



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

JMSL1018PGQ

Features

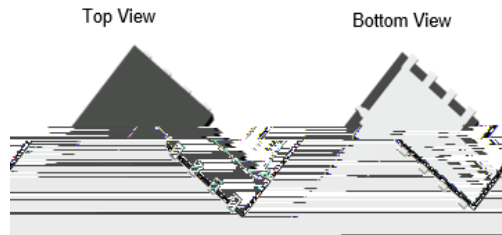
- Ultra-low ON-resistance, R_{DS(ON)}
- Low Gate Charge
- 100% UIS Tested
- 100% V_{ds} Tested
- Halogen-free; RoHS-compliant
- AEC-Q101 Qualified

Applications

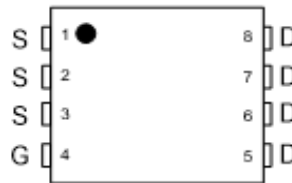
- Load Switch
- PWM Application
- General Automotive Application

Product Summary

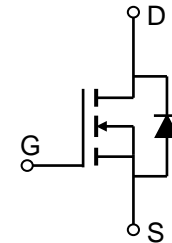
Parameters	Value	Unit
V _{DSS}	100	V
V _{GS(th)_Typ}	1.5	V
I _D (@V _{GS} =10V)	57	A
R _{DS(ON)_Typ} (@V _{GS} =10V)	13.2	mΩ
R _{DS(ON)_Typ} (@V _{GS} =4.5V)	17.6	mΩ



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°C unless otherwise specified)

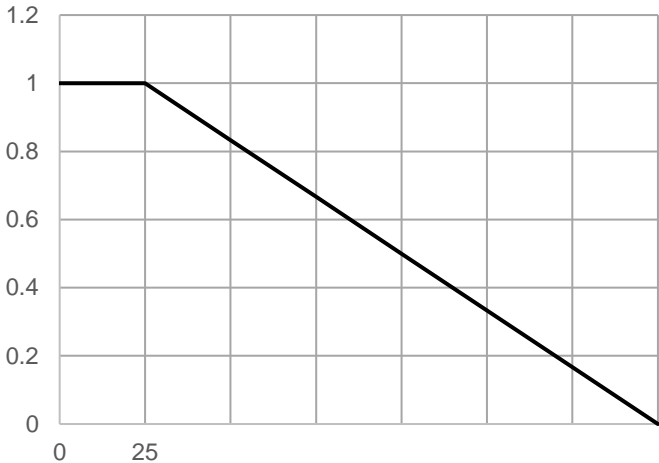
Symbol	Parameter	Value	Unit
V _{DS}	Drain-to-Source Voltage	100	V
V _{GS}	Gate-to-Source Voltage	±20	V
I _D	Continuous Drain Current	T _C = 25°C	57
		T _C = 100°C	41
I _{DM}	Pulsed Drain Current ⁽¹⁾	Refer to Fig.4	A
E _{AS}	Single Pulsed Avalanche Energy ⁽²⁾	44	mJ
P _D	Power Dissipation	T _C = 25°C	105
		T _C = 100°C	52
T _{J STG}	Junction & Storage Temperature Range	-55 to 175	°C

Thermal Characteristics

Symbol	Parameter	Max	Unit
R	Thermal Resistance, Junction to Ambient ⁽³⁾	46	°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

