



YJS05GP10A

P-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	-100V
I_D	-4.5A
$R_{DS(ON)}$ (at $V_{GS}=-10V$)	110 mohm
$R_{DS(ON)}$ (at $V_{GS}=-4.5V$)	120 mohm
100% EAS Tested	
100% V_{DS} Tested	

General Description

Split gate 107b MOSFET technology
High density cell design for low $R_{DS(ON)}$
Low C_{rss} (Typ.25pF)
Moisture Sensitivity Level 3



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Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D =-250	-100			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-100V, V _{GS} =0V	T _J =25		-1	
			T _J =150		-100	
Gate-Body Leakage Current	I _{GSS}	V _{GS} = 20V, V _{DS} =0V			100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =-250	-1.0	-1.8	-2.5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = -10V, I _D =-3A		83	110	m
		V _{GS} = -4.5V, I _D =-2A		95	120	
Diode Forward Voltage	V _{SD}	I _S =-3A, V _{GS} =0V			-1.3	V
Maximum Body-Diode Continuous Current	I _S				-4.5	A
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =-50V, V _{GS} =0V, f=1MHZ		1051		pF
Output Capacitance	C _{oss}			119		
Reverse Transfer Capacitance	C _{rss}			25		
Switching Parameters						
Total Gate Charge	Q _{g(-10V)}	V _{GS} =-10V, V _{DS} =-50V, I _D =-5A		20		nC
Total Gate Charge	Q _{g(-4.5V)}			9.7		
Gate-Source Charge	Q _{gs}			3.9		
Gate-Drain Charge	Q _{gd}			4.3		
Reverse Recovery Charge	Q _{rr}	I _F =-5A, di/dt=100A/us		140		
Reverse Recovery Time	t _{rr}			80		
Turn-on Delay Time	t _{D(on)}	V _{GS} =-10V, V _{DD} =-50V, I _{DS} =-5A R _{GEN} =6		10		ns
Turn-on Rise Time	t _r			30		
Turn-off Delay Time	t _{D(off)}			77		
Turn-off fall Time	t _f			81		

A. Repetitive rating; pulse width limited by max. junction temperature.

B.



