

# 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 $\Omega$

### 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	$\pm 20$	V
$I_D$		$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	A
$I_{DM}$	Pulsed Drain Current <sup>(1)</sup>	Refer to Fig.4	A
$E_{AS}$	Single Pulsed Avalanche Energy <sup>(2)</sup>	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
<b>Off Characteristics</b>					
$V_{(BR)DSS}$		30	-	-	V
$I_{DSS}$		-	-	1.0	$\mu\text{A}$
$I_{GSS}$		-	-	$\pm 100$	nA

$V_{GS(th)}$

## Typical Performance Characteristics

Figure 1: Power De-rating

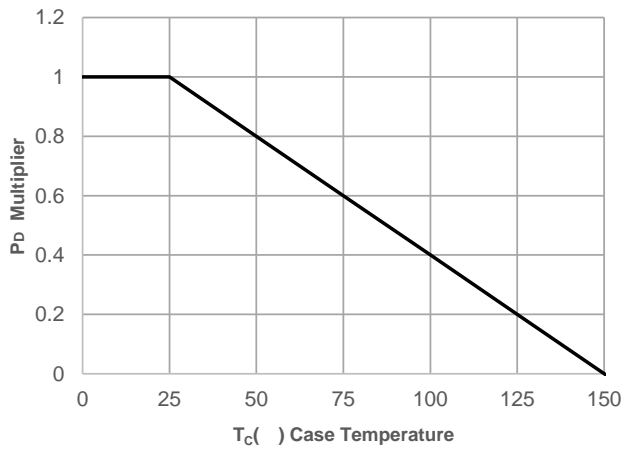
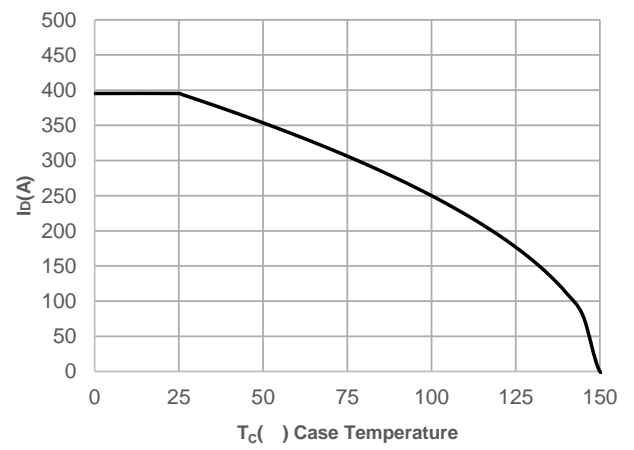
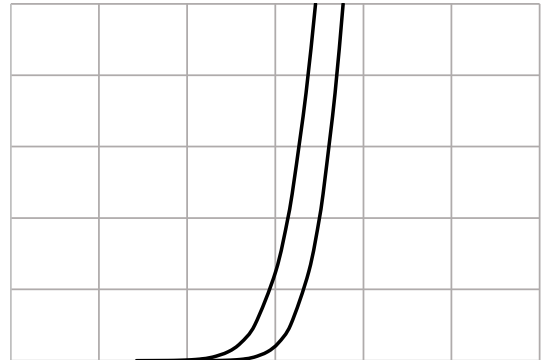
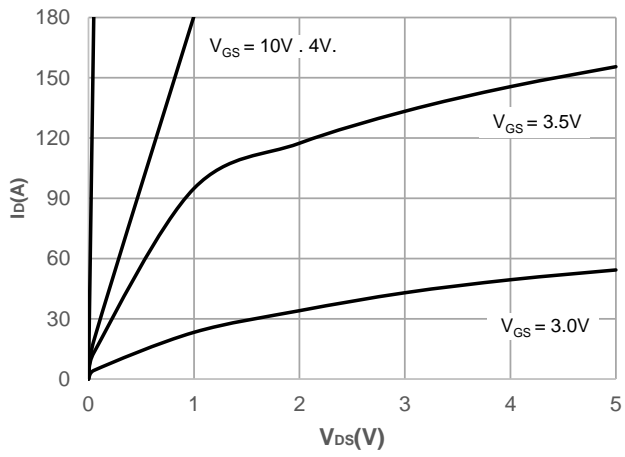


