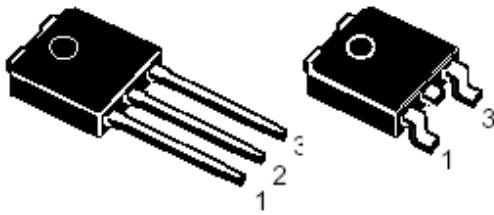


**1.0A**

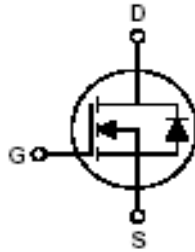
**PIN CONFIGURATION**

TO-251

TO-252



1.Gate 2.Drain 3.Source



**FEATURE**

- Robust High Voltage Termination.
- Avalanche Energy Specified
- Source-to Drain Diode Recovery Time Comparable to a Discrete Fast Recovery Diode
- Diode is Characterized for Use in Bridge Circuits
- $I_{DSS}$  and  $V_{DS(on)}$  Specified at Elevated Temperature

**ABSOLUTE MAXIMUM RATINGS**

RATING	SYMBOL	VALUE	UNIT
Drain to Current - Continuous - Pulsed	$I_D$ $I_{DM}$	1.0 5.0	A
Gate-to-Source Voltage – Continue - Non-repetitive	$V_{GS}$ $V_{GSM}$	+/-30 +/-40	V V
Total Power Dissipation TO-251/252	$P_D$	50	W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150	
Single Pulse Drain-to-Source Avalanche Energy – $T_j = 25$ ( $V_{DD} = 100V, V_{GS} = 10V, I_{AS} = 2A, L = 10mH, R_G = 25$ )	$E_{AS}$	20	mJ
Thermal Resistance – Junction to Case - Junction to Ambient	$\theta_{JC}$ $\theta_{JA}$	1.0 62.5	/W
Maximum Lead Temperature for Soldering Purposes, 1/8” form 10 seconds	$T_L$	260	



**STANSON TECHNOLOGY**

120 Bentley Square, Mountain View, Ca 94040 USA

TEL: (650) 9389294 FAX: (650) 9389295

**N Channel MOSFET****M01N60****1.0A****MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( Ta=25 )**

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	CONDITION
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	600			Vdc	$V_{GS}=0, I_D=250\mu A$
Drain-Source Leakage Current	$I_{DSS}$			1.0 0.25	mA mA	$V_{DS}=600V, V_{GS}=0$ $V_{DS}=480V, V_{GS}=0, T_j=125$
Gate-Source Leakage Current-Forward	$I_{GSSF}$			100	nA	$V_{GSR}=20V, V_{DS}=0$
Gate Threshold Voltage	$V_{GS(th)}$	2.0		4.0	V	$V_{DS}=V_{GS}, I_D=250\mu A$
Drain-Source On-Resistance	$R_{DS(on)}$			8	Ohm	$V_{GS}=10V, I_D=0.6A^*$
Input Capacitance	$C_{iss}$		210		pF	$V_{DS}=25V, V_{GS}=0, f=1\text{ MHz}$
Output Capacitance	$C_{oss}$		28		pF	
Reverse Transfer Capacitance	$C_{rss}$		9		pF	
Turn-On Delay Time	$t_{on}$		8		nS	$V_{DS}=300V, I_D=1.0A,$  $V_{GS}=10V, R_G=18$
Turn-Off Delay Time	$t_{off}$		18		nS	
Rise Time	$t_r$		21		nS	
Fall Time	$t_f$		24		nS	
Total Gate Charge	$Q_g$		8.5		nC	
Gate-Drain Charge	$Q_{gd}$		8.5		nC	
Gate-Drain Charge	$Q_{gs}$		1.8		nC	
Internal Drain Inductance	$L_D$		4.5		nH	Measured from the drain lead 0.25'' From package to center of die
Internal Drain Inductance	$L_s$		7.5		nH	Measured from the source lead 0.25'' package to source bond pad
<b>SOURCE-DRAIN DIODE CHARACTERISTICS</b>						
Forward On-Voltage(1)	$V_{DS}$			1.5	V	$I_s=1.0A, V_{GS}=0V$ $d_I/d_t = 100A/\mu S$
Forward Turn Time	$t_{on}$		**		nS	
Reverse Recovery Time	$t_{rr}$		350	500	nS	

