Description

JMT N-channel Enhancement Mode Power MOSFET

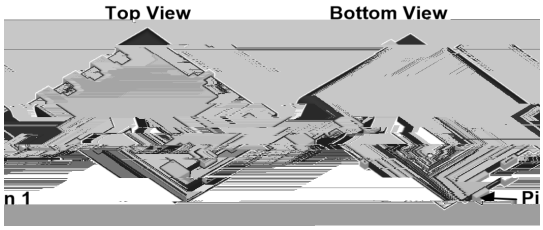
Features

- 40V, 50A
  $R_{DS(ON)}$ < 6.6mΩ @ V_{GS} = 10V
  $R_{DS(ON)}$ < 9.4mΩ @ V_{GS} = 4.5V
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead Free

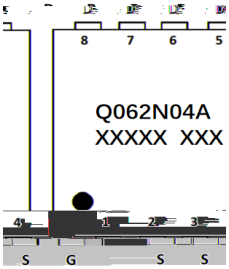
Applications

- Load Switch
- PWM Application
- Power Management

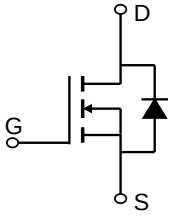
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PDFN3x3-8L



Marking and Pin Assignment



Schematic Diagram

Package Marking and Ordering Information

Device Marking	Device	Outline	Package	Reel Size	Reel(pcs)	Per Carton (pcs)
Q062N04A	JMTQ062N04A	TAPING	PDFN3x3-8L	13"	5000	50000

Absolute Maximum Ratings (@ T_C = 25°C unless otherwise specified)

Symbol	Parameter		Value	Units
V_{DS}	Drain-to-Source Voltage		40	V
V_{GS}	Gate-to-Source Voltage		±20	V
		T	50	
			32	
	Pulsed Drain Current (1)		200	
	Single Pulsed Avalanche Energy (2)		100	
		Power Dissipation		39
		Thermal Resistance, Junction to Ambient (3)	43	
	Thermal Resistance, Junction to Case		3.2	

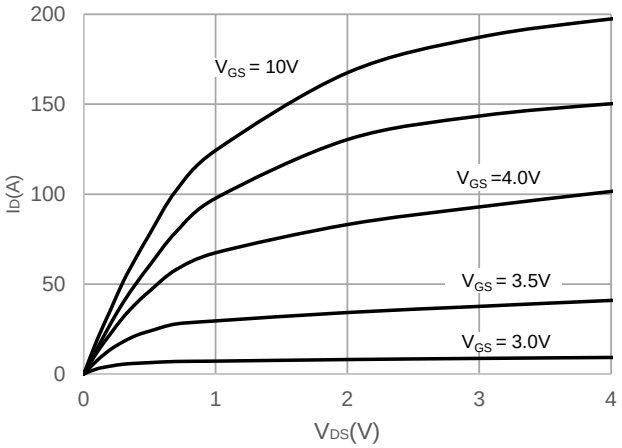
Electrical Characteristics (T_J = 25°C unless otherwise specified)

Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics					
$V_{(BR)DSS}$		40	-	-	V
I_{DSS}		-	-	1.0	A
I_{GSS}		-	-	±100	nA
$V_{GS(th)}$		1.3	1.8	2.3	V
		-	5.1	6.6	m
		-	7.2	9.4	m
C_{iss}		-	3031	-	pF
C_{oss}		-	213	-	pF
C_{rss}		-	179	-	pF
Q_g		-	59	-	nC
Q_{gs}		-	12	-	nC
Q_{gd}		-	12	-	nC
$t_{d(on)}$		-	11	-	ns
t_r		-	32	-	ns
$t_{d(off)}$		-	52	-	ns
t_f		-	13	-	ns
I_S		-	-	50	A
I_{SM}		-	-	200	A
V_{SD}		-	-	1.2	V
trr		-	13	-	ns
Qrr		-	7	-	nC

