, DC/DC Converter

OUTLINE DRAWING

Unit : mm



TERNIMAL CONNECTOR

JEITA: HSOP8

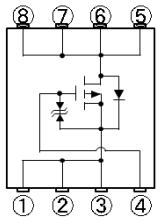
①:SOURCE
②:SOURCE
③:SOURCE
④:GATE
⑤:DRAIN
⑥:DRAIN
⑦:DRAIN
⑧:DRAIN

MAXIMUM RATINGS

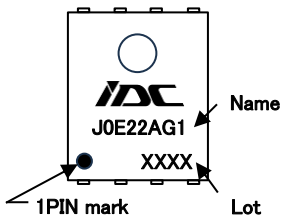
Paramete	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GSS}	±25	V
Drain Current(DC)(※1) Ta=25℃	I_D	-17	A
Drain Current(Pulse) (※2)	I_{DP}	-28	A
Total Power Dissipation (※1)	P_D	3	W
Channel Temperature	T_{ch}	+150	℃
Storage Temperature	T_{stg}	-55～+150	℃

※1 package mounted on glass-epoxy substrate.
39mm × 39mm × 1.6mm
Copper foil with an area of 1460 mm² and a thickness of 35 μm
※2 : Pw≦10ms, Duty cycle≦1%

EQUIVALENT CIRCUIT



MARKING

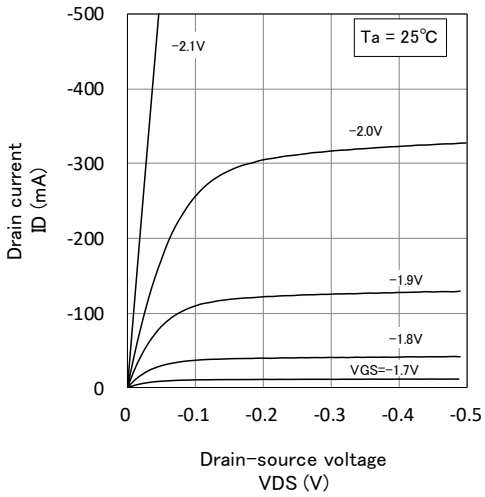


ELECTRICAL CHARACTERISTICS (Ta=25℃)

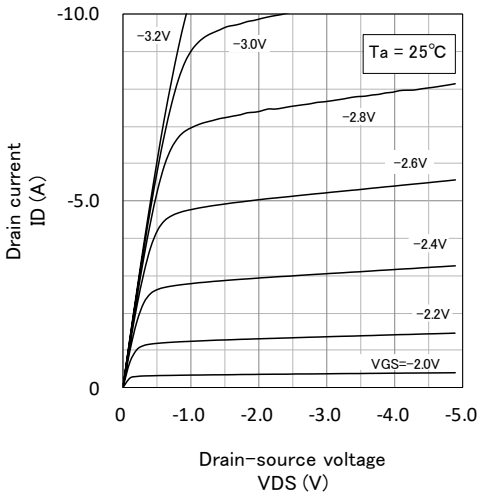
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=-250μA, V_{GS}=0V	-30	-	-	V
Gate-Source Leak Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	-	-	±0.1	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V	-	-	-100	μA
Gate Threshold Voltage	V_{th}	I_D=-250μA, V_{DS}=V_{GS}	-1.0	-	-2.5	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	I_D=-17A, V_{GS}=-10V	-	9.5	12	mΩ
		I_D=-12A, V_{GS}=-4.5V	-	13	17	
Input Capacitance	C_{iss}	V_{DS}=-10V, V_{GS}=0V, f=1MHz	-	3780	-	pF
Output Capacitance	C_{oss}		-	530	-	
Feedback Capacitance	C_{rss}		-	330	-	
Switching Time	t_{on}	V_{DS}=-20V, I_D=-200mA, f=1MHz	-	350	-	ns
	t_{off}		-	920	-	

