65V N-Ch Power MOSFET

V_{DS}		65	V
$R_{DS(on),typ}$	V_{GS}=10V	2.5	m

			174	A
			65	
			±20	V
Pulsed Drain Current	I_{DM}		400	A
	P_D		172	W
Operating and Storage Temperature	T_J, T_{stg}	-	-55 to175	

Absolute Maximum Ratings

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-Ambient	R_{JA}	60	°C/W
Thermal Resistance Junction-Case	R_{JC}	0.87	°C/W

Electrical Characteristics at T_J=25℃ (unless otherwise specified)
Static Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	-	-	±100	
Drain to Source on Resistance	$R_{DS(on)}$	V_{GS}=10V, I_D=20A	-	2.5	3	m
Drain to Source on Resistance	$R_{DS(on)}$	V_{GS}=4.5V, I_D=20A	-	3.6		m
			-			
Gate Resistance	R_G		-			

Dynamic Characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}					
Output Capacitance	C_{oss}	V_{GS}=0V, V_{DS}=30V, f=1MHz		1625		
Reverse Transfer Capacitance	C_{rss}					
Total Gate Charge	Q_g(10V)		-		-	
	Q_g(4.5V)	V_{DD}=30V, I_D=20A, V_{GS}=10V	-	34	-	nC
Gate to Source Charge	Q_{gs}		-	8	-	
Gate to Drain (Miller) Charge	Q_{gd}				-	
				14		
				13	-	ns
				49	-	
				19		

V

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. Typical Transfer Characteristics	Figure 6. Typical Source-Drain Diode Forward Voltage

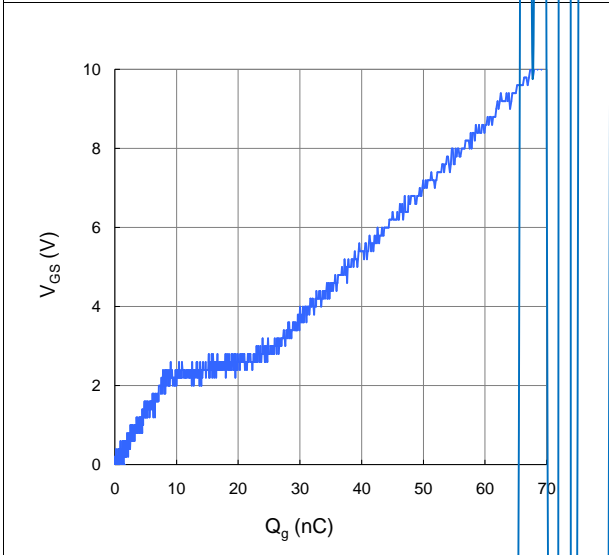Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

V_{GS} (V)

Q_g (nC)

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

Capacitance (pF)