Figure 2: Current De-



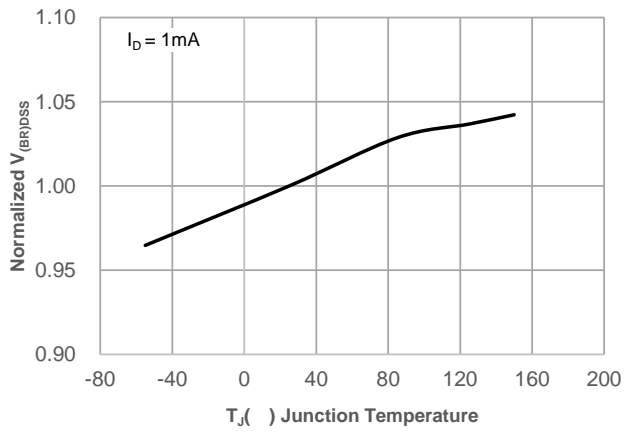
## Typical Performance Characteristics

Figure 5: Output Characteristics



## Typical Performance Characteristics

Figure 11: Normalized Breakdown voltage vs. Junction Temperature



### Test Circuit



Figure 1: Gate Charge Test Circuit & Waveform

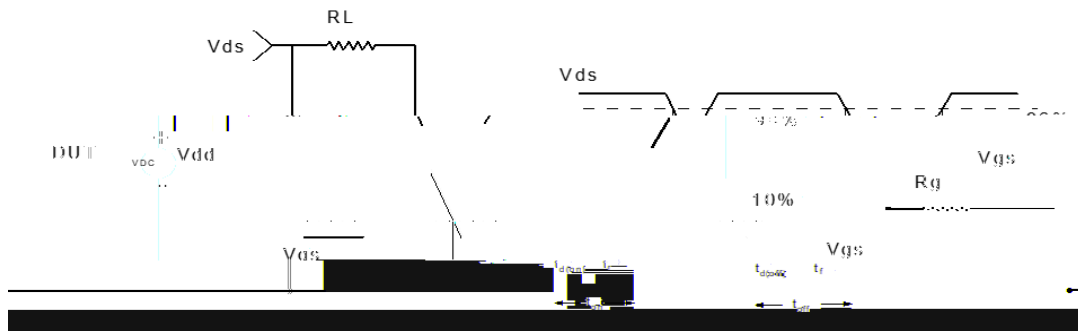


Figure 2: Resistive Switching Test Circuit & Waveform

