

Outline	Reel Size	Reel(pcs)	Per Carton (pcs)
TAPING	13"	4000	48000

Symbol	Units
V_{DS}	V
V_{GS}	V
	$T_A = 25^{\circ}C$
	$T_A = 100^{\circ}C$
I_{DM}	A
E_{AS}	mJ
P_D	$T_A = 25^{\circ}C$ W
R	$^{\circ}C/W$
T_J, T_{STG}	

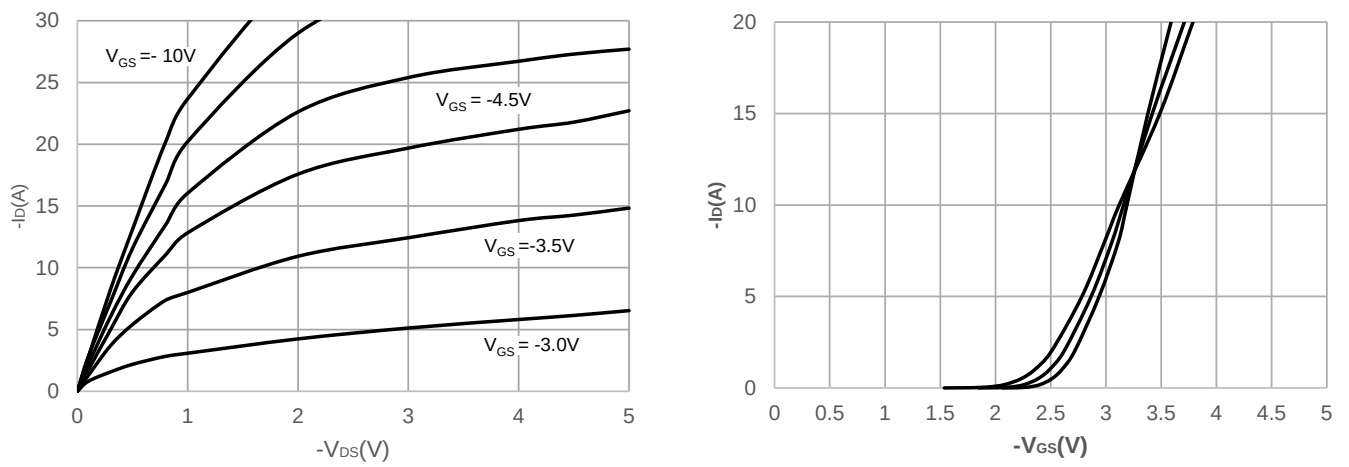
Electrical Characteristics (T_J = 25°C unless otherwise specified)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	I _D = -250μA, V _{GS} = 0V	-30	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = -30V, V _{GS} = 0V	-	-	-1.0	μA
I _{GSS}	Gate-Body Leakage Current	V _{DS} = 0V, V _{GS} = ±20V	-	-	±100	nA
On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = -250μA	-1.0	-1.8	-2.5	V
R _{DS(ON)}	Static Drain-Source ON-Resistance ⁽⁴⁾	V _{GS} = -10V, I _D = -5A	-	31	40	mΩ
		V _{GS} = -4.5V, I _D = -4A	-	46	60	mΩ
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{GS} = 0V, V _{DS} = -15V, f = 1MHz	-	540	-	pF
C _{oss}	Output Capacitance		-	75	-	pF
C _{rss}	Reverse Transfer Capacitance		-	57	-	pF
Q _g	Total Gate Charge	V _{GS} = 0 to -10V V _{DS} = -15V, I _D = -2A	-	11	-	nC
Q _{gs}	Gate Source Charge		-	2	-	nC
Q _{gd}	Gate Drain("Miller") Charge		-	2	-	nC
Switching Characteristics						
t _{d(on)}	Turn-On DelayTime	V _{GS} = -10V, V _{DD} = -15V I _D = -2A, R _{GEN} = 3Ω	-	3	-	ns
t _r	Turn-On Rise Time		-	2	-	ns
t _{d(off)}	Turn-Off DelayTime		-	26	-	ns
t _f	Turn-Off Fall Time		-	15	-	ns
Drain-Source Diode Characteristics and Max Ratings						
I _S	Maximum Continuous Drain to Source Diode Forward Current		-	-	-5.1	A
I _{SM}	Maximum Pulsed Drain to Source Diode Forward Current		-	-	-20	A
V _{SD}	Drain to Source Diode Forward Voltage	V _{GS} = 0V, I _S = -5.1A	-	-	-1.2	V
trr	Body Diode Reverse Recovery Time	I _F = -2A, di/dt = 100A/us	-	9	-	ns
Qrr	Body Diode Reverse Recovery Charge		-	3	-	nC

- Notes:
1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature.
 2. EAS condition: Starting T_J=25°C, V_{DD}=-15V, V_G=-10V, R_G=25ohm, L=0.5mH, I_{AS}=-7A
 3. R is measured with the device mounted on a 1inch² pad of 2oz copper FR4 PCB
 4. Pulse Test: Pulse Width 0.5%.