C_{iss}

C_{oss}

C_{rss}

V_{DS} (V)
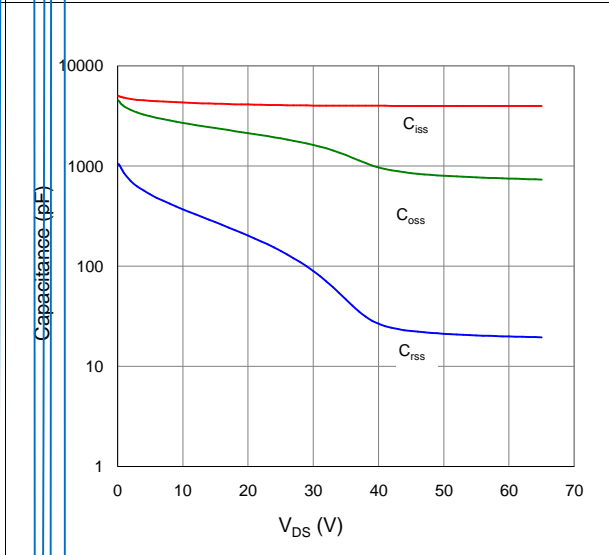
Figure 9. Maximum Safe Operating Area
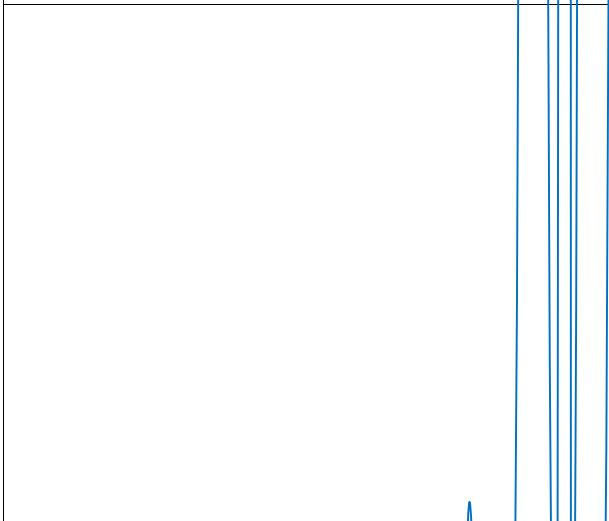
Figure 10. Maximun Drain Current vs. Case Temperature
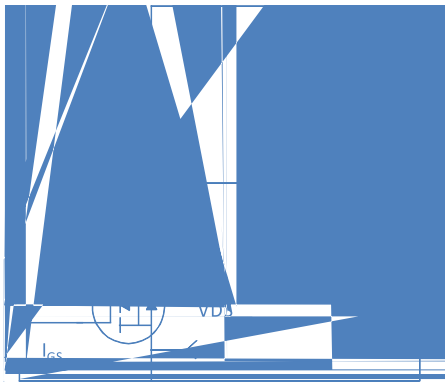
Current rating I_D (A)
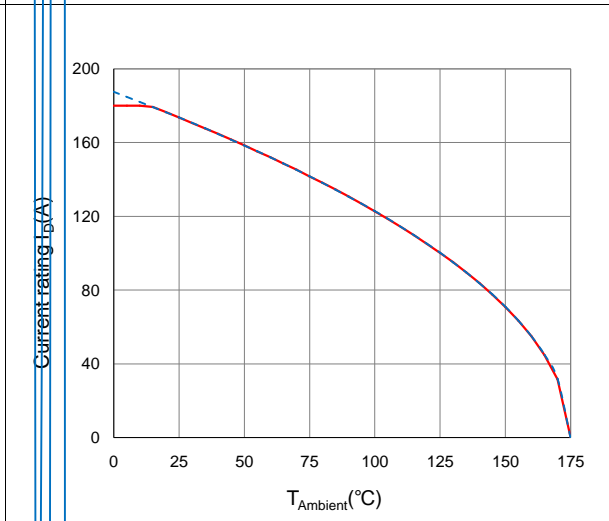
$T_{Ambient}$(℃)