\*Pulse Test: Pulse Width 300  $\mu S$ , Duty Cycle 2%

\*\*Negligible, Dominated by circuit inductance

**STANSON TECHNOLOGY**

120 Bentley Square, Mountain View, Ca 94040 USA

TEL: (650) 9389294 FAX: (650) 9389295

N Channel MOSFET

M01N60

1.0A

Typical Characteristics

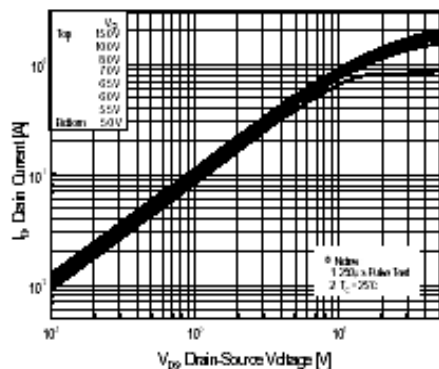


Figure 1. On-Region Characteristics

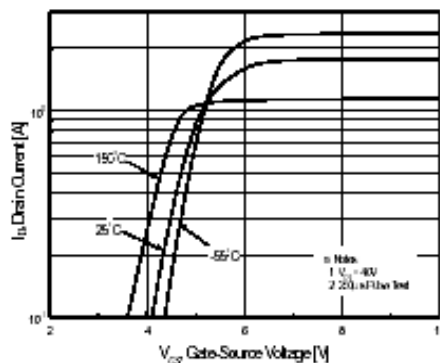


Figure 2. Transfer Characteristics

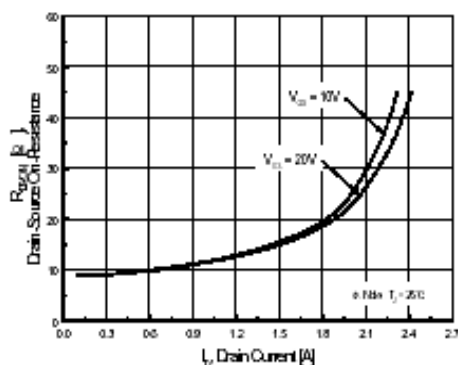


Figure 3. On-Resistance Variation vs Drain Current and Gate Voltage

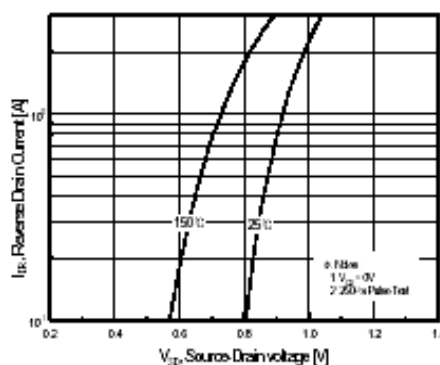


Figure 4. Body Diode Forward Voltage Variation with Source Current and Temperature