Typical Performance Characteristics

Figure 1: Output Characteristics



Test Circuit

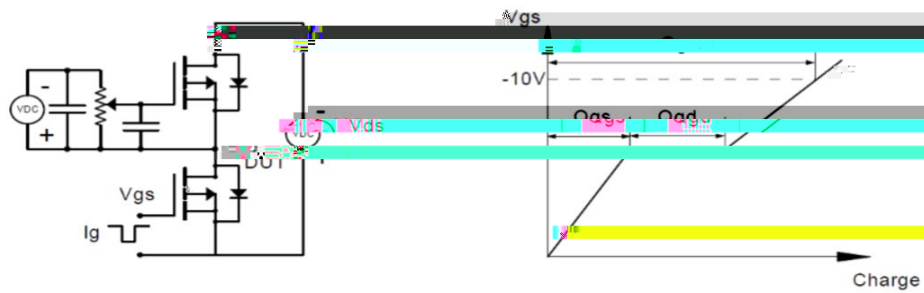


Figure 1: Gate Charge Test Circuit & Waveform

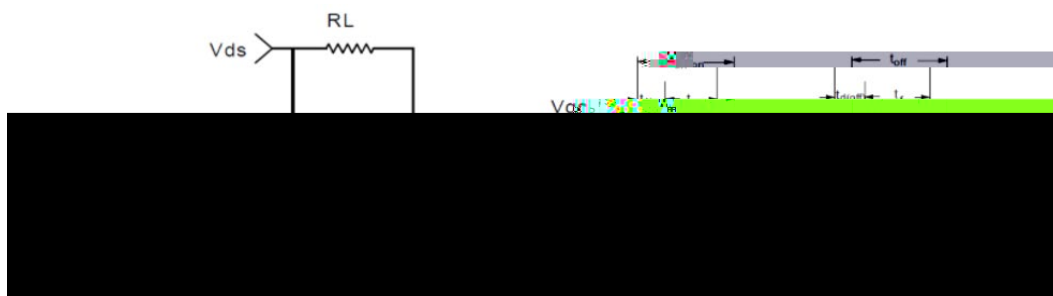


Figure 2: Resistive Switching Test Circuit & Waveform

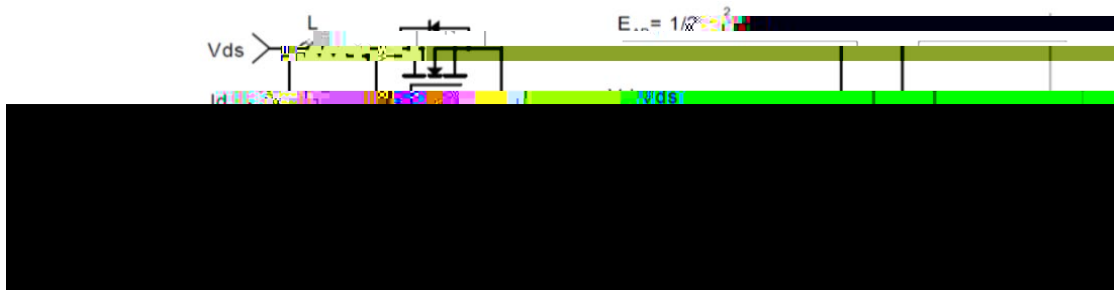


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

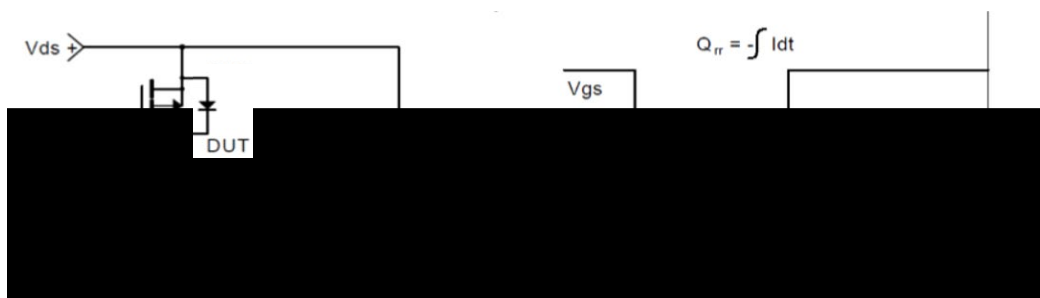


Figure 4: Diode Recovery Test Circuit & Waveform



Package Mechanical Data(SOP-8)

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