Absolute Maximum Ratings at T_j=25 unless otherwise noted

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	800	V
Gate-source voltage	V_{GS}	±30	V
Continuous drain current[1], T_C=25 °C	I_D	4	A
Continuous drain current[1], T_C=100 °C		2.5	
Pulsed drain current[2], T_C=25 °C	$I_{D,\ pulse}$	12	A
Continuous diode forward current[1], T_C=25 °C	I_S	4	A
Diode pulsed current[2], T_C=25 °C	$I_{S,\ pulse}$	12	A
Power dissipation[3], T_C=25			

Dynamic Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	C_{iss}		363.5		pF	V_{GS}=0 V, V_{DS}=50 V, Hz
Output capacitance	C_{oss}		25.5		pF	
Reverse transfer capacitance	C_{rss}		1.35		pF	
Turn-on delay time	$t_{d(on)}$		16.8		ns	V_{GS}=10 V, V_{DS}=400 V, R_G=25 I_D=2 A
Rise time	t_r		5.7		ns	
Turn-off delay time	$t_{d(off)}$		31		ns	
Fall time	t_f		42.8		ns	

Gate Charge Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Total gate charge	Q_g		7.5		nC	V_{GS}=10 V, V_{DS}=400 V, I_D=4 A
Gate-source charge	Q_{gs}		2.1		nC	
Gate-drain charge	Q_{gd}		2.9		nC	
Gate plateau voltage	$V_{plateau}$		5.6		V	

Body Diode Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Diode forward voltage	V_{SD}			1.3	V	I_S=4 A,