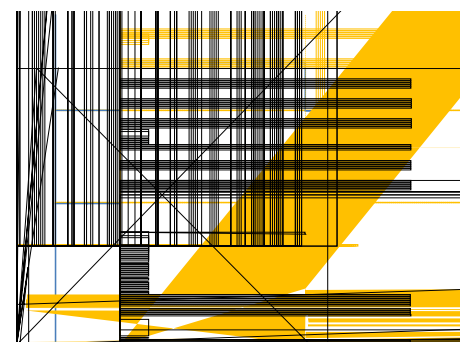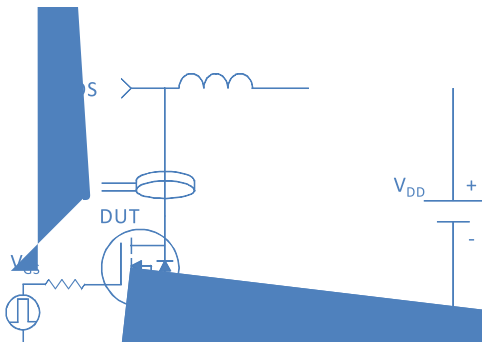Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Ambient
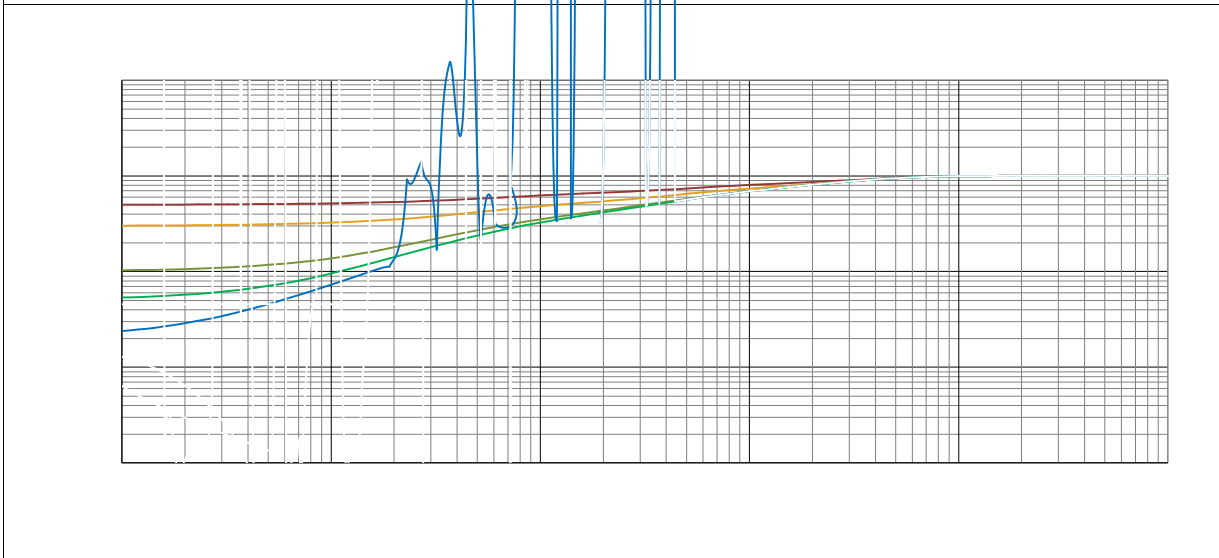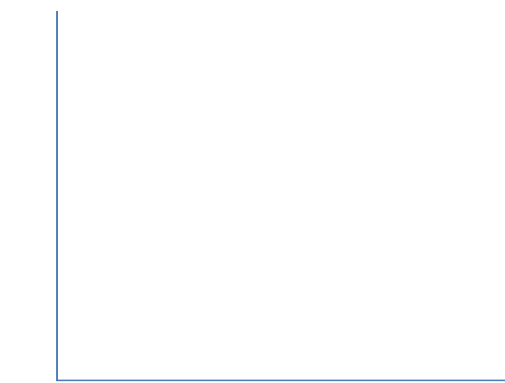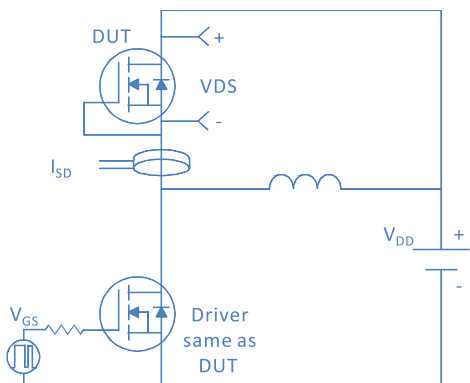
Inductive switching Test