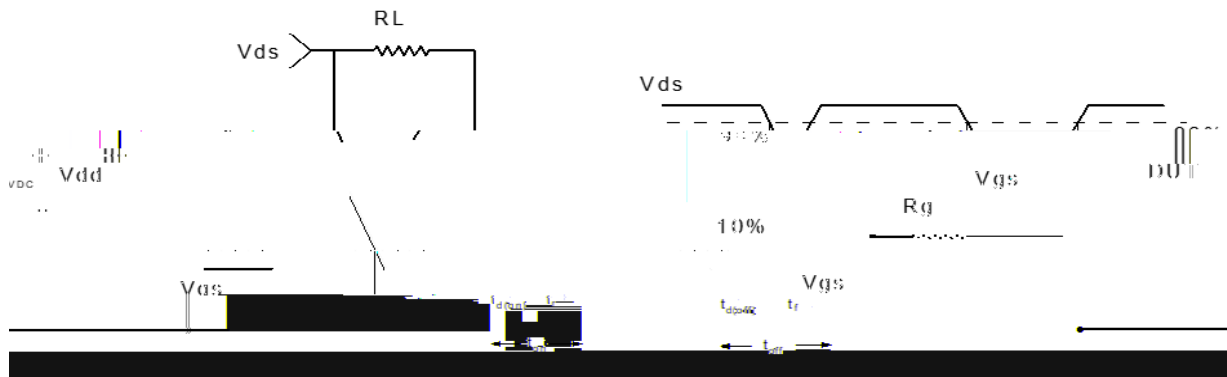


Figure 2: Resistive Switching Test Circuit & Waveform

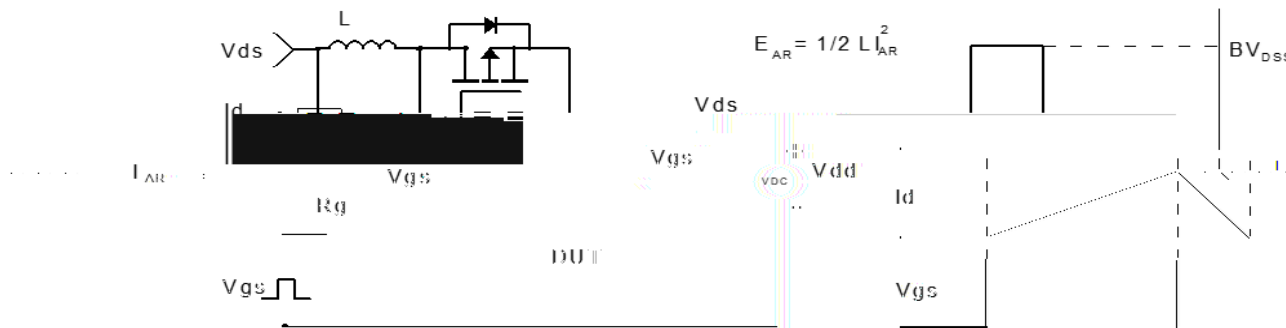


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

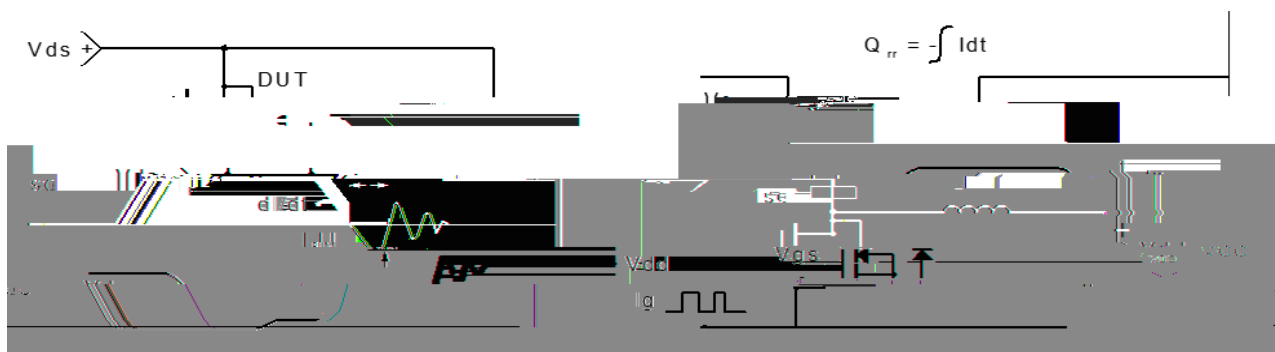


Figure 4: Diode Recovery Test Circuit & Waveform



