



100V, 57A, 17.6mΩ N-channel Power SGT MOSFET

JMSL1018PGQ

Features

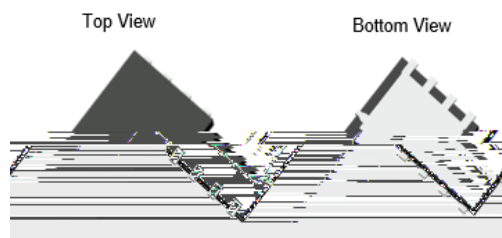
Ultra-low ON-resistance, $R_{DS(ON)}$
Low Gate Charge
100% UIS Tested
100% V_{DS} Tested
Halogen-free; RoHS-compliant
AEC-Q101 Qualified

Applications

Load Switch
PWM Application
General Automotive Application

Product Summary

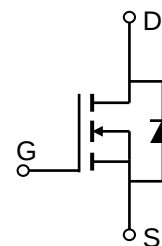
Parameters	Value	Unit
V_{DSS}	100	V
$V_{GS(th)}_{Typ}$	1.5	V
$I_D(@V_{GS}=10V)$	57	A
$R_{DS(ON)}_{Typ}(@V_{GS}=10V)$	13.2	mΩ
$R_{DS(ON)}_{Typ}(@V_{GS}=4.5V)$	17.6	mΩ



PDFN5X6-8L



Pin Assignment



Schematic Diagram

Ordering Information

Device	Marking	MSL	Form	Package	Reel(pcs)	Per Carton (pcs)
JMSL1018PGQ-13	L1018PQ	1	Tape&Reel	PDFN5x6-8L	5000	50000

Absolute Maximum Ratings (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

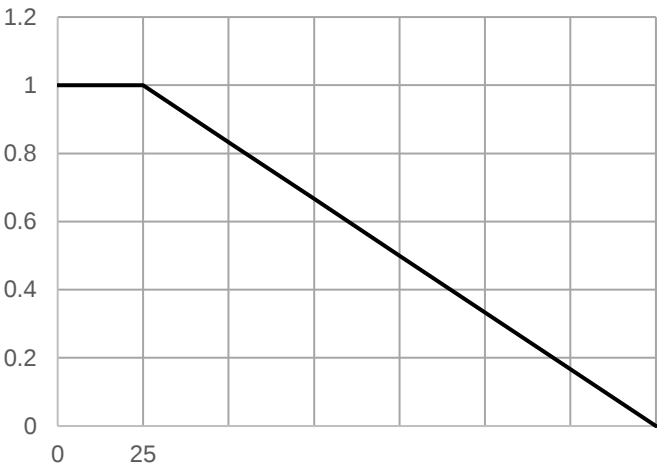
Symbol	Parameter	Value	Unit
V_{DS}	Drain-to-Source Voltage	100	V
V_{GS}	Gate-to-Source Voltage	± 20	V
I_D	Continuous Drain Current	$T_C = 25^\circ\text{C}$: 57 $T_C = 100^\circ\text{C}$: 41	A
I_{DM}	Pulsed Drain Current ⁽¹⁾	Refer to Fig.4	A
E_{AS}	Single Pulsed Avalanche Energy ⁽²⁾	44	mJ
P_D	Power Dissipation	$T_C = 25^\circ\text{C}$: 105 $T_C = 100^\circ\text{C}$: 52	W
$T_{J \text{ STG}}$	Junction & Storage Temperature Range	-55 to 175	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Max	Unit
R	Thermal Resistance, Junction to Ambient ⁽³⁾	46	$^\circ\text{C/W}$
R	Thermal Resistance, Junction to Case	1.4	



