

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	$^{\circ}C/W$
$T_J, T_{STG}$	

# JMTP9435A

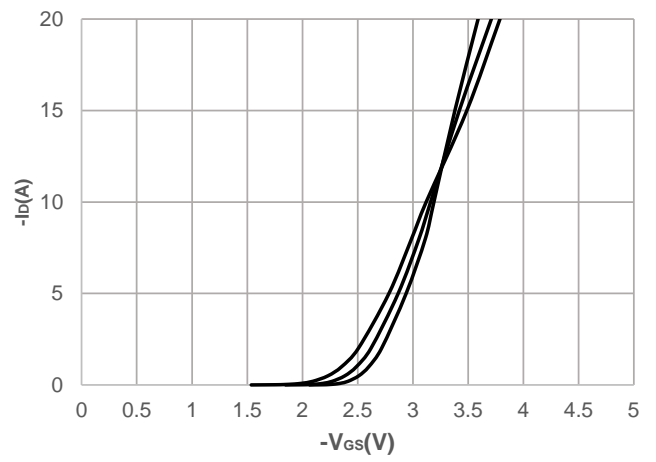
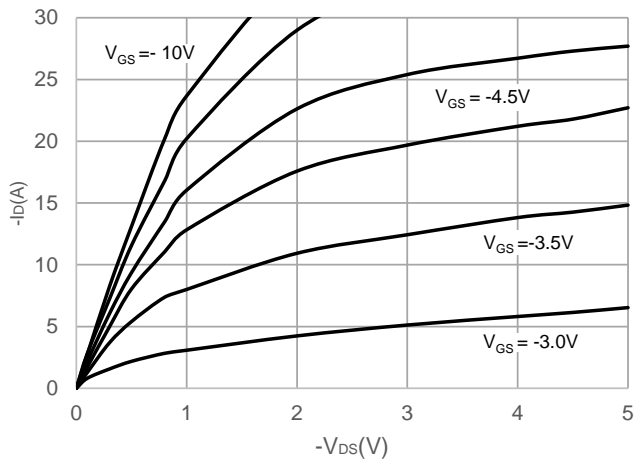
## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise specified)

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

- Notes:
1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature.
  2. EAS condition: Starting T<sub>J</sub>=25°C, V<sub>DD</sub>=-15V, V<sub>G</sub>=-10V, R<sub>G</sub>=25ohm, L=0.5mH, I<sub>AS</sub>=-7A
  3. R<sub>th(j-c)</sub> is measured with the device mounted on a 1inch<sup>2</sup> pad of 2oz copper FR4 PCB
  4. Pulse Test: Pulse Width 0.5%.

## Typical Performance Characteristics

Figure 1: Output Characteristics





## Test Circuit

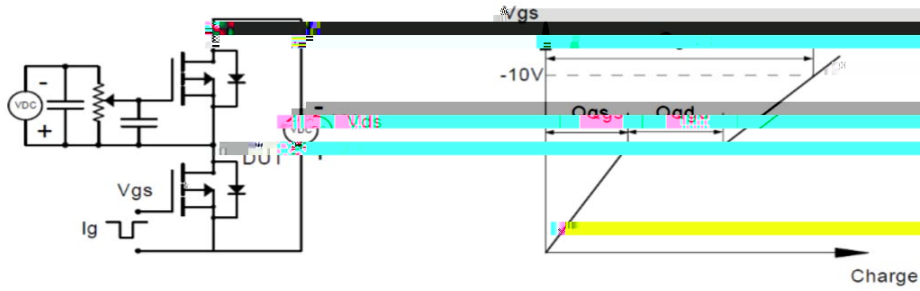


Figure 1: Gate Charge Test Circuit & Waveform



Figure 2: Resistive Switching Test Circuit & Waveform



Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

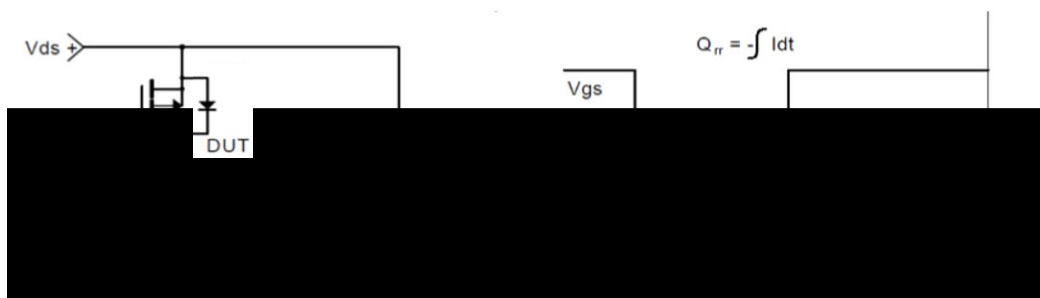


Figure 4: Diode Recovery Test Circuit & Waveform



## Package Mechanical Data(SOP-8)

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