Notes

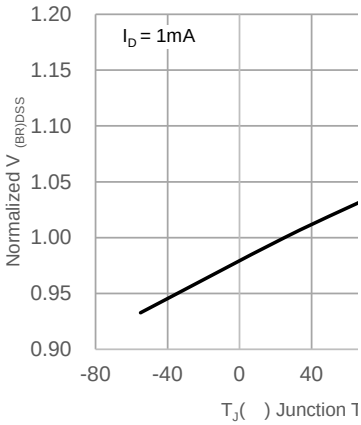
Typical Performance Characteristics

Figure 1: Output Characteristics



Typical Performance C

Figure 7: Normalized Bı
Junction Te



Test Circuit

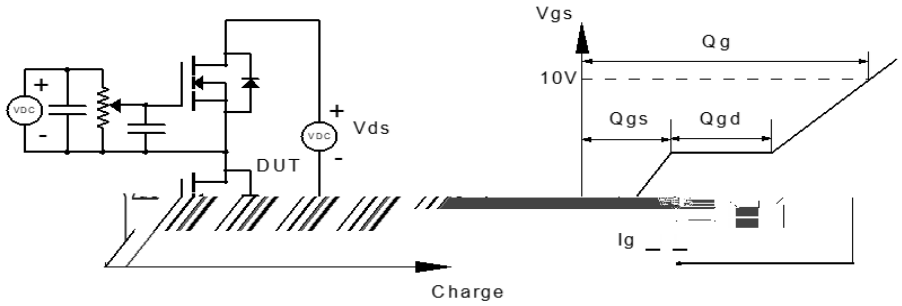


Figure 1: Gate Charge Test Circuit & Waveform

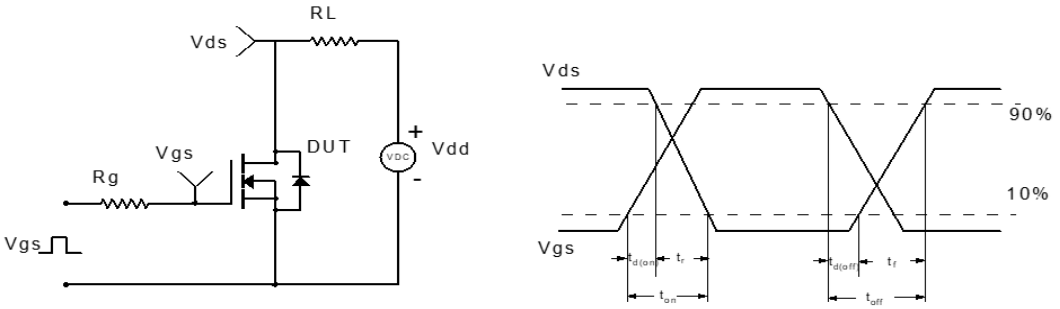


Figure 2: Resistive Switching Test Circuit & Waveform

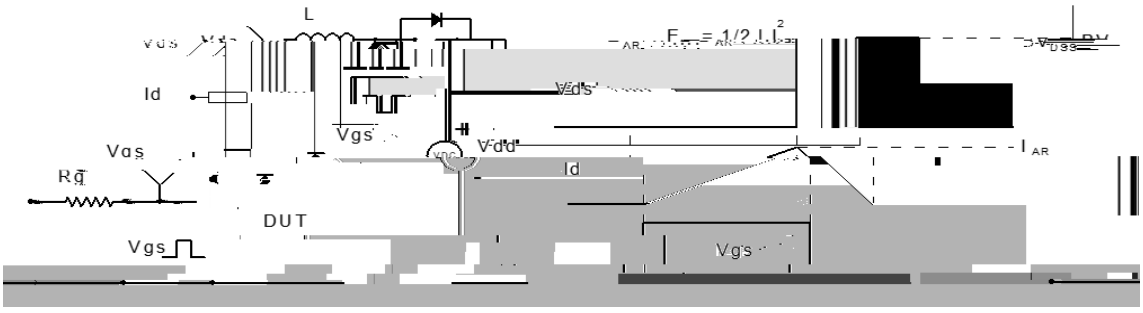


Figure 3: Unclamped Inductive Switching Test Circuit& Waveform

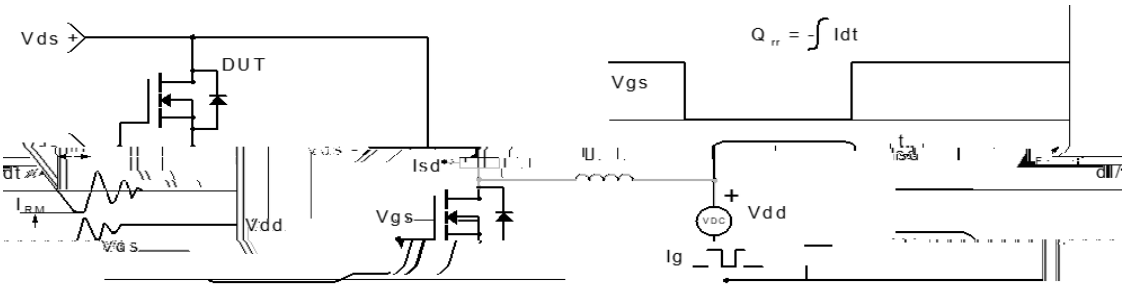


Figure 4: Diode Recovery Test Circuit & Waveform

Package Mechanical Data(PDFN3x3-8L)