Typical Performance Characteristics



Typical Performance Characteristics

Test Circuit

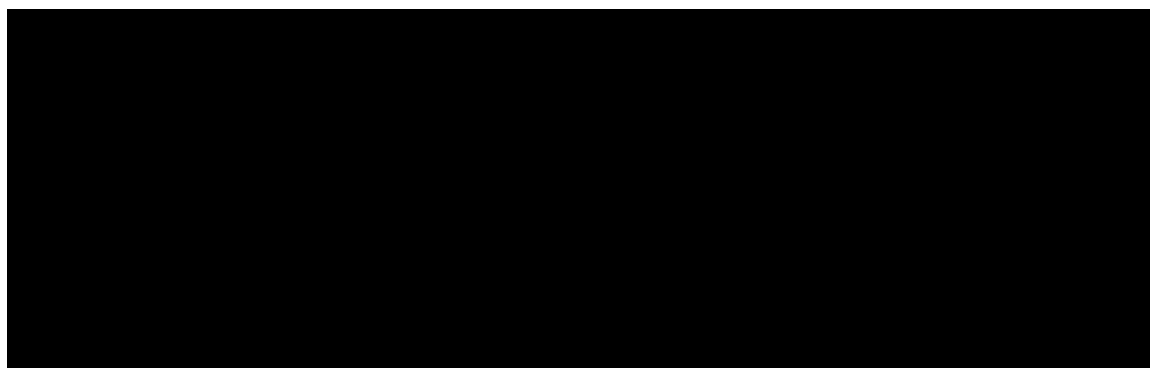


Figure 1: Gate Charge Test Circuit & Waveform

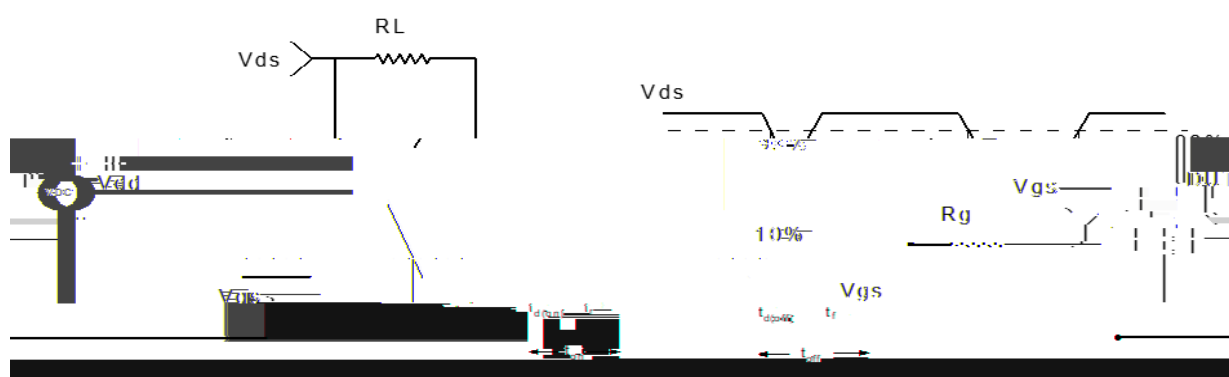


Figure 2: Resistive Switching Test Circuit & Waveform

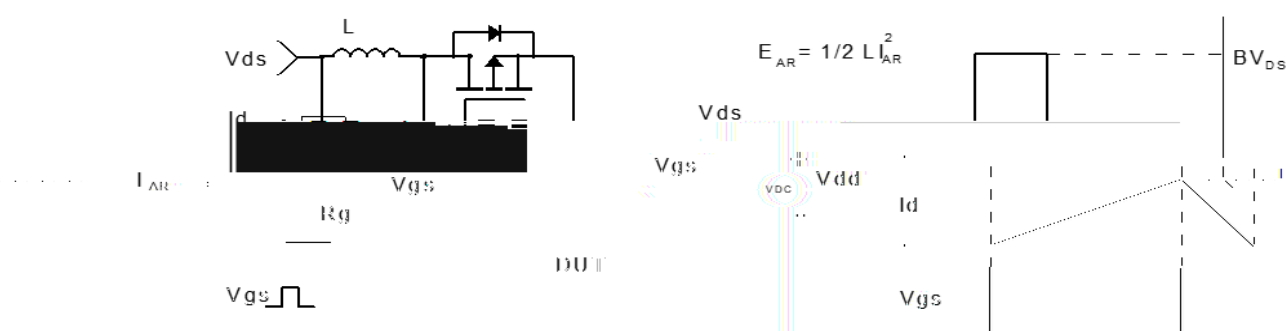


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