Typical Performance Characteristics

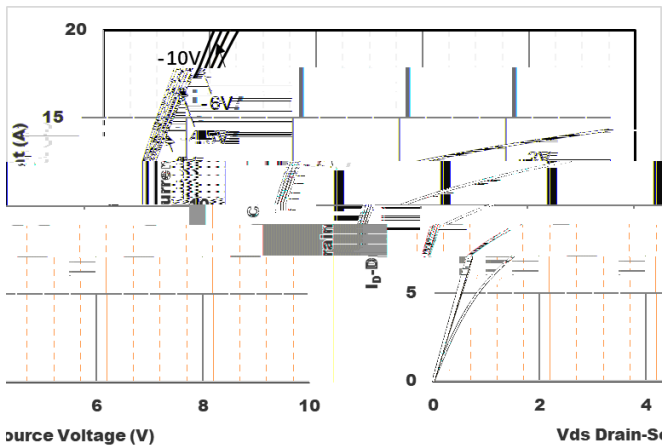


Figure1. Output Characteristics

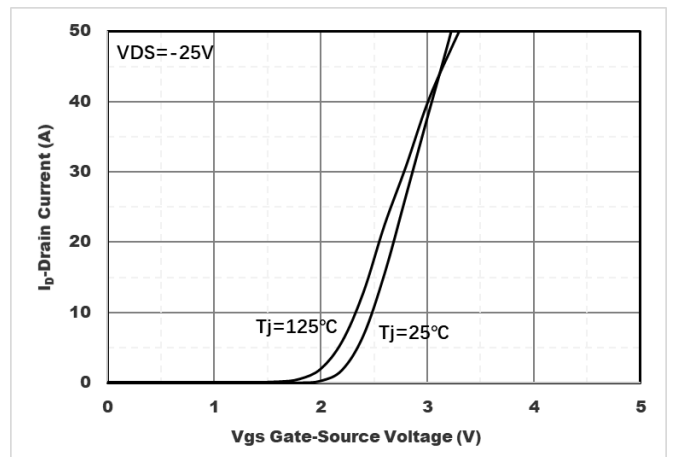


Figure2. Transfer Characteristics

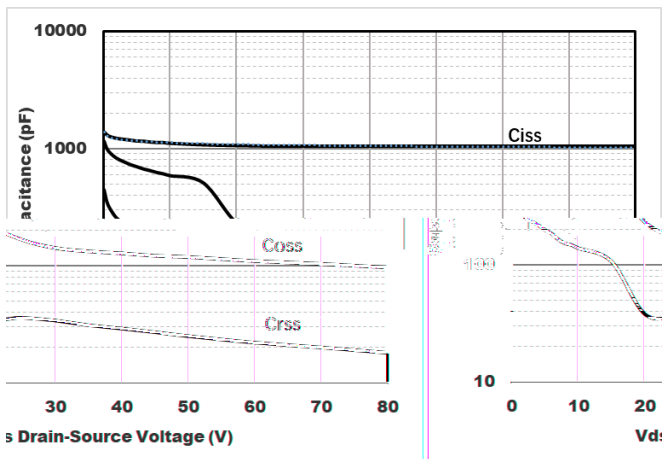


Figure3. Capacitance Characteristics

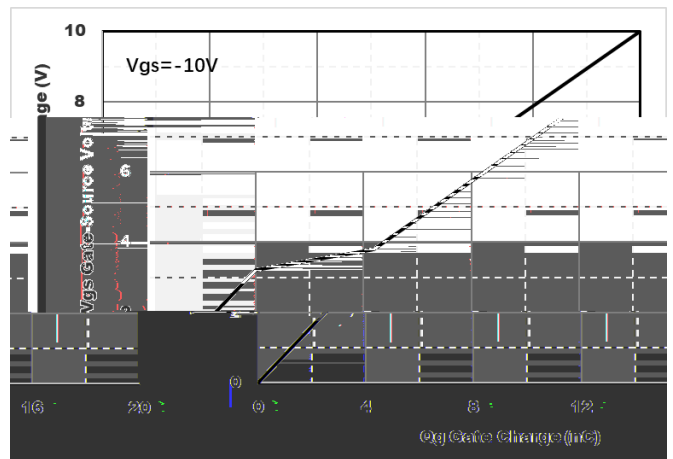


Figure4. Gate Charge

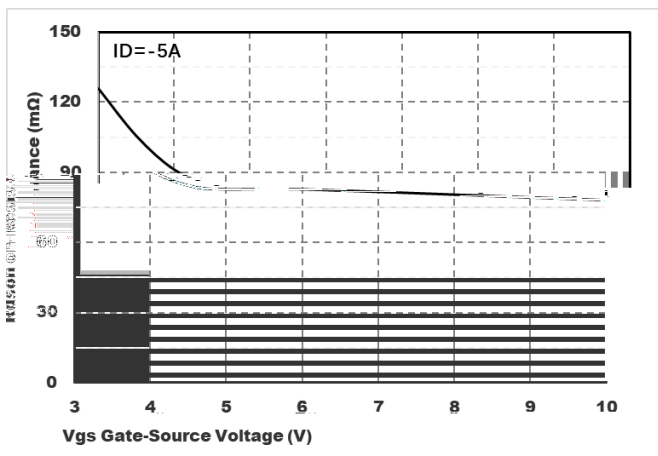


Figure5. : On-Resistance vs. Gate to Source Voltage

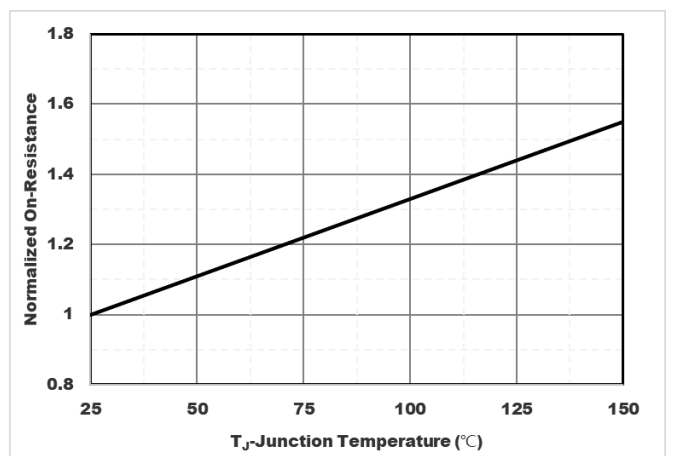


Figure6. Normalized On-Resistance

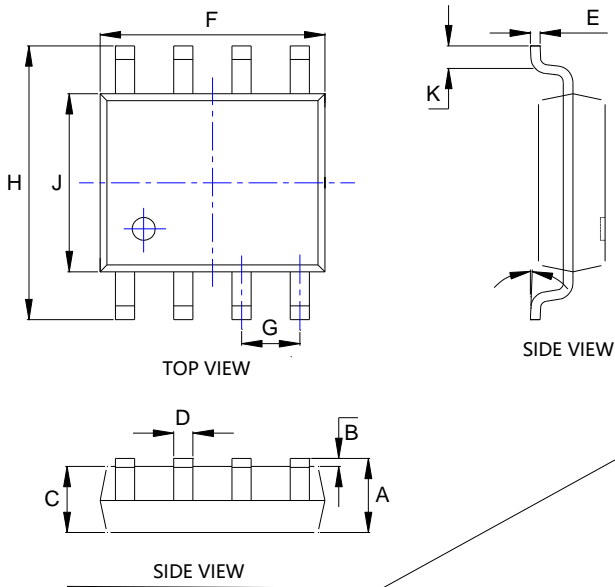


Figure7. Drain current



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SOP-8 Package Information



SYMBOL	DIMENSIONS		
	INCHES		Millimeter
	MIN.	MAX.	MIN.
A	0.053	0.069	
B	0.004	0.010	
C		0.061	
D		0.020	
E			
F			
G	0.050BSC		1.270BSC
H			
J			
K			
	0°		



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