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Electrical Characteristics @T_A=25°C unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static *D						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100	--	--	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 80V, V _{GS} = 0V	--	--	1	μA
Gate Threshold Voltage	V _{GS(TH)}	V _{GS} = V _{DS} , I _{DS} = 250μA	1	--	2.5	V
Gate Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V	--	--	±100	nA
Drain-Source On-state Resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 20A	--	9.3	12.1	mΩ
	R _{DS(on)}	V _{GS} = 4.5V, I _D = 10A	--	12.0	15.6	mΩ
Diode Forward Voltage	V _{SD}	I _{SD} = 1A, V _{GS} = 0V	--	--	1.2	V
Diode Forward Current *C	I _S	T _C = 25°C	--	--	47.3	A
Switching						
Total Gate Charge	Q _g	V _{GS} = 10V, V _{DS} = 50V, I _{DS} = 20A	--	17.8	--	nC
Gate-Source Charge	Q _{gs}		--	3	--	nC
Gate-Drain Charge	Q _{gd}		--	3.9	--	nC
Turn-on Delay Time	t _{d(on)}	V _{DS} = 50V, V _{GEN} = 10V, R _G = 3Ω, I _{DS} = 20A	--	3.4	--	ns
Turn-on Rise Time	t _r		--	3.5	--	ns
Turn-off Delay Time	t _{d(off)}		--	15	--	ns
Turn-off Fall Time	t _f		--	8.5	--	ns
Dynamic						
Input Capacitance	C _{iss}	V _{DS} = 50V, V _{GS} = 0V, f = 1.0MHz	--	1048	--	pF
Output Capacitance	C _{oss}		--	482	--	pF
Reverse Transfer Capacitance	C _{rss}		--	11	--	pF

A: The value of R_{thJC} is measured with the device mounted on 1in2 FR-4 board with 2oz. Copper, in a still air environment with T_A=25° C. The value in any given application depends on the user's specific board design.

B: Repetitive rating, pulse width limited by junction temperature.

C: The current rating is based on the junction to case thermal resistance rating.

D: Pulse Test: Pulse Wide≤ 300μs, Duty Cycles≤ 2%.