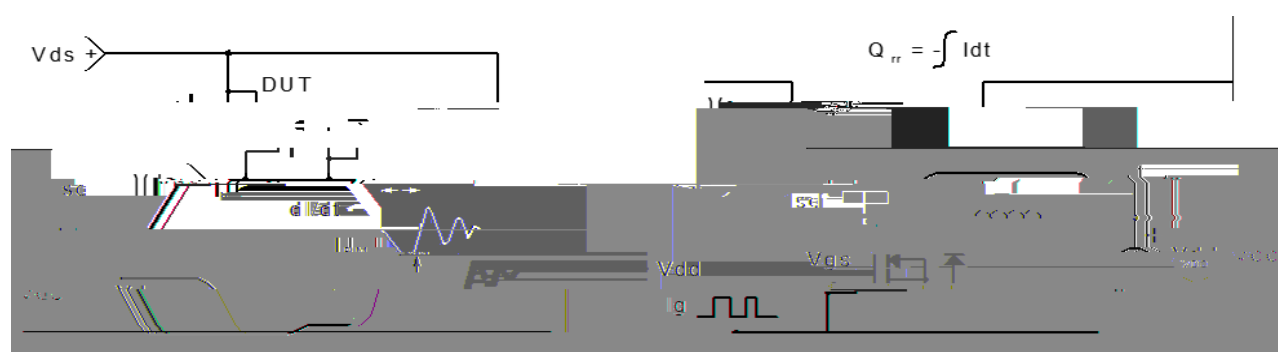
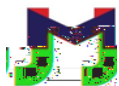
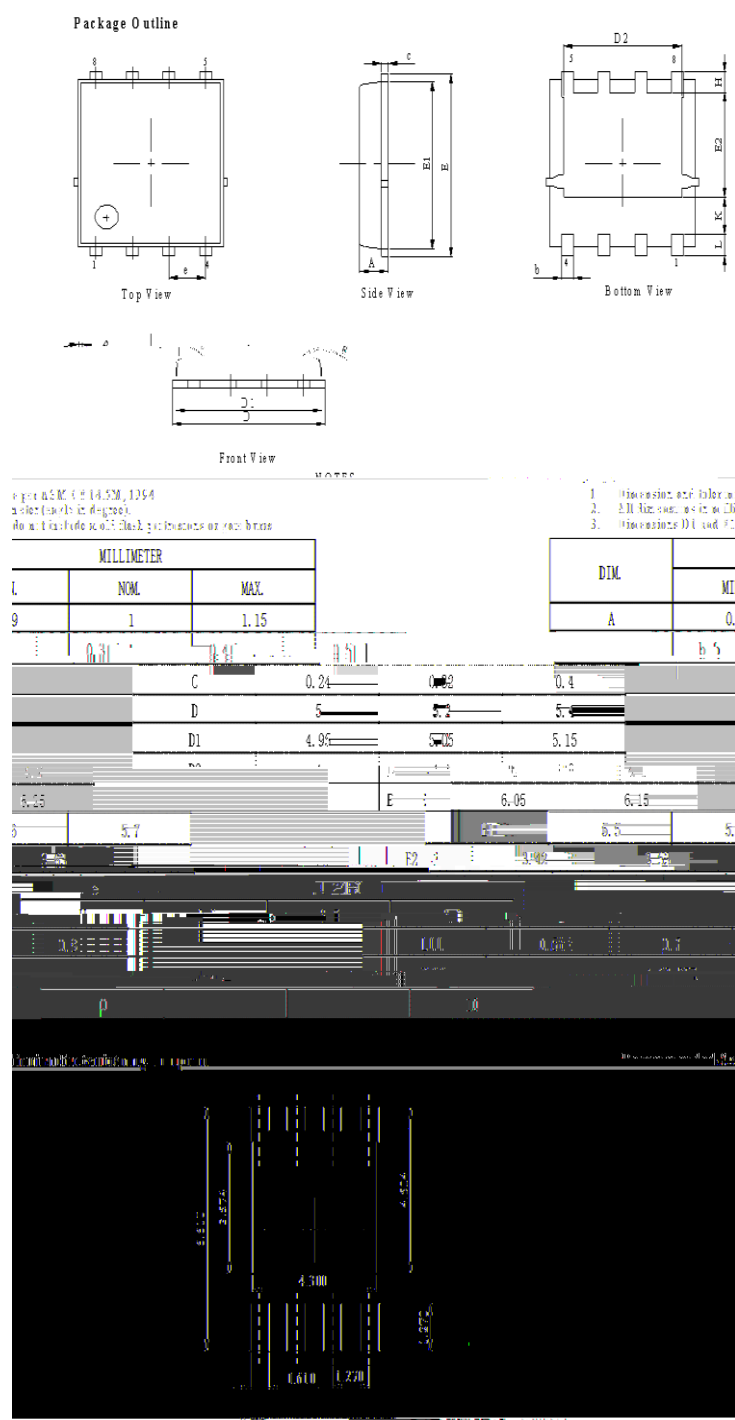


Figure 4: Diode Recovery Test Circuit & Waveform



Package Mechanical Data(PDFN5X6-8L)



Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.



is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