TYPICAL CHARACTERISTICS

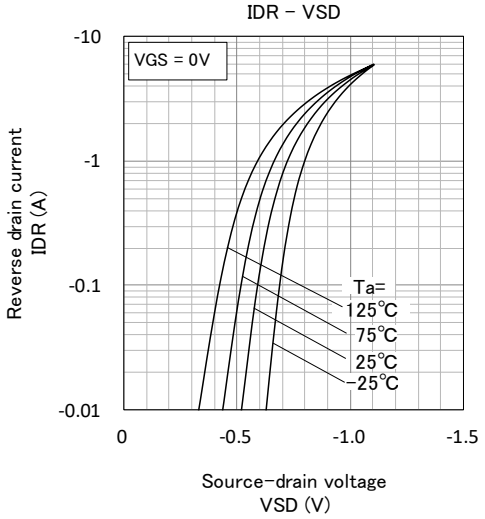
ID – VDS(Low Voltage Area)



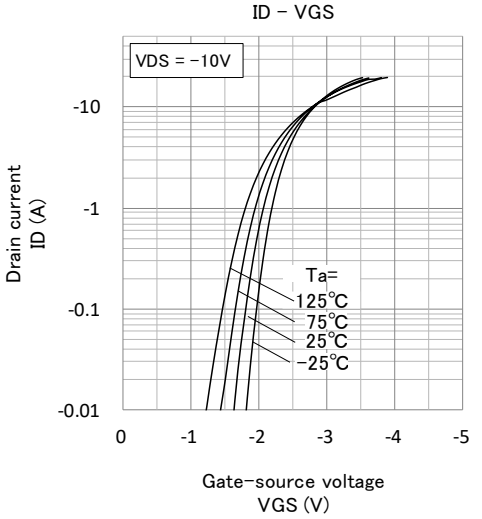
ID – VDS



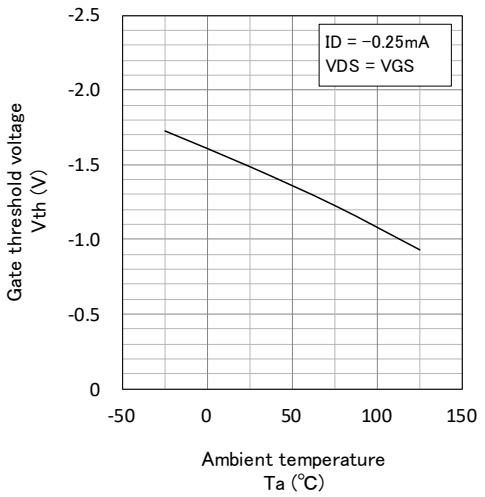
IDR – VSD



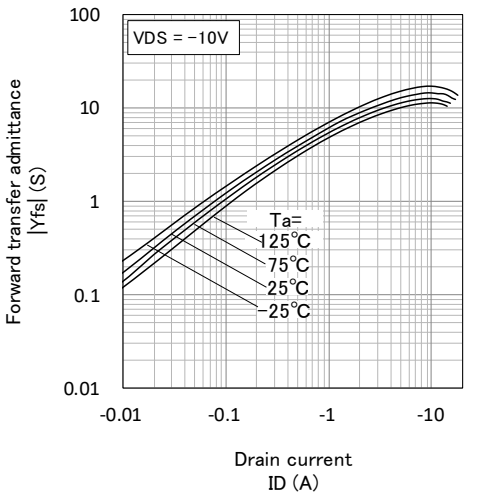
ID – VGS



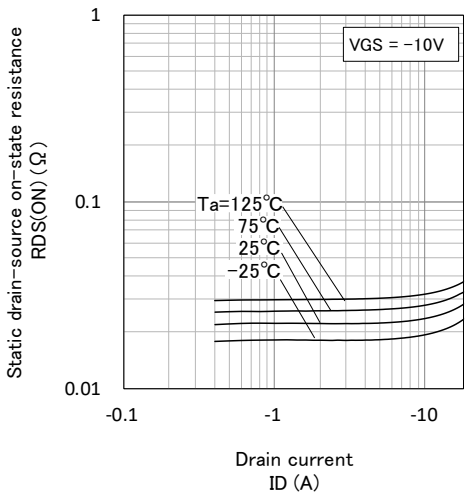
Vth – Ta



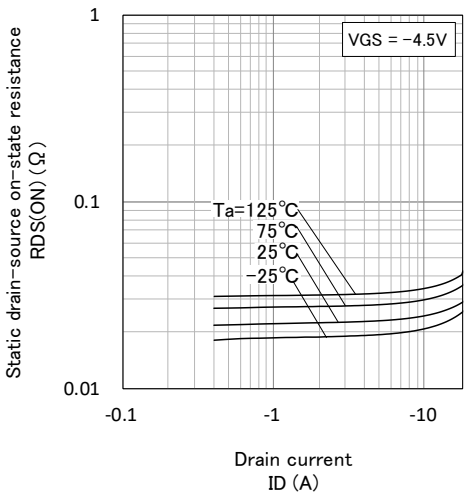
