

P!7\ &\$J : UghGk ]HW ]b[ ACG: 9Hg

- ★ Ö!^^} Ö^çã^ Ççãã|^
- ★ Û^] ^! Š[, Öæ^ Ö@\* ^
- ★ Öç&||^} cÖâçÉac^~^&câ^&ã^ ^
- ★ Öãçç &^á @ @&^|| á^} •æ^ V!^} &@ ç&@ [ [ \* ^

DfcXi WhGi a a Ufm

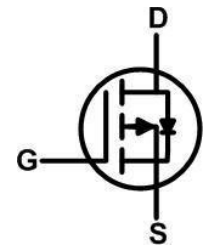
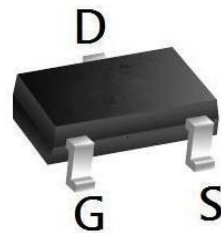


6 J 8 GG	F 8 GCB	-8
Ě8X	GG	Ě Ě Ě

8 YgW]dhjcb

V@ÁÜGHFLÁ Á@Á@ Ö^||Á^} •æ^ Á^} &@á  
 PĚ@UÙÖV•Ě @&^|| çã^•Áç&||^} ÖÜÖÜP  
 ç áÁ^~ã} & Á^!Á{ [•Á[ -Á@Á•{ çÁ][, ^!  
 •, æ@\* Á çá[ çáÁ, æ@] |æã} •Ě  
 V@ÁÜGHFLÁ ^^Á@Á[ PÜÁ çáÖ!^^} ÁU! [ á^ &c  
 !^~ á^{ ^} ç á@^ ||Á^} &ç} Á^|æã ç Á^} | ç^áĚ

GCH& !' @ D]b 7 cbZ[ i fU]cb



5 Vgc`i hYAU ]a i a FU]b[ g

Grã Vc`	DUFa Yhf	FU]b[	I b]hg
V <sub>DS</sub>	Drain-Source Voltage	-18	V
V <sub>GS</sub>	Gate-Source Voltage	±12	V
I <sub>D</sub> @T <sub>C</sub> =25°C	Continuous Drain Current, V <sub>GS</sub> @ 10V <sup>1,6</sup>	-5.8	A
I <sub>D</sub> @T <sub>C</sub> =100°C	Continuous Drain Current, V <sub>GS</sub> @ 10V <sup>1,6</sup>	-3.5	A
I <sub>DM</sub>	Pulsed Drain Current <sup>2</sup>	-21.3	A
EAS	Single Pulse Avalanche Energy <sup>3</sup>	---	mJ
I <sub>AS</sub>	Avalanche Current	---	A
P <sub>D</sub> @T <sub>C</sub> =25°C	Total Power Dissipation <sup>4</sup>	1.4	W
T <sub>STG</sub>	Storage Temperature Range	-55 to 150	°C
T <sub>J</sub>	Operating Junction Temperature Range	-55 to 150	°C

H Yfa U 8UU

Symbol	Parameter	Typ.	Max.	Unit
R <sub>θJA</sub>	Thermal Resistance Junction-Ambient <sup>1</sup>	---	90	°C/W
R <sub>θJC</sub>	Thermal Resistance Junction-Case <sup>1</sup>	---	---	°C/W

**Electrical Characteristics (T<sub>J</sub>=25 °C, unless otherwise noted)**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V, I <sub>D</sub> =-250uA	-18	---	---	V
$\Delta BV_{DSS}/\Delta T_J$	BV <sub>DSS</sub> Temperature Coefficient	Reference to 25°C, I <sub>D</sub> =1mA	---	---	---	V/°C
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance <sup>2</sup>	V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-1A	---	22	28	mΩ
		V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-1A	---	28	36	
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =-250uA	-0.5	---	-1	V
$\Delta V_{GS(th)}$	V <sub>GS(th)</sub> Temperature Coefficient		---	---	---	mV/°C
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =-15V, V <sub>GS</sub> =0V, T <sub>J</sub> =25°C	---	---	1	uA
		V <sub>DS</sub> =-15V, V <sub>GS</sub> =0V, T <sub>J</sub> =100°C	---	---	100	
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> =±12V, V <sub>DS</sub> =0V	---	---	±100	nA
g <sub>fs</sub>	Forward Transconductance	V <sub>DS</sub> =-5V, I <sub>D</sub> =-2A	---	---	---	S
R <sub>g</sub>	Gate Resistance	V <sub>DS</sub> =0V, V <sub>GS</sub> =0V, f=1MHz	---	---	---	Ω
Q <sub>g</sub>	Total Gate Charge		---	8	---	nC
Q <sub>gs</sub>	Gate-Source Charge	V <sub>DS</sub> =-10V, V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-2A	---	2	---	
Q <sub>gd</sub>	Gate-Drain Charge		---	1.8	---	
T <sub>d(on)</sub>	Turn-On Delay Time		---	13	---	ns
T <sub>r</sub>	Rise Time	V <sub>DD</sub> = -4.5V, R <sub>L</sub> = 3Ω	---	35	---	
T <sub>d(off)</sub>	Turn-Off Delay Time	R <sub>G</sub> = 3Ω, V <sub>GS</sub> =-6V	---	32	---	
T <sub>f</sub>	Fall Time		---	10	---	
C <sub>iss</sub>	Input Capacitance		---	693	---	pF
C <sub>oss</sub>	Output Capacitance	V <sub>DS</sub> =-10V, V <sub>GS</sub> =0V, f=1MHz	---	154	---	
C <sub>rss</sub>	Reverse Transfer Capacitance		---	124	---	

