



YJL03N06B

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	60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 60V, V _{GS} =0V			1	
Gate-Body Leakage Current	I _{GSS}	V _{GS} = 16V, V _{DS} =0V			100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250	0.65	0.95	1.55	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = 10V, I _D = 3A		86	100	m
		V _{GS} = 4.5V, I _D = 2A		90	120	
		V _{GS} = 2.5V, I _D = 1A		100	200	
Diode Forward Voltage	V _{SD}	I _S = 3.0A, V _{GS} =0V		0.8	1.2	V
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =30V, V _{GS} =0V, f=1MHZ		451		pF
Output Capacitance	C _{oss}			38		
Reverse Transfer Capacitance	C _{rss}			31		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} = 10V, V _{DS} = 30V, I _D = 3.0A		13.8		nC
Gate-Source Charge	Q _{gs}			2.2		
Gate-Drain Charge	Q _{gd}			1.9		
Reverse Recovery Charge	Q _{rr}	I _F = 3A, di/dt=100A/us		7.6		
Reverse Recovery Time	t _{rr}			30		
Turn-on Delay Time	t _{D(on)}	V _{GS} = 10V, V _{DS} = 30V, I _D = 1.5A R _{GEN} = 3		3		ns
Turn-on Rise Time	t _r			18		
Turn-off Delay Time	t _{D(off)}			17		
Turn-off fall Time	t _f			22		

A. Pulse Test: Pulse Width 300us, Duty cycle 2%.

B. R_{JA} is the sum of the junction-to-lead and lead-to-ambient thermal resistance, where the lead thermal reference is defined as the solder mounting surface of the drain pins. R_{JL} is guaranteed by design, while R_{JA} is determined by the board design. The maximum rating presented here is based on mounting on a 1 in 2 pad of 2oz copper.