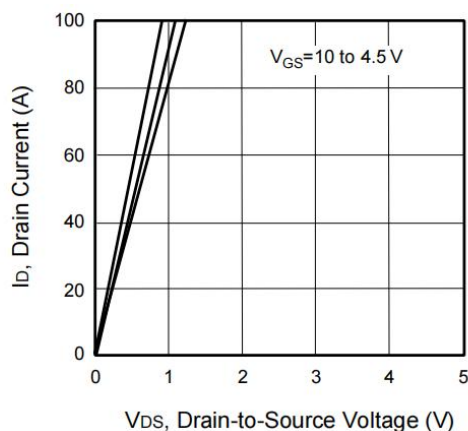


Figure 1. Output Characteristics

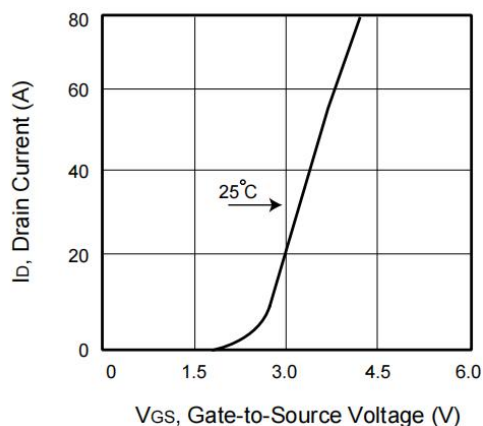


Figure 2. Transfer Characteristics

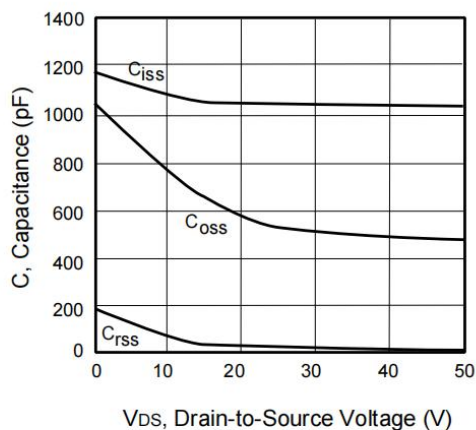


Figure 3. Capacitance

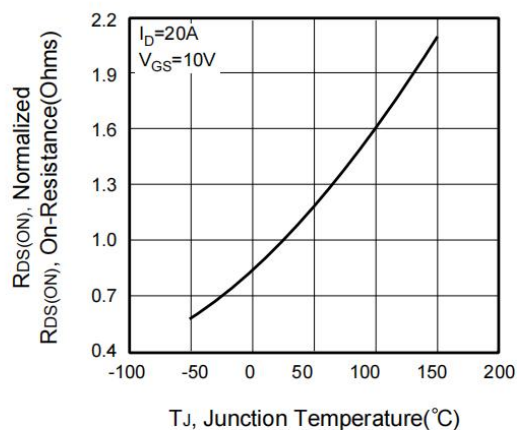


Figure 4. On-Resistance Variation with Temperature

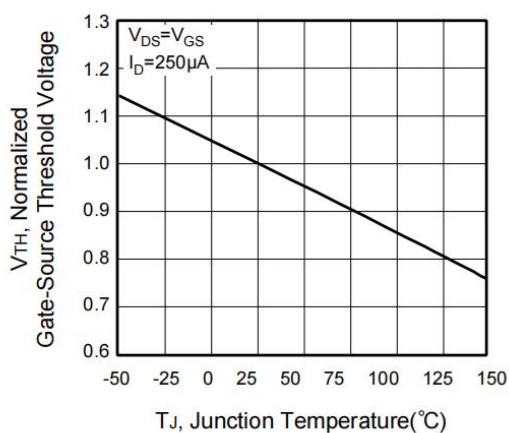


Figure 5. Gate Threshold Variation with Temperature