**Diode Characteristics**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I <sub>S</sub>	Continuous Source Current <sup>1,4</sup>	V <sub>G</sub> =V <sub>D</sub> =0V, Force Current	---	---	-5.8	A
V <sub>SD</sub>	Diode Forward Voltage <sup>2</sup>	V <sub>GS</sub> =0V, I <sub>S</sub> =-FA, T <sub>J</sub> =25°C	---	---	-1.2	V

Notes 1.Repetitive Rating: Pulse width limited by maximum junction temperature.

Notes 2.E<sub>AS</sub> condition: T<sub>J</sub>=25°C, V<sub>DD</sub>=-12V, V<sub>G</sub>=-10V, R<sub>G</sub>=25Ω, L=0.5mH.

Notes 3.Repetitive Rating: Pulse width limited by maximum junction temperature.

Typical Electrical And Thermal Characteristics (Curves)

Figure 1. Output Characteristics

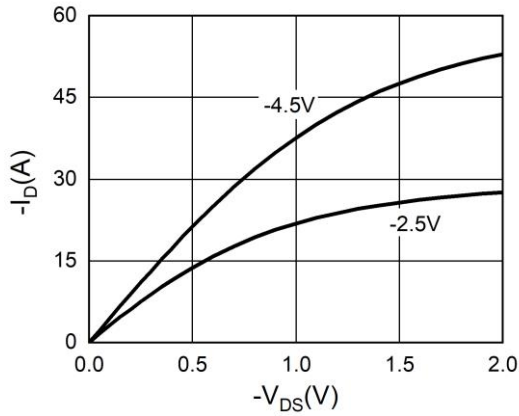


