JMSL0302PU

Product Summary

Parameters	Value	Unit
V_{DSS}	30	V
$V_{GS(th)\_Typ}$	1.5	V
I_D(@V_{GS}=10V)	125	A
$R_{DS(ON)\_Typ}$(@V_{GS}=10V)	1.4	mΩ
$R_{DS(ON)\_Typ}$(@V_{GS}=4.5V)	2.0	mΩ

Ordering Information

Device	Marking	MSL	Form	Package	Reel(pcs)	Per Carton (pcs)
JMSL0302PU-13	SL0302P	1	Tape&Reel	PDFN3x3-8L	5000	50000

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

Symbol	Parameter		Value	Unit
V_{DS}	Drain-to-Source Voltage		30	V
V_{GS}	Gate-to-Source Voltage		±20	V
I_D	Continuous Drain Current	T_C = 25°C	125	A
		T_C = 100°C	79	
I_{DM}	Pulsed Drain Current [1]		Refer to Fig.4	A
E_{AS}	Single Pulsed Avalanche Energy		294	mJ
P_D	Power Dissipation	T_C = 25°C	50	W
		T_C = 100°C	20	
T_J $_{STG}$	Junction & Storage Temperature Range		-55 to 150	°C

Thermal Characteristics

Symbol	Parameter	Max	Unit
R	Thermal Resistance, Junction to Ambient[3]	43	°C/W
R	Thermal Resistance, Junction to Case	2.5	

Typical Performance Characteristics

Figure 1: Power De-rating

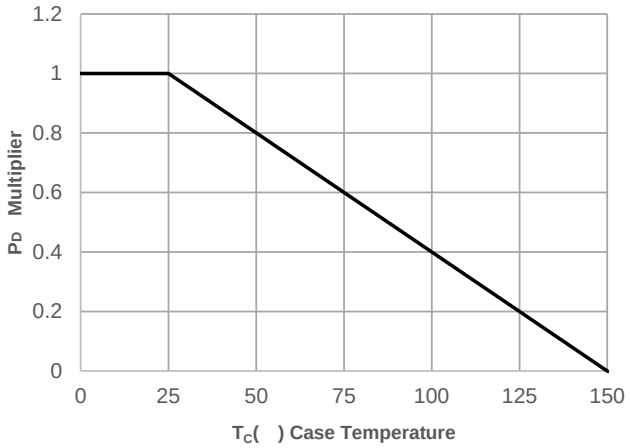


Figure 2: Current De-rating

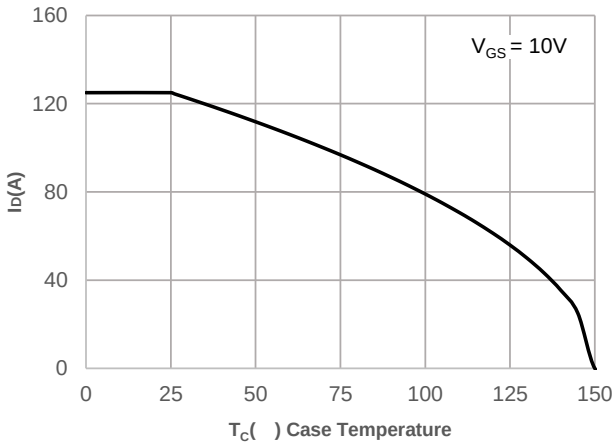
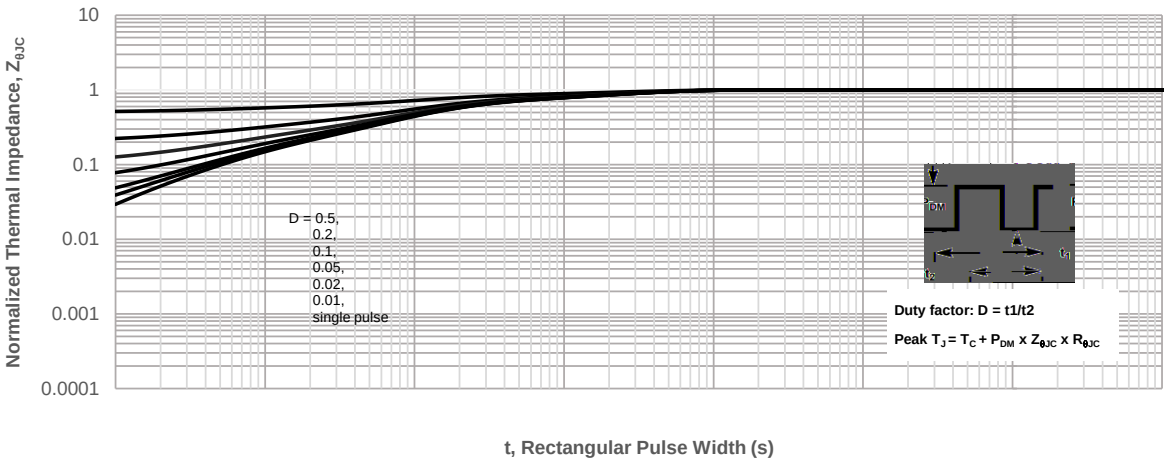
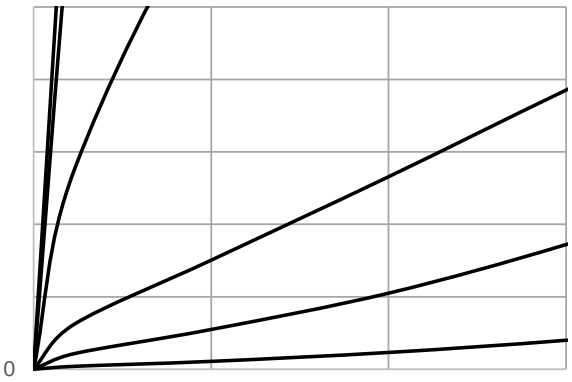