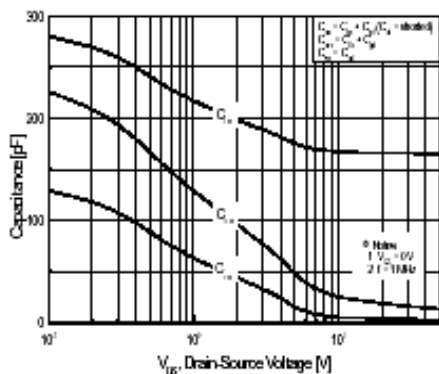


Figure 5. Capacitance Characteristics

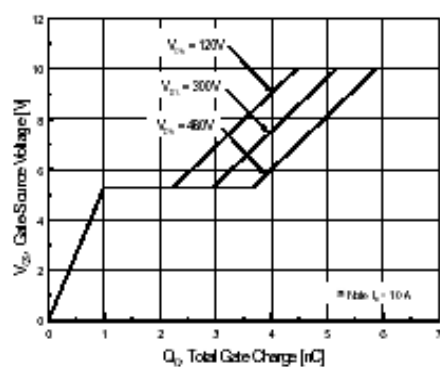


Figure 6. Gate Charge Characteristics

Typical Characteristics (Continued)

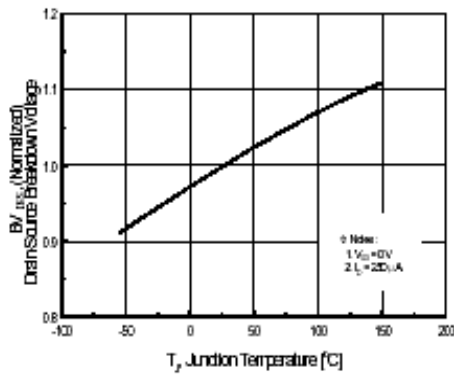


Figure 7. Breakdown Voltage Variation vs Temperature

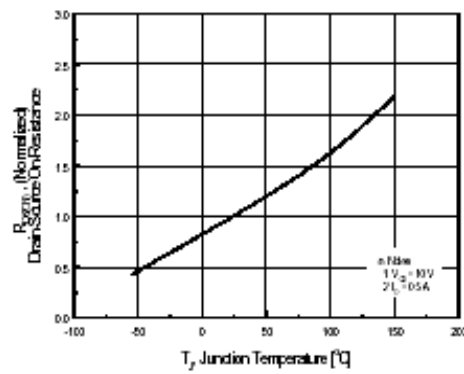


Figure 8. On-Resistance Variation vs Temperature

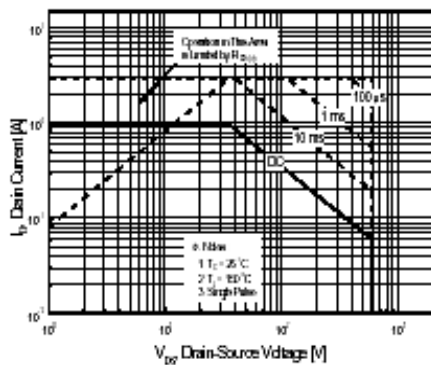


Figure 9-1. Maximum Safe Operating Area for SSP1N60B

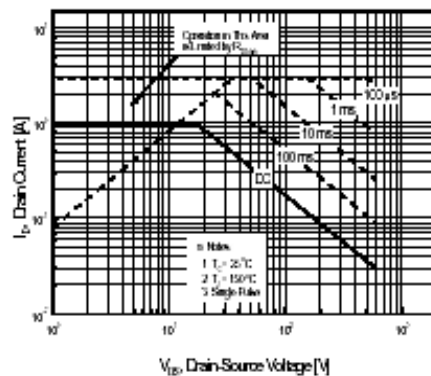


Figure 9-2. Maximum Safe Operating Area for SSS1N60B

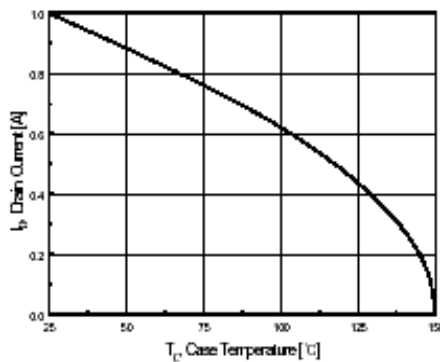


Figure 10. Maximum Drain Current vs Case Temperature