Figure 2. Transfer Characteristics

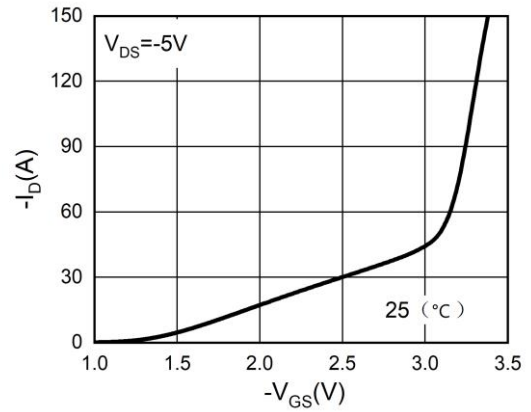


Figure 3. Power Dissipation

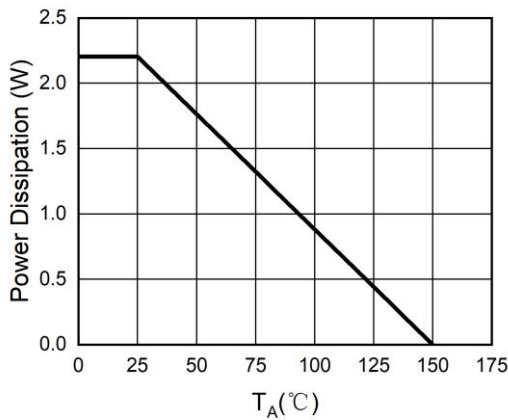


Figure 4. Drain Current

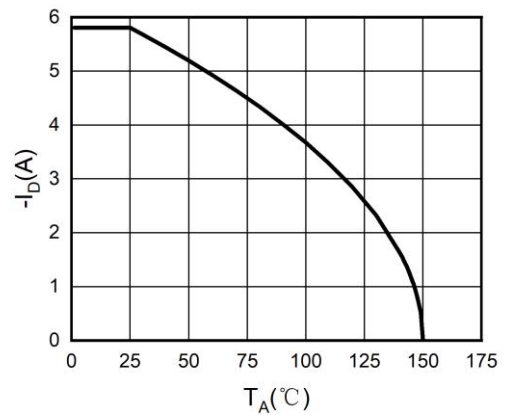


Figure 5.  $BV_{DSS}$  vs Junction Temperature

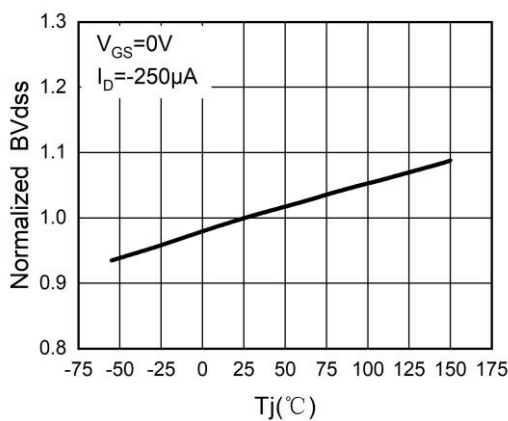
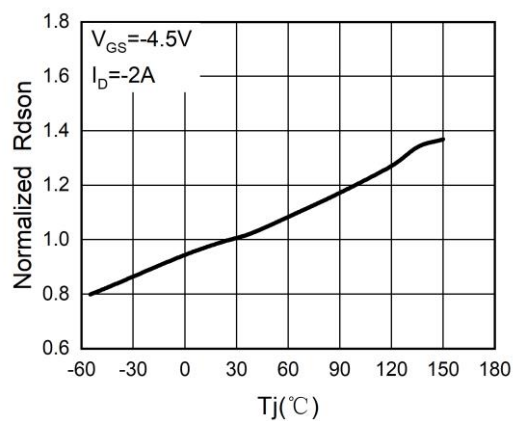


Figure 6.  $R_{DS(ON)}$  vs Junction Temperature



Typical Electrical And Thermal Characteristics (Curves)

Figure 7. Gate Charge Waveforms

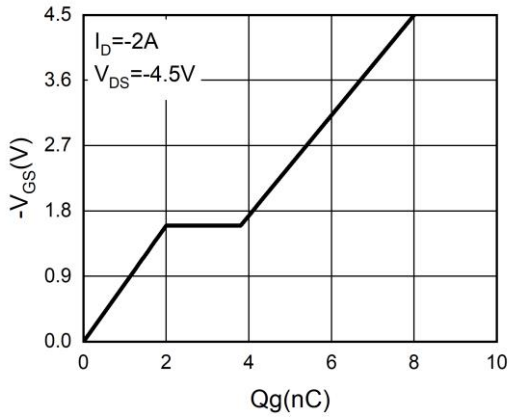


Figure 8. Capacitance

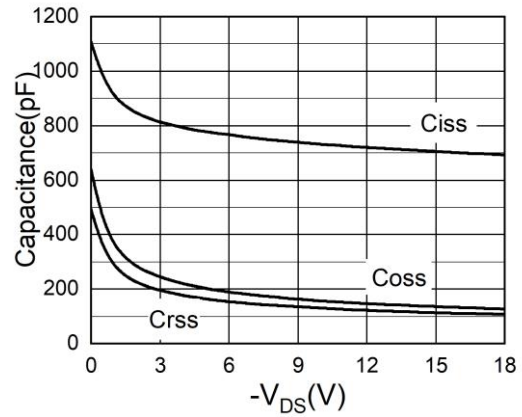


Figure 9. Body-Diode Characteristics

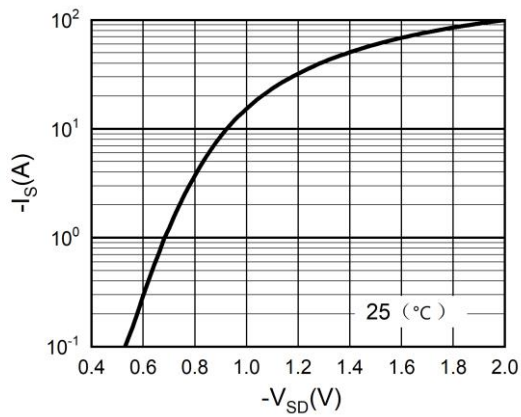
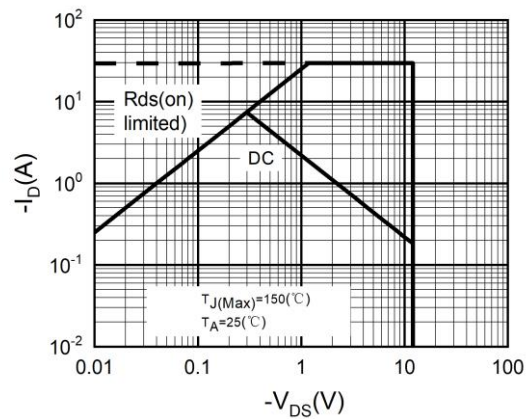