Typical Performance Characteristics

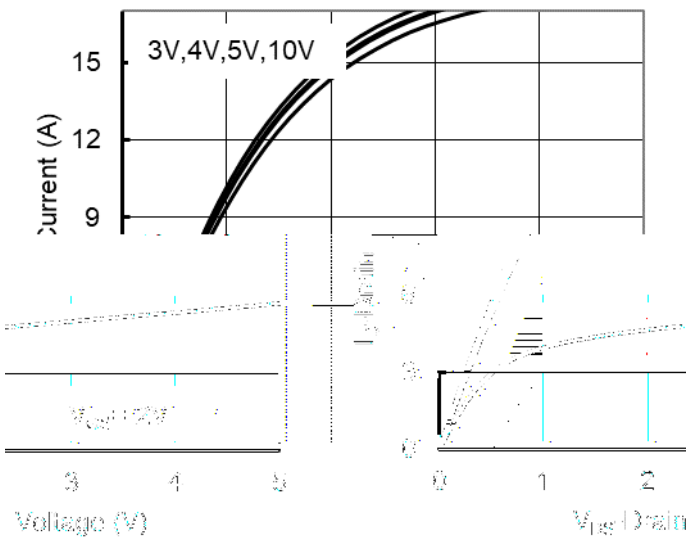


Figure1. Output Characteristics

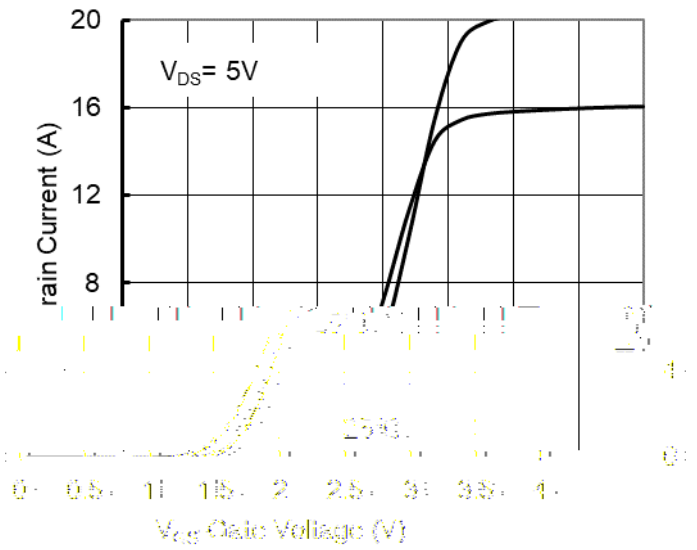


Figure2. Transfer Characteristics

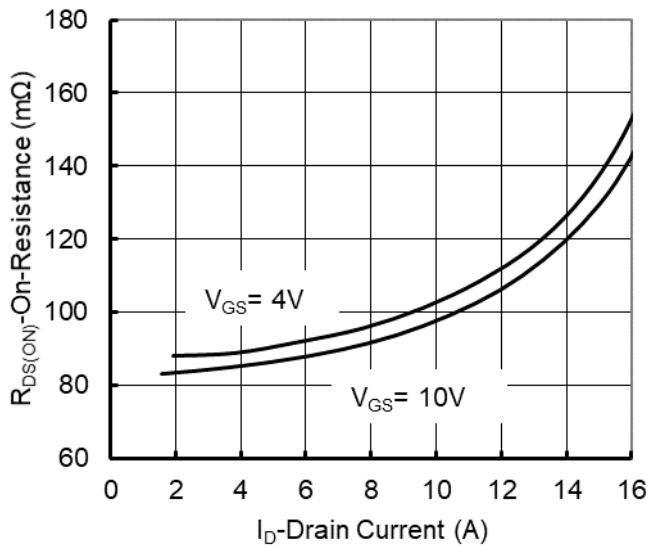


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

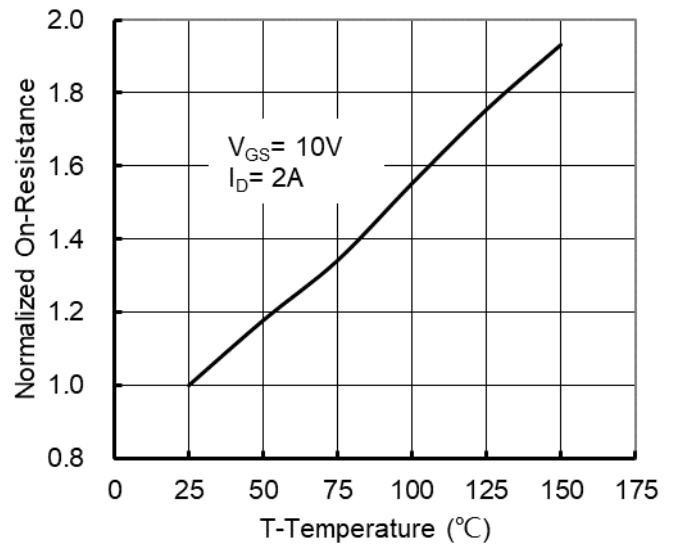


Figure 4: On-Resistance vs. Junction Temperature

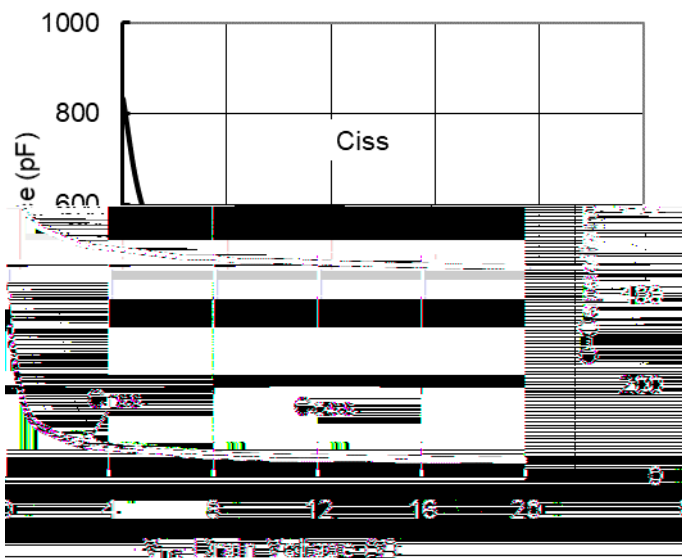


Figure5. Capacitance Characteristics

