



P-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	-30 V
I_D	-40 A
$R_{DS(ON)}$ (at $V_{GS}=-10V$)	14 m
$R_{DS(ON)}$ (at $V_{GS}=-4.5V$)	22 m
100% EAS Tested	
100% V_{DS} Tested	

General Description

Trench Power LV MOSFET technology
High density cell design for Low $R_{DS(ON)}$
High Speed switching

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reW*nBT/F5 5.52 T TJETQq0.000008882 0 596.04 842.04 reW*nBT/F5



YJD40P03B

Electrical Characteristics ($T_J=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=-$	-30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V, V_{GS}=0V$	-	-	-1	
		$V_{DS}=-30V, V_{GS}=0V, T_J=150$	-	-	-100	
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-$	-1	-1.5	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-20A$	-	10.5	14	
		$V_{GS}=-4.5V, I_D=-20A$	-	16	22	
Diode Forward Voltage	V_{SD}	$I_S=-20A, V_{GS}=0V$	-	-0.9	-1.3	V
Gate resistance	R_G	$f=1MHz$				



Typical Electrical and Thermal Characteristics Diagrams

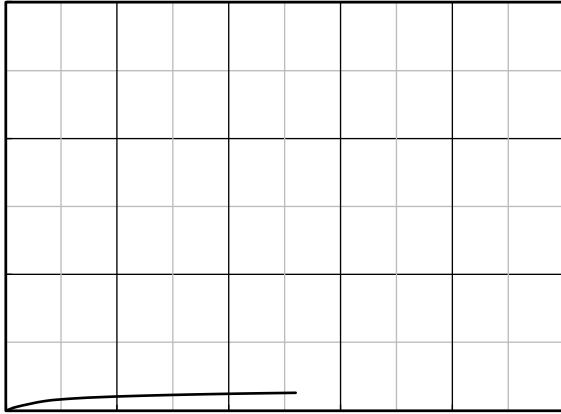


Figure 1. Output Characteristics

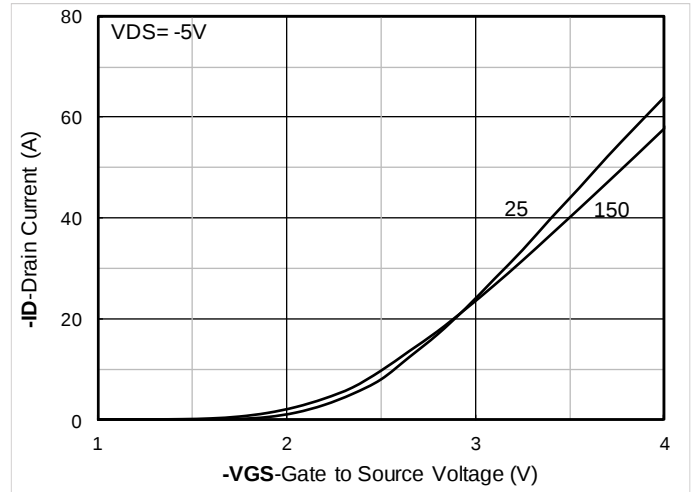


Figure 2. Transfer Characteristics

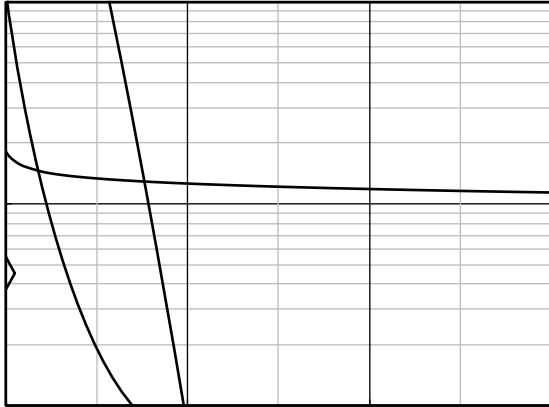


Figure 3. Capacitance Characteristics

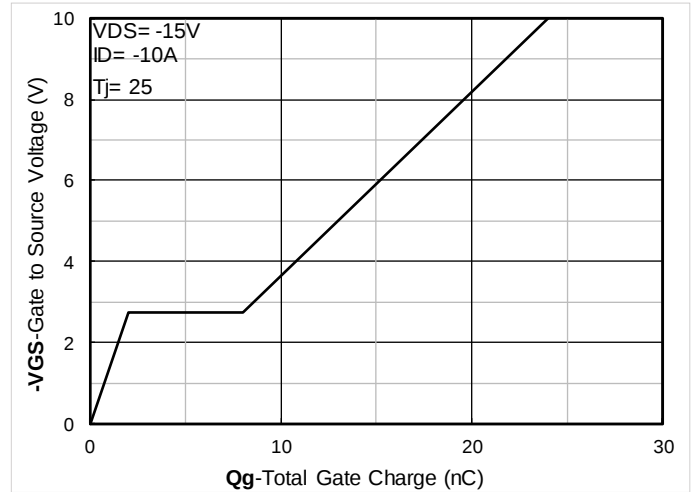


Figure 4. Gate Charge

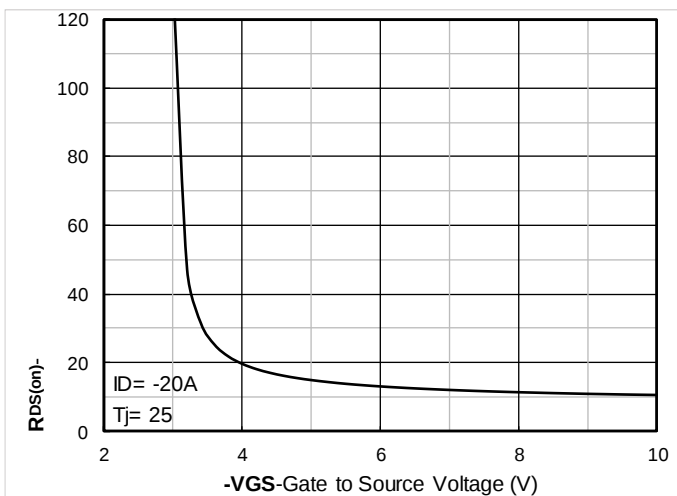


Figure 5. On-Resistance vs Gate to Source Voltage

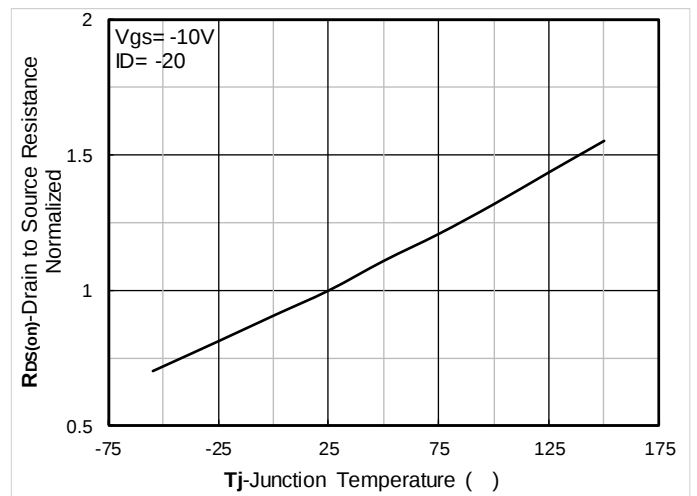


Figure 6. Normalized On-Resistance

YJD40P03B

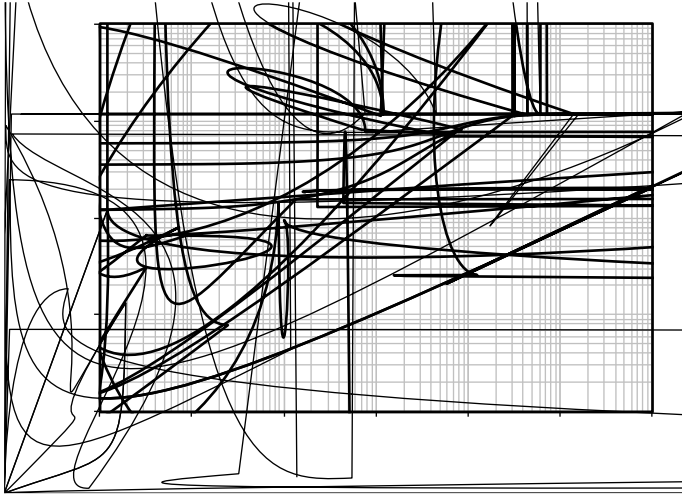


Figure 13. Maximum Transient Thermal Impedance

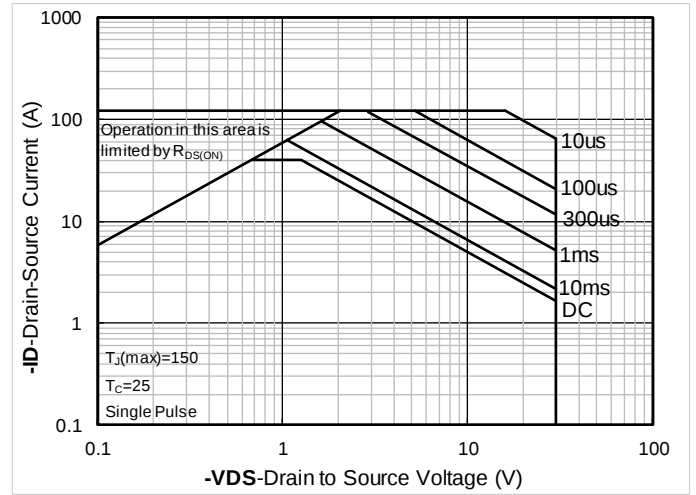


Figure 14.



Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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