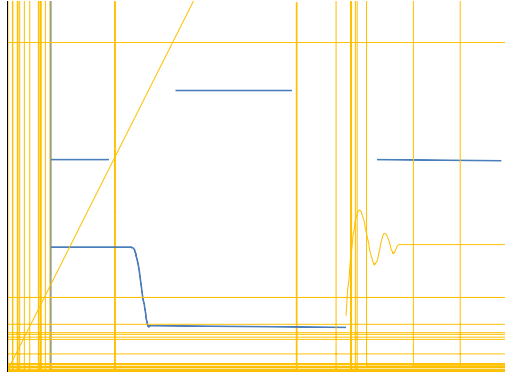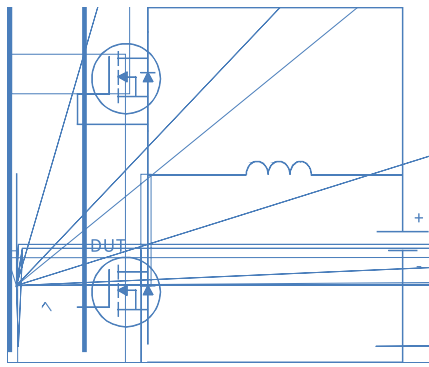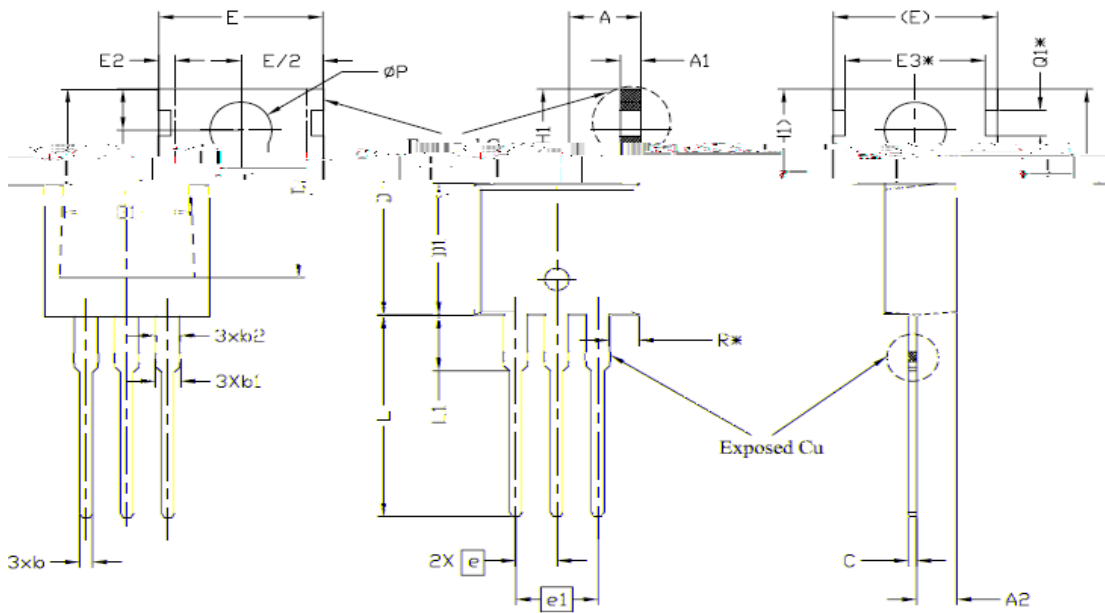
Gate Charge Test
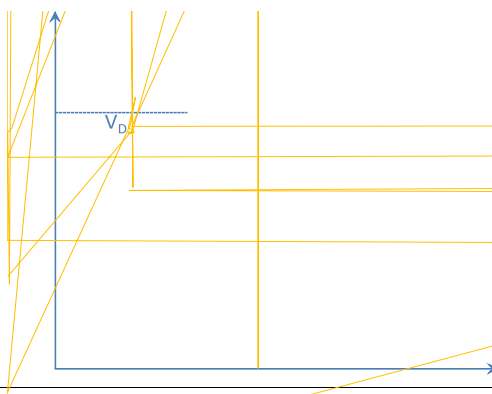
Uclamped Inductive Switching (UIS) Test

Diode Recovery Test

Package Outline

TO-220, 3 leads

SYMBOL	DIMENSIONS			NOTES
	MIN.	NOM.	MAX.	