Electrical Characteristics Diagrams

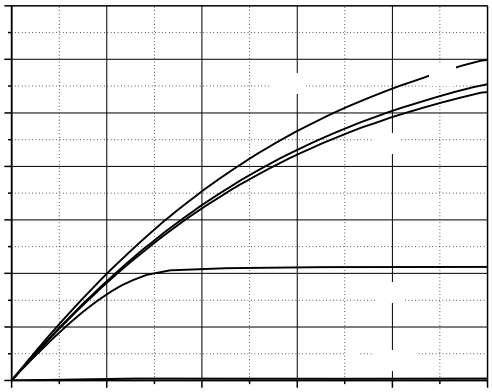

Figure 1. Typ. output characteristics

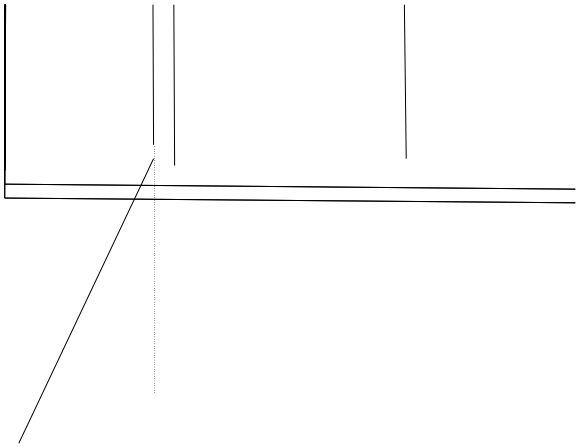

Figure 2. Typ. transfer characteristics

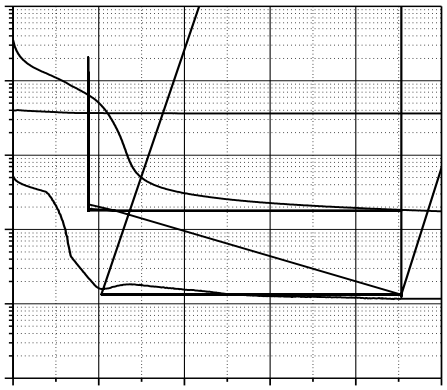

Figure 3. Typ. capacitances

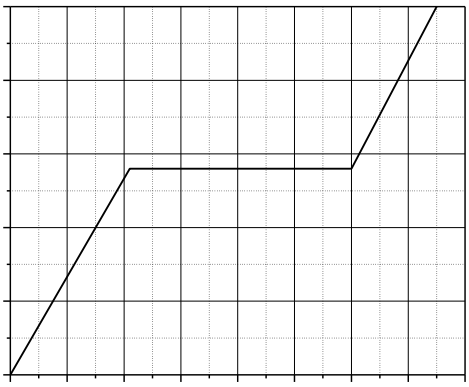

Figure 4. Typ. gate charge

Figure 5. Drain-source breakdown voltage

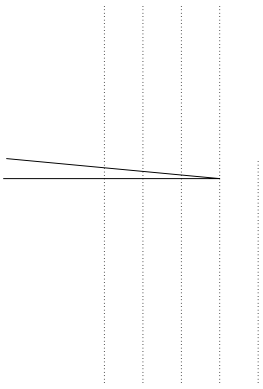

Figure 6. Drain-source on-state resistance

Test circuits and waveforms

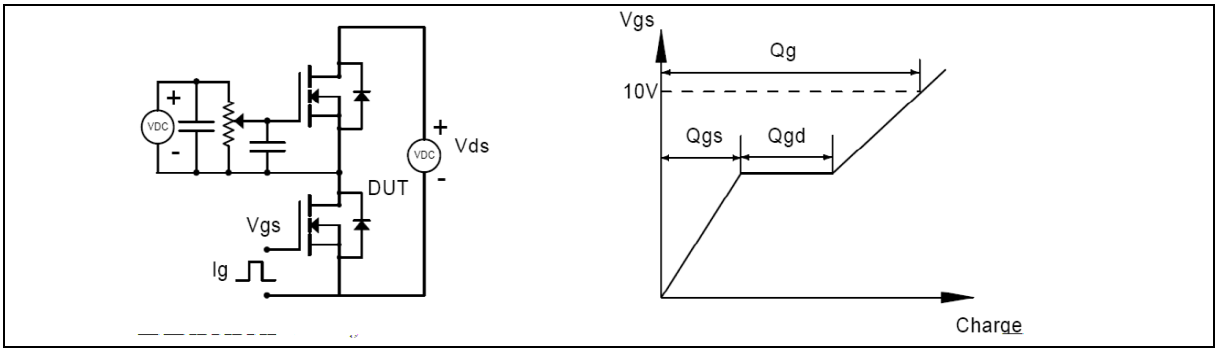

Figure 1. Gate charge test circuit & waveform

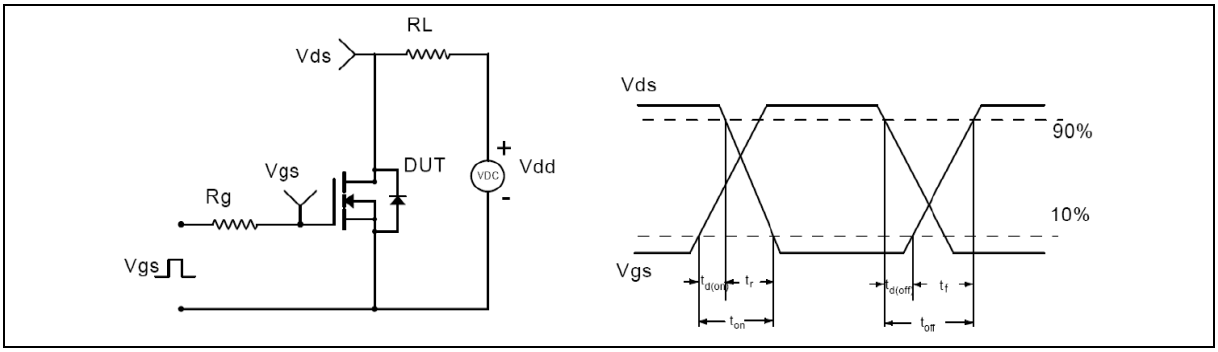

Figure 2. Switching time test circuit & waveforms

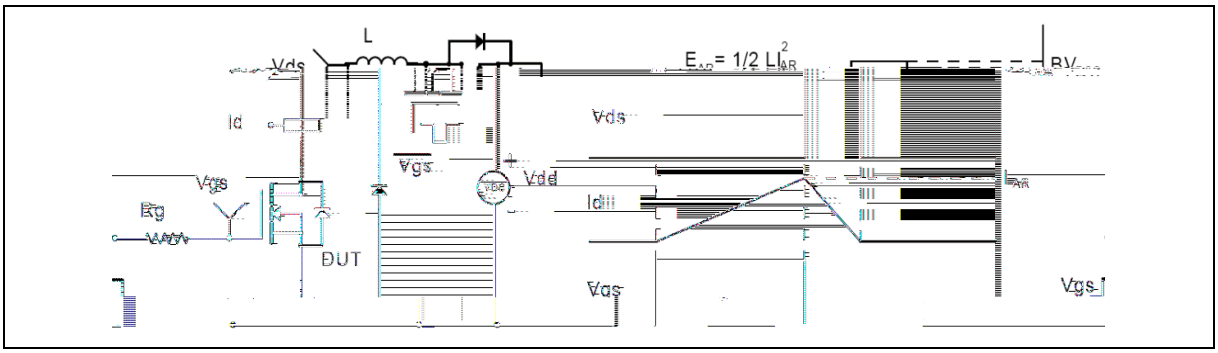

Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms

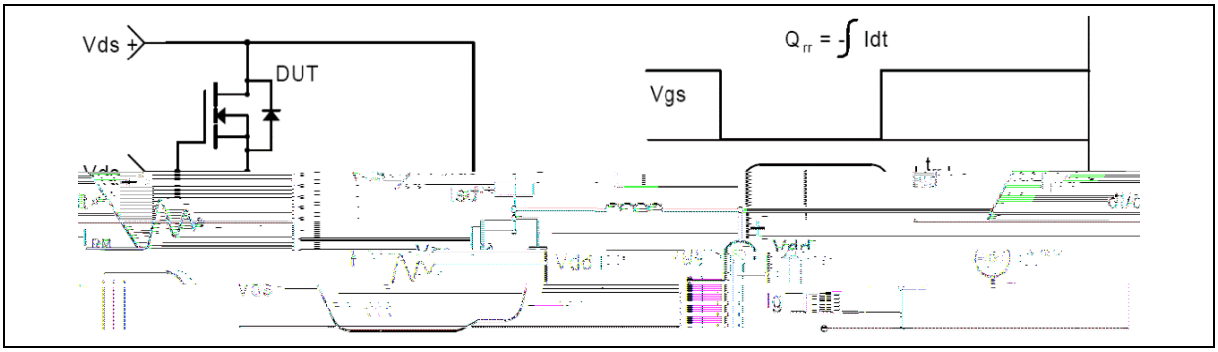

Figure 4. Diode reverse recovery test circuit & waveforms

Package Information

Symbol	mm		
	Min	Nom	Max
A	4.37	4.57	4.77
A1	1.25	1.30	1.45
A2	2.20	2.40	2.60

Ordering Information

Package Type	Units/ Tube	Tubes/ Inner Box	Units/ Inner Box	Inner Boxes/ Carton Box	Units/ Carton Box
TO220-P	50	20	1000	6	6000

Product Informa