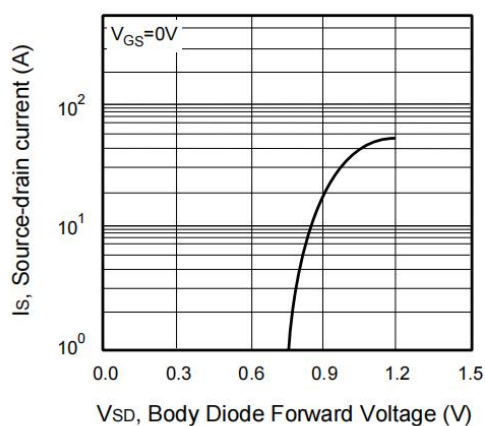


Figure 6. Body Diode Forward Voltage Variation with Source Current

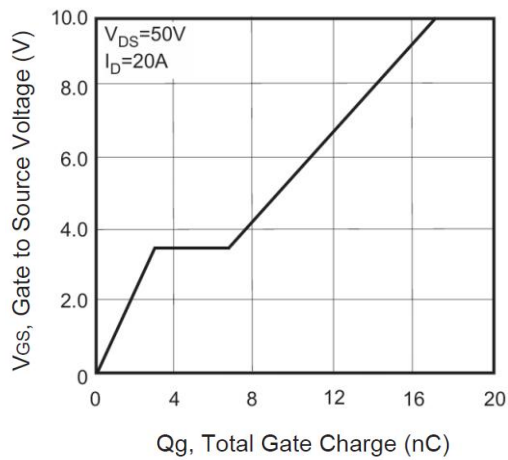


Figure 7. Gate Charge

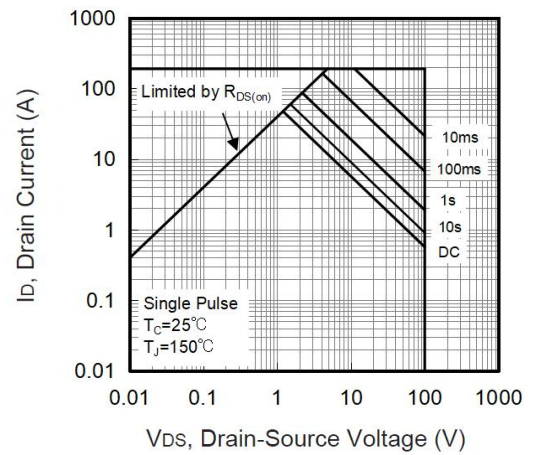


Figure 8. Maximum Safe Operating Area

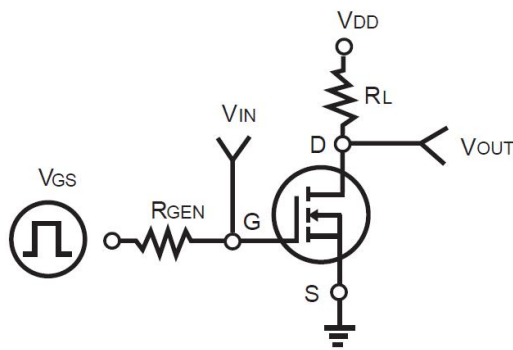


Figure 9. Switching Test Circuit

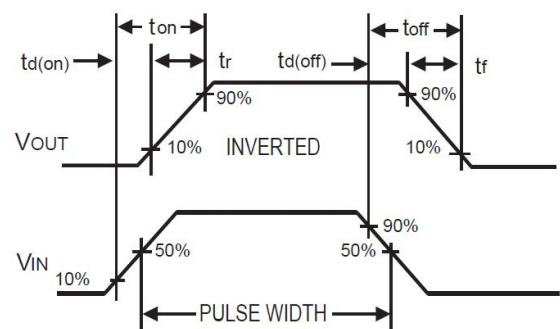


Figure 10. Switching Waveforms

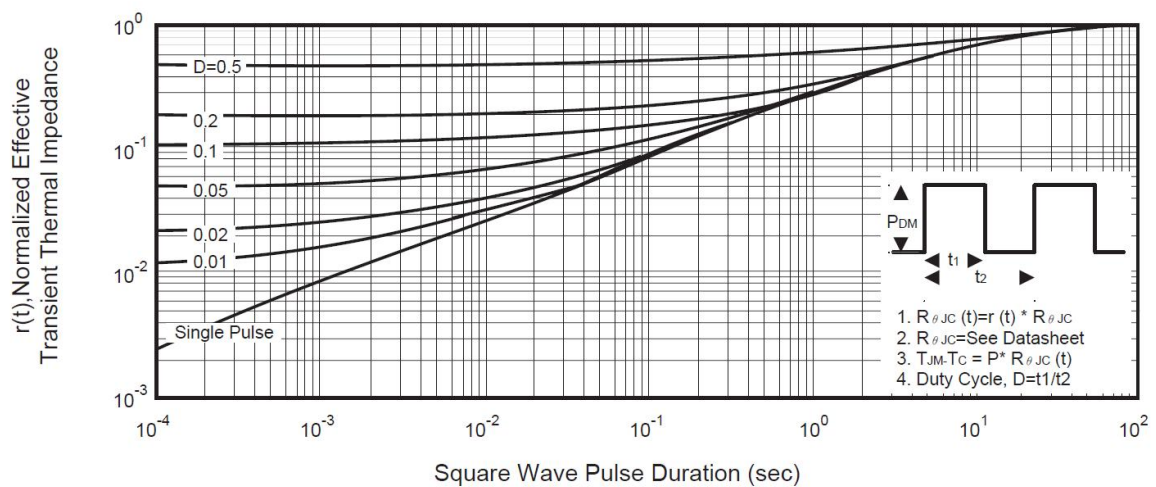
