HTN036N03P DFN5x6 TN036N03P

Absolute Maximum Ratings at T_j=25℃ (unless otherwise specified)

Parameter		Conditions	Value	Unit
Continuous Drain Current (Silicon Limited)		T_C=25℃	70	A
		T_C=100℃	64	
Drain to Source Voltage	V_{DS}	-	30	V
			±20	V
Pulsed Drain Current			70	A
			54	mJ
			50	W
			-55 to150	℃

Absolute Maximum Ratings

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-Case	R_{JC}	2.5	℃/W
Thermal Resistance Junction-Ambient	R_{JA}	50	℃/W

Zero Gate Voltage Drain Current	I_{DSS}	V_{GS}=0V, V_{DS}=24V, T_j=25℃	-			
	$R_{DS(on)}$		-	3 4.2	3.6	
Transconductance	g_{fs}		-	25.2	-	S
Gate Resistance	R_G	V_{GS}=0V, V_{DS} Open, f=1MHz	-	2.0	-	

Dynamic Characteristics

Input Capacitance	C_{iss}		-	2015		
		V_{GS}=0V, V_{DS}=15V, f=1MHz	-	365	-	pF
Reverse Transfer Capacitance	C_{rss}		-	205	-	
Total Gate Charge (10V)	Q_g (10V)		-	42	-	
	Q_g (4.5V)	V_{DD}=15V, I_D=18A, V_{GS}=10V	-	21	-	nC
	Q_{gs}		-	6	-	
	Q_{gd}		-	9	-	
Turn on Delay Time	$t_{d(on)}$		-	15	-	
Rise time	t_r	V_{DD}=15V, I_D=1A, V_{GS}=10V, R_G=6 ,	-	20	-	ns
Turn off Delay Time	$t_{d(off)}$		-	72	-	
Fall Time	t_f		-	20	-	

Reverse Diode Characteristics

	V_{SD}	V_{GS}=0V, I_F=15A	-	0.7	1.1	
		I_F=15A, dI_F/dt=100A/ s	-	15.0	-	ns
Reverse Recovery Charge	Q_{rr}		-	8.0	-	nC

