

30V, 395A, 0.48m N-channel Power SGT MOSFET

JMSL030STG

Product Summary

Parameters	Value	Unit
V_{DSS}	30	V
$V_{GS(th_Typ)}$	1.6	V
$I_D(@V_{GS}=10V)$	395	A
$R_{DS(ON_Typ)}(@V_{GS}=10V)$	0.48	m Ω

Ordering Information

Device	Marking	MSL	Form	Package	Reel(pcs)	Per Carton (pcs)
JMSL030STG-13	SL030ST	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	30	V
V_{GS}	Gate-to-Source Voltage	± 20	V
I_D		$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	A
I_{DM}	Pulsed Drain Current ⁽¹⁾	Refer to Fig.4	A
E_{AS}	Single Pulsed Avalanche Energy ⁽²⁾	1118	mJ
P_D		$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	W
T_J, T_{STG}			$^\circ\text{C}$

Symbol	Unit
R	
R	

Electrical Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics					
$V_{(BR)DSS}$		30	-	-	V
I_{DSS}		-	-	1.0	μA
I_{GSS}		-	-	± 100	nA

$V_{GS(th)}$

Typical Performance Characteristics

Figure 1: Power De-rating

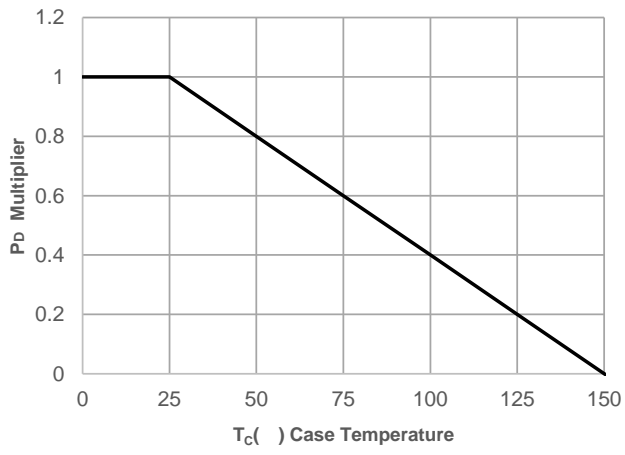
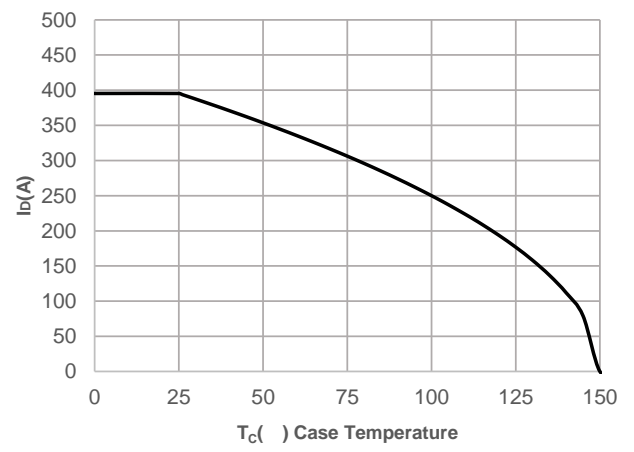
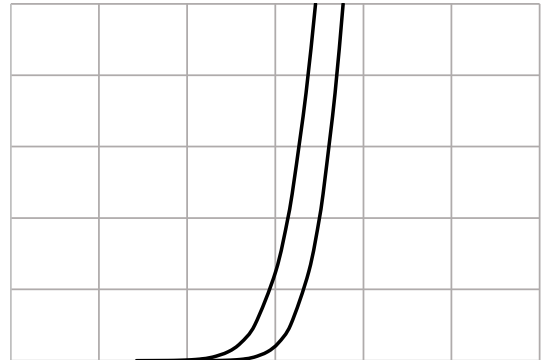
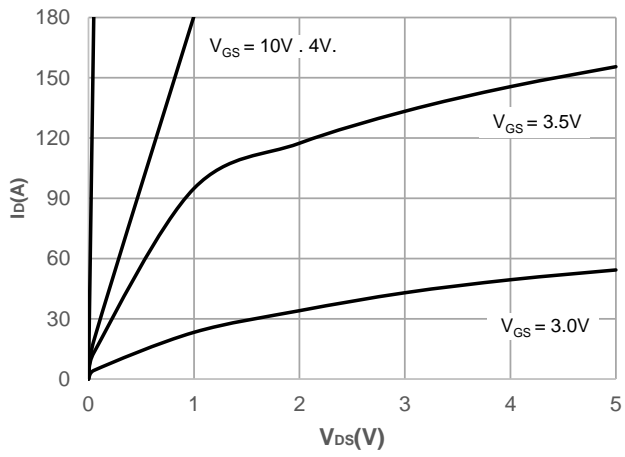