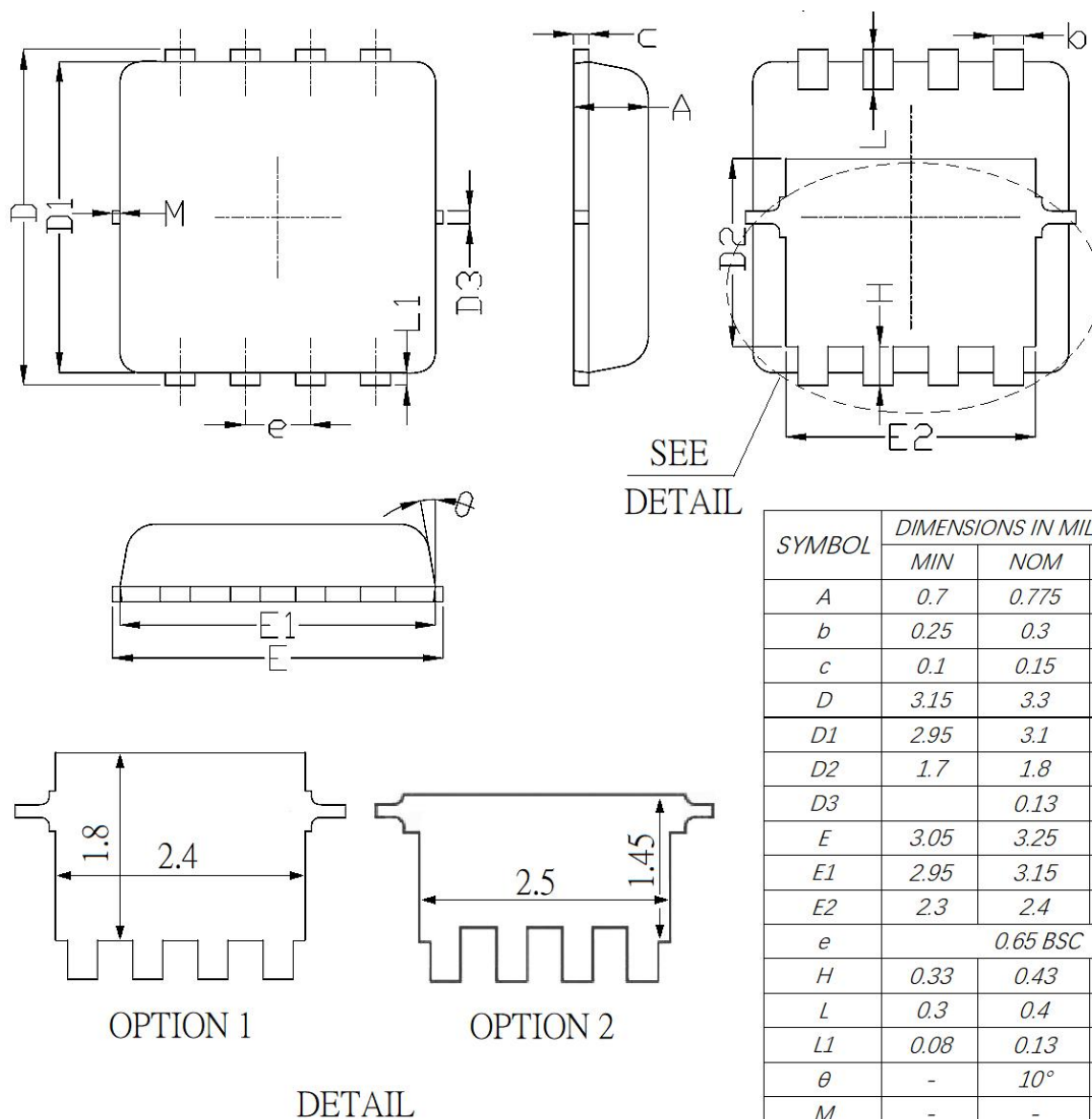


Figure 11. Normalized Thermal Transient Impedance Curve

Package Information



SYMBOL	DIMENSIONS IN MILLIMETERS		
	MIN	NOM	MAX
A	0.7	0.775	0.85
b	0.25	0.3	0.35
c	0.1	0.15	0.25
D	3.15	3.3	3.4
$D1$	2.95	3.1	3.2
$D2$	1.7	1.8	1.93
$D3$		0.13	
E	3.05	3.25	3.35
$E1$	2.95	3.15	3.2
$E2$	2.3	2.4	2.55
e	0.65 BSC		
H	0.33	0.43	0.53
L	0.3	0.4	0.5
$L1$	0.08	0.13	0.18
θ	-	10°	12°
M	-	-	0.15