Fig 1. Typical Output Characteristics

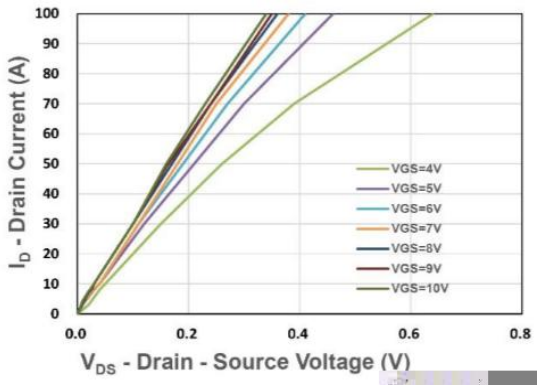


Figure 2. On-Resistance vs. Gate-Source Voltage

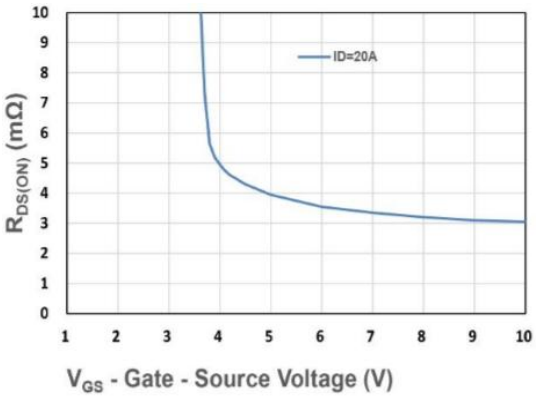


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

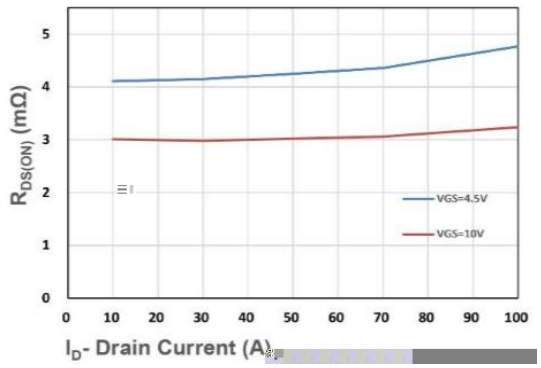


Figure 4. Normalized On-Resistance vs. Junction Temperature

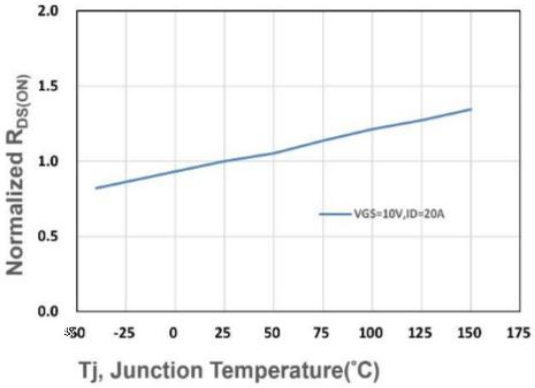


Figure 5.Normalized Threshold Voltage VS Junction Temparature

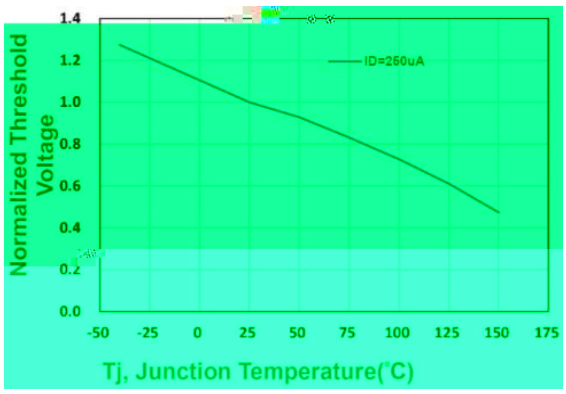


Figure 6. Typical Source-Drain Diode Forward Voltage

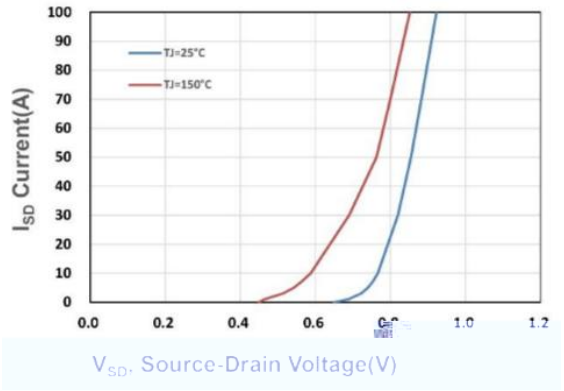


Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

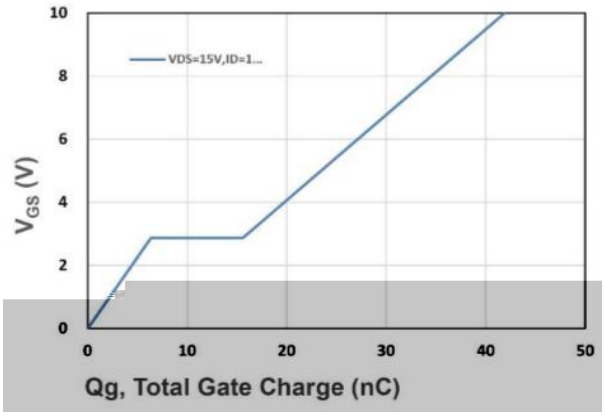