Figure 3: Normalized Maximum Transient Thermal Impedance



Typical Performance Characteristics



Typical Performance Characteristics

Figure 11: Normalized Breakdown voltage vs. Junction Temperature

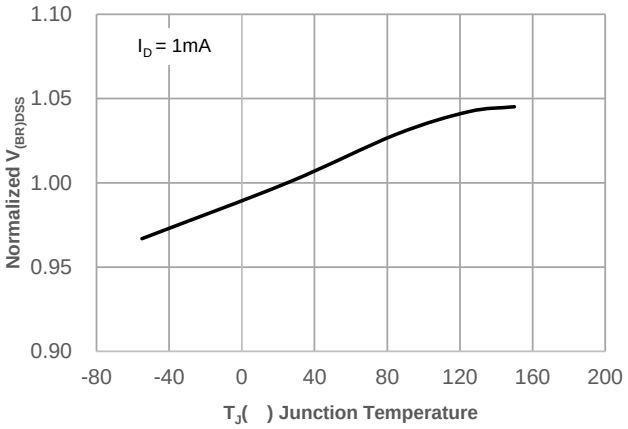
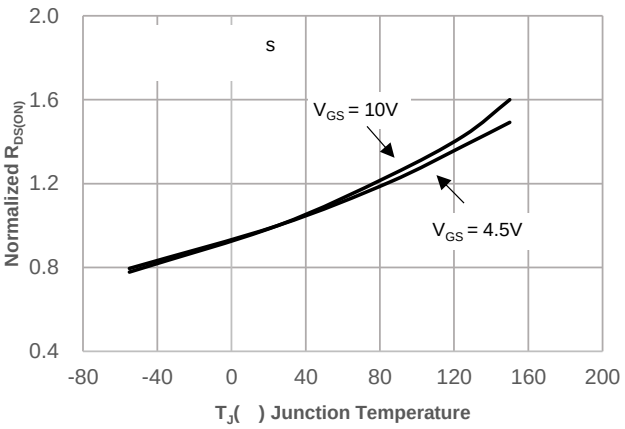


Figure 12: Normalized on Resistance vs. Junction Temperature



Test Circuit

Figure 1: Gate Charge Test Circuit & Waveform

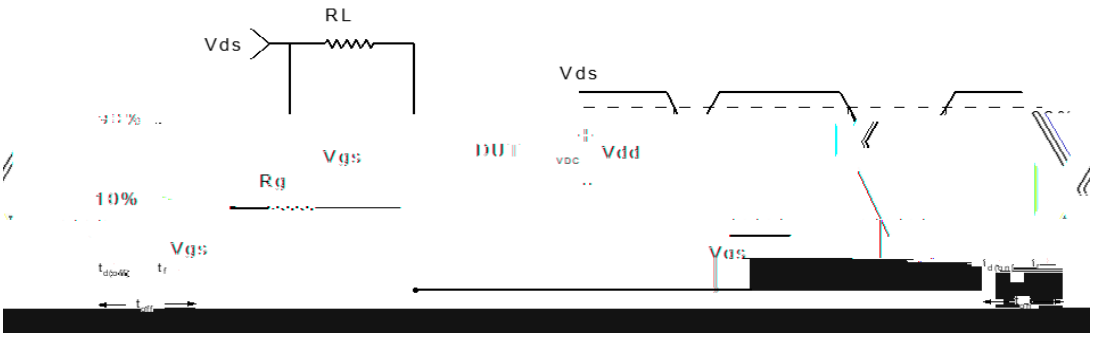


Figure 2: Resistive Switching Test Circuit & Waveform

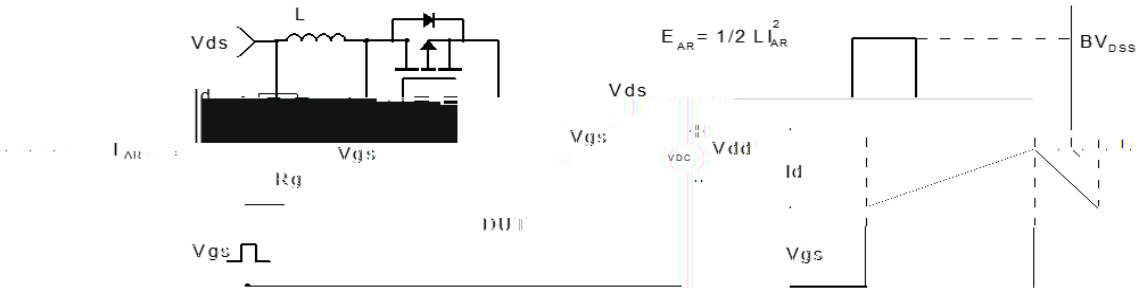


Figure 3: Unclamped Inductive Switching Test Circuit& Waveform

Figure 4: Diode Recovery Test Circuit & Waveform

Package Mechanical Data(PDFN3x3-8L)

Package Outline