|Yfs| – ID



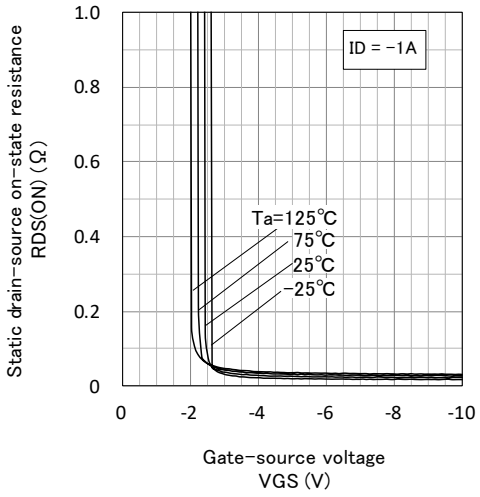
RDS(ON) – ID



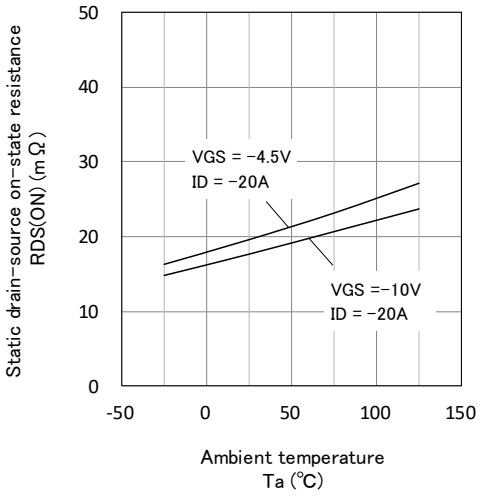
RDS(ON) – ID



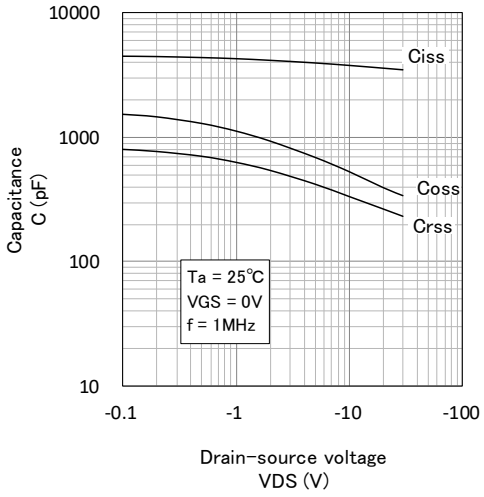
RDS(ON) – VGS



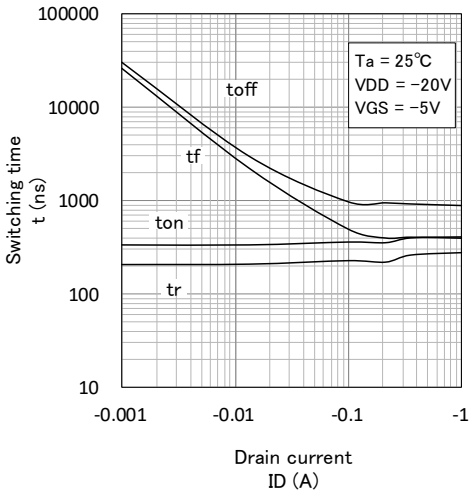
RDS(ON) – Ta



C – VDS



t – ID



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