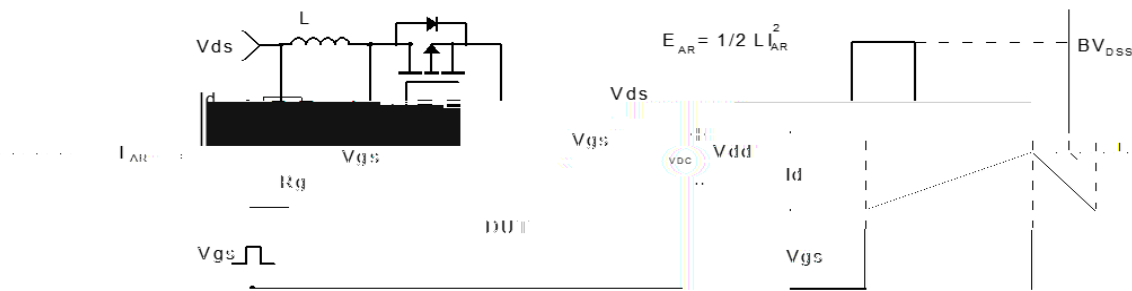


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

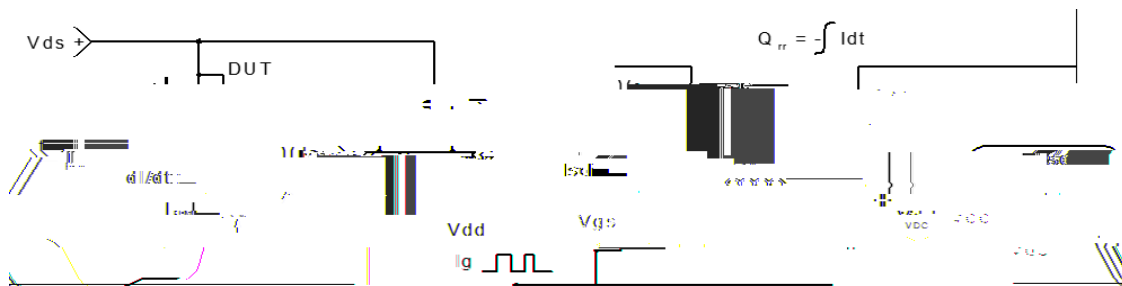


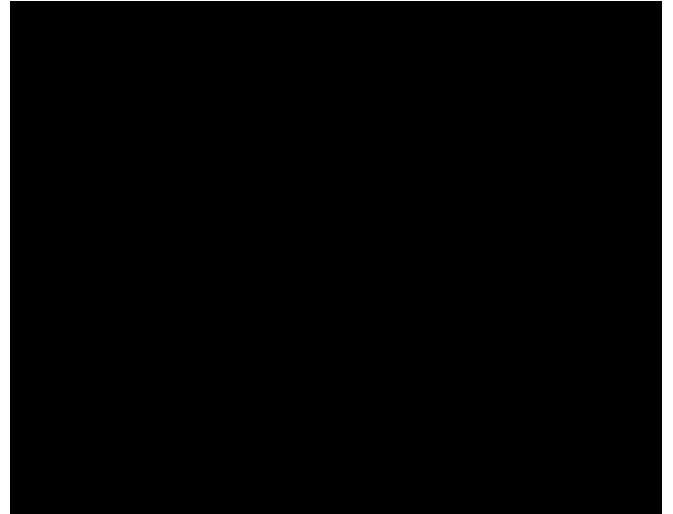
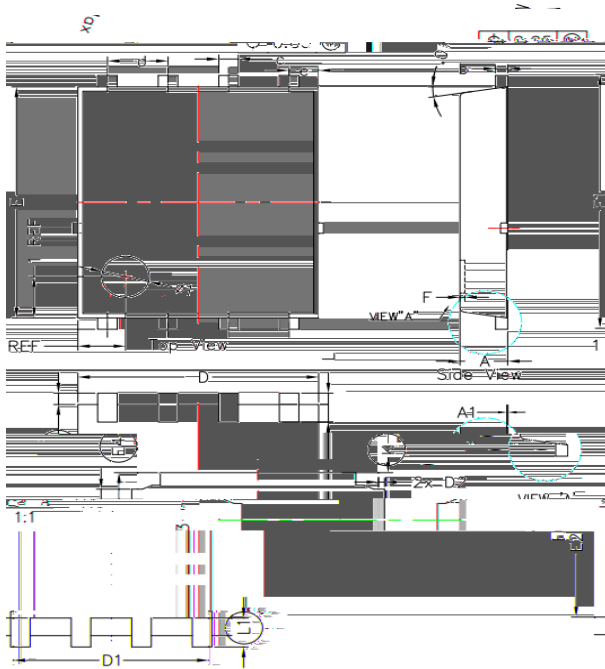
Figure 4: Diode Recovery Test Circuit & Waveform





## Package Mechanical Data(PDFN 5X6-8L)

### Package Outline



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