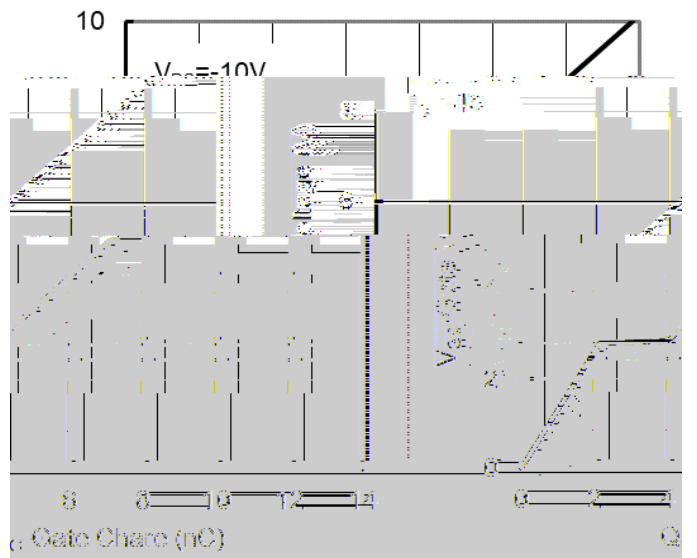


Figure6. Gate Charge

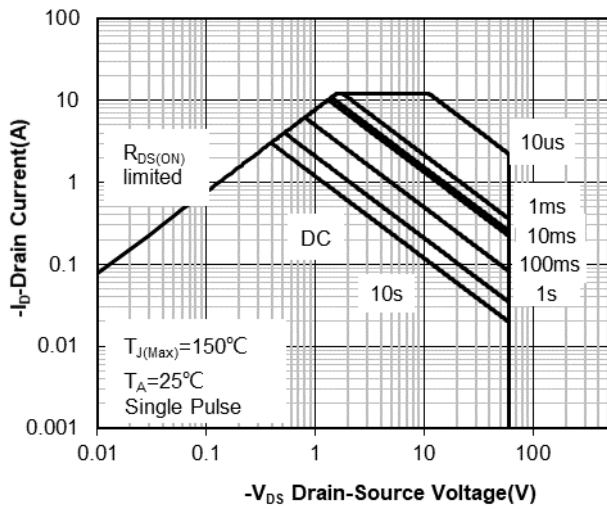


Figure7. Safe Operation Area

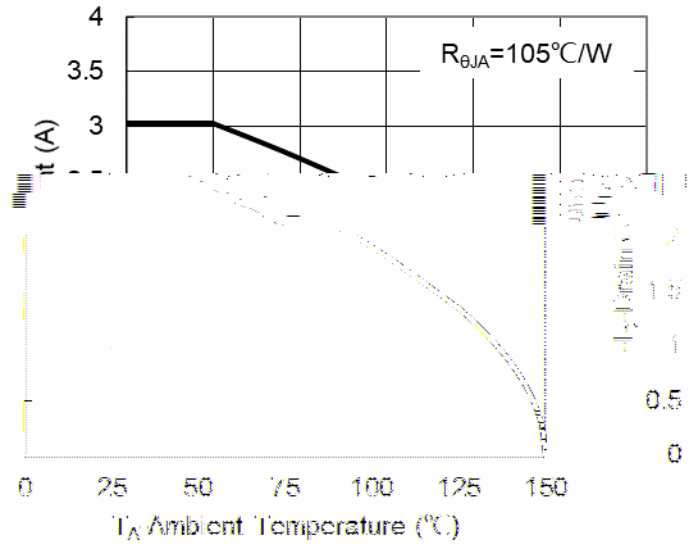


Figure8. Maximum Continuous Drain Current vs Ambient Temperature

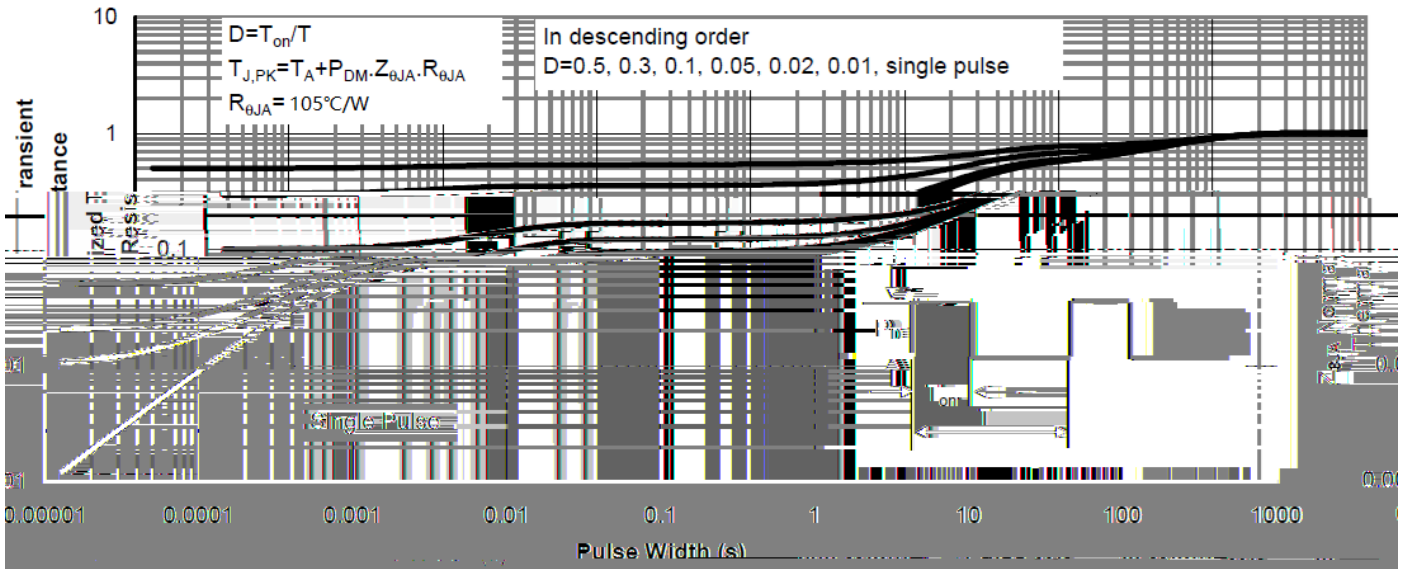


Figure9. Normalized Maximum Transient Thermal Impedance

YJL03N



SOT-23 Package Information



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