Figure 2: Current De-



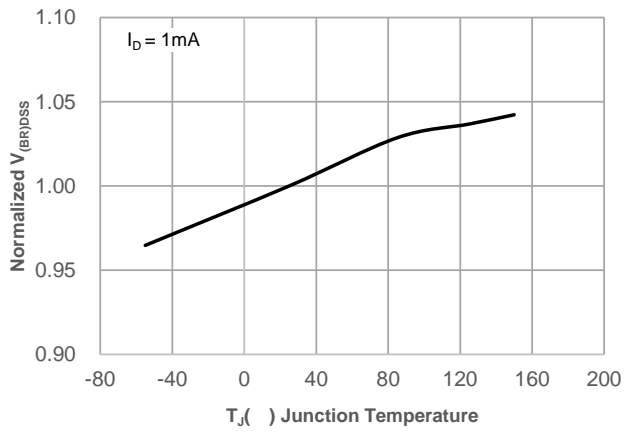
Typical Performance Characteristics

Figure 5: Output Characteristics



Typical Performance Characteristics

Figure 11: Normalized Breakdown voltage vs. Junction Temperature



Test Circuit



Figure 1: Gate Charge Test Circuit & Waveform

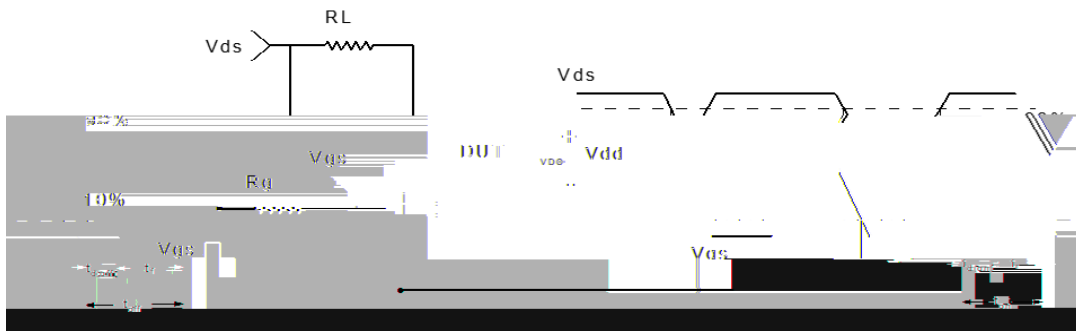


Figure 2: Resistive Switching Test Circuit & Waveform

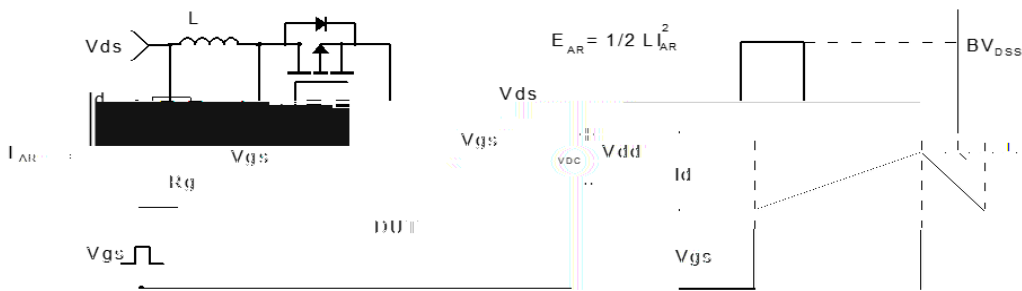


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

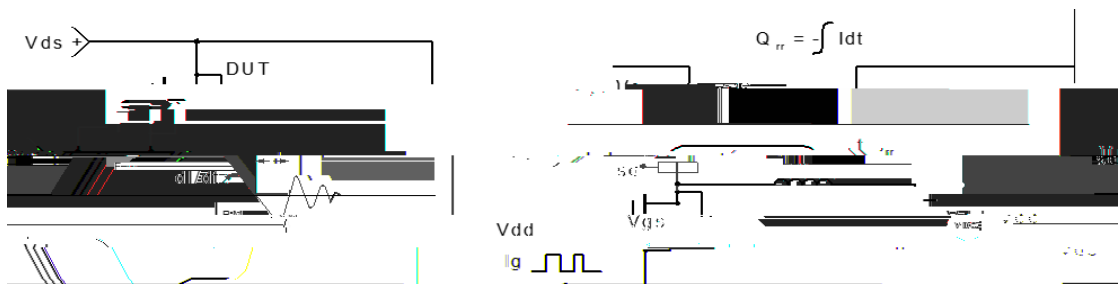


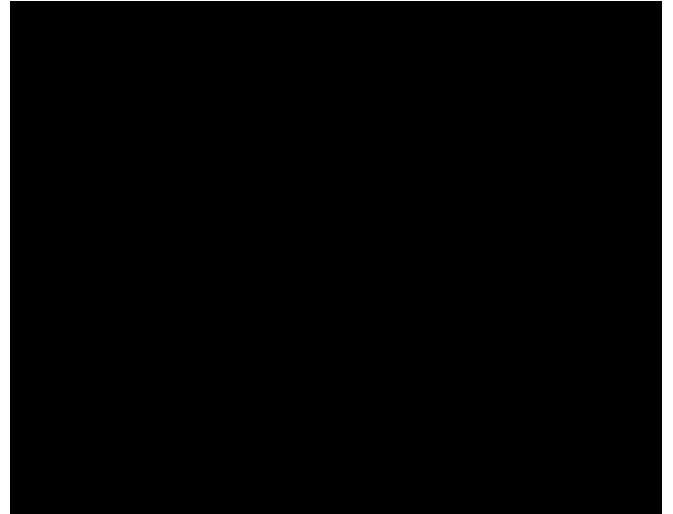
Figure 4: Diode Recovery Test Circuit & Waveform





Package Mechanical Data(PDFN 5X6-8L)

Package Outline



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