Figure 8. Typical Capacitance vs. Drain-to-Source Voltage

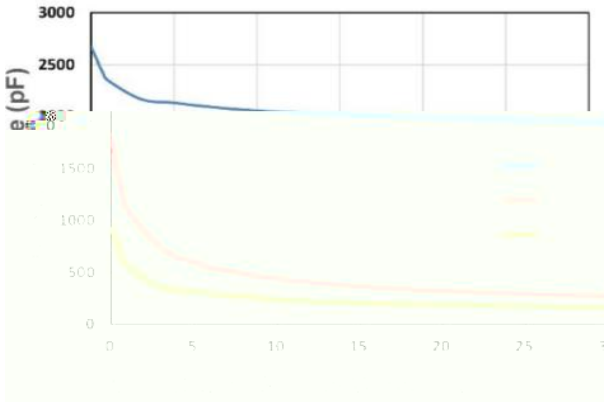


Figure 9. Maximum Safe Operating Area

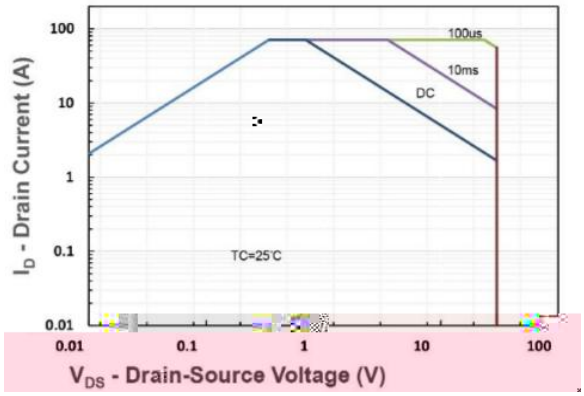


Figure 10. Maximun Drain Current vs. Case Temperature

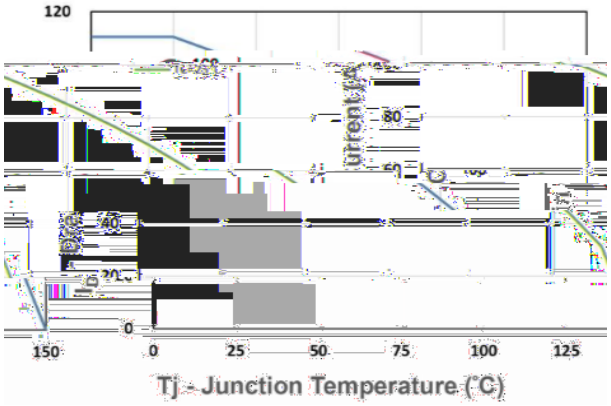
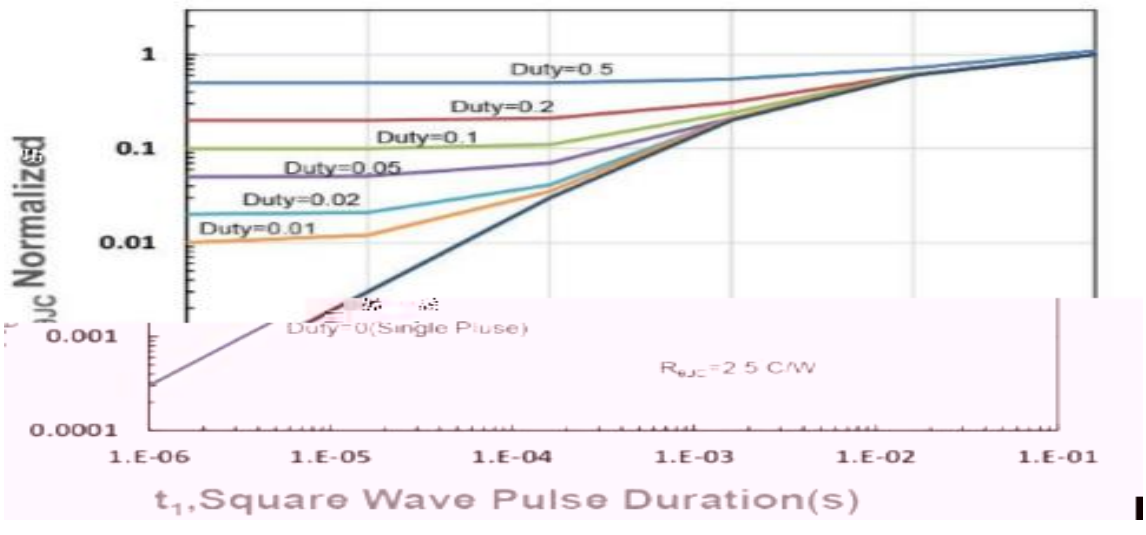
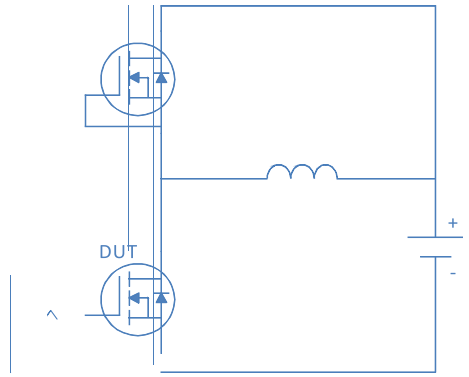
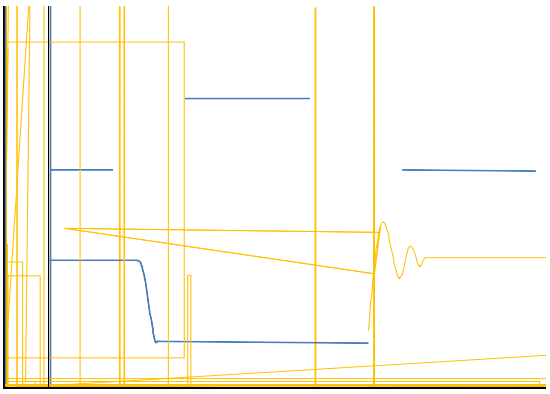


Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Case

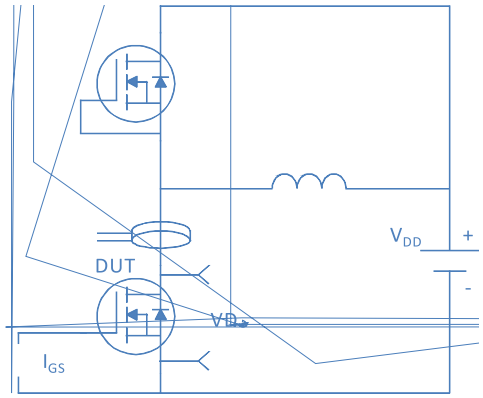


Inductive switching Test

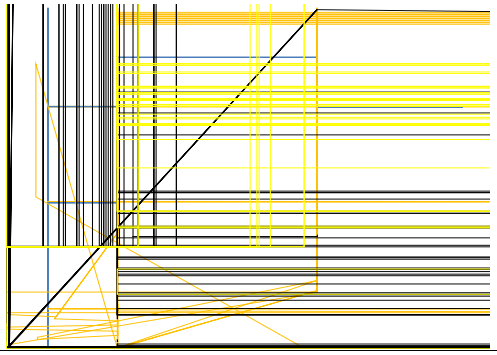




Gate Charge Test



Uclamped Inductive Switching (UIS) Test



Diode Recovery Test