

Description

JMT N-channel Enhancement Mode Power MOSFET

Features

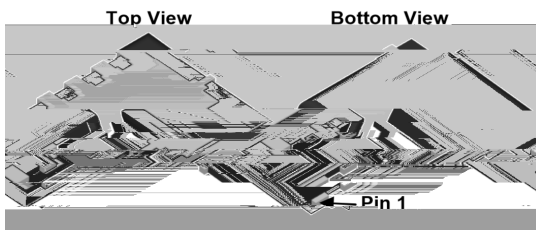
- 40V, 50A
- $R_{DS(ON)} < 6.6m$ $V_{GS} = 10V$
- $R_{DS(ON)} < 9.4m$ $V_{GS} = 4.5V$
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead Free

Applications

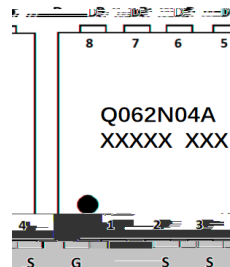
- Load Switch
- PWM Application
- Power Management



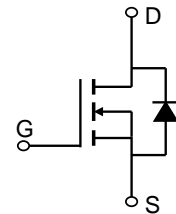
100% UIS TESTED!
100% \dot{V}_{ds} TESTED!



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 (@ $T_C = 25^\circ C$ 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)

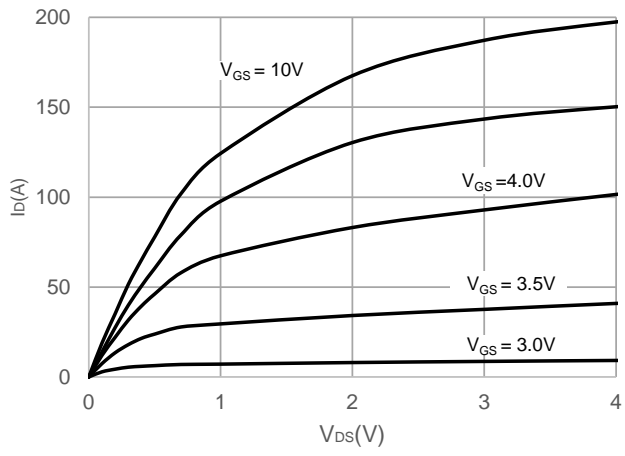
Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics					
V _{(BR)DSS}		40	-	-	V
I _{DSS}		-	-	1.0	A
I _{GSS}		-	-	±100	nA
On Characteristics					
V _{GS(th)}		1.3	1.8	2.3	V
		-	5.1	6.6	m
		-	7.2	9.4	m
Capacitance					
C _{iss}		-	3031	-	pF
C _{oss}		-	213	-	pF
C _{rss}		-	179	-	pF
Q _g		-	59	-	nC
Q _{gs}		-	12	-	nC
Q _{gd}		-	12	-	nC
Timing					
t _{d(on)}		-	11	-	ns
t _r		-	32	-	ns
t _{d(off)}		-	52	-	ns
t _f		-	13	-	ns
Static Characteristics					
I _S		-	-	50	A
I _{SM}		-	-	200	A
V _{SD}		-	-	1.2	V
t _{rr}		-	13	-	ns
Q _{rr}		-	7	-	nC

Notes



Typical Performance Characteristics

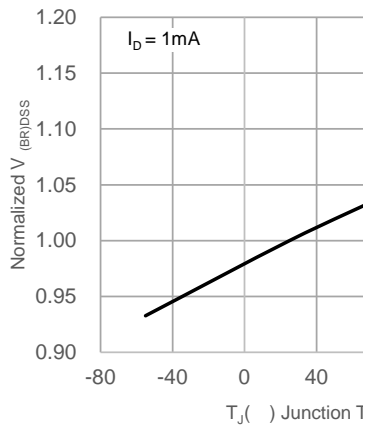
Figure 1: Output Characteristics





Typical Performance C

Figure 7: Normalized Bi
Junction Te



Test Circuit

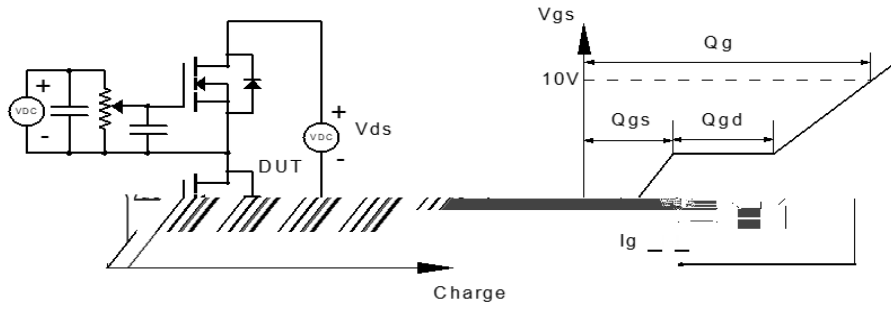


Figure 1: Gate Charge Test Circuit & Waveform

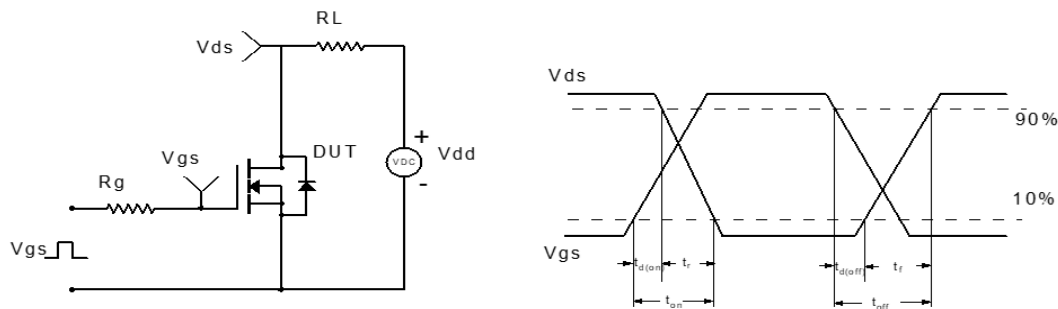


Figure 2: Resistive Switching Test Circuit & Waveform

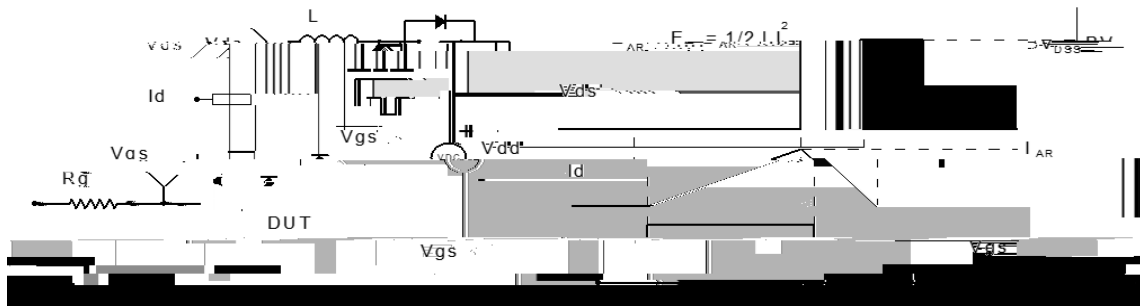


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

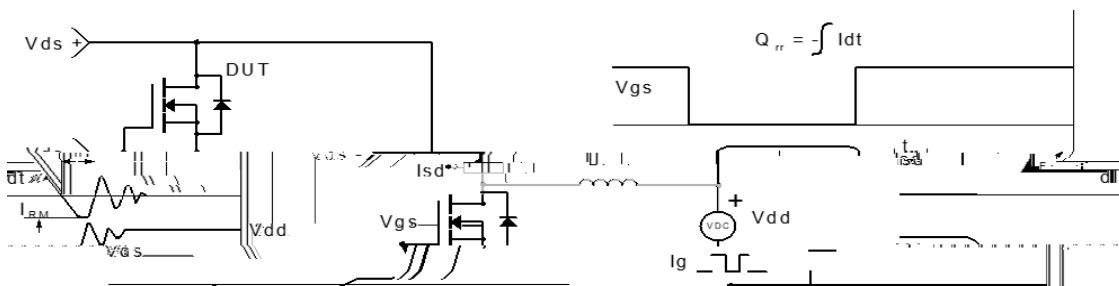


Figure 4: Diode Recovery Test Circuit & Waveform

Package Mechanical Data(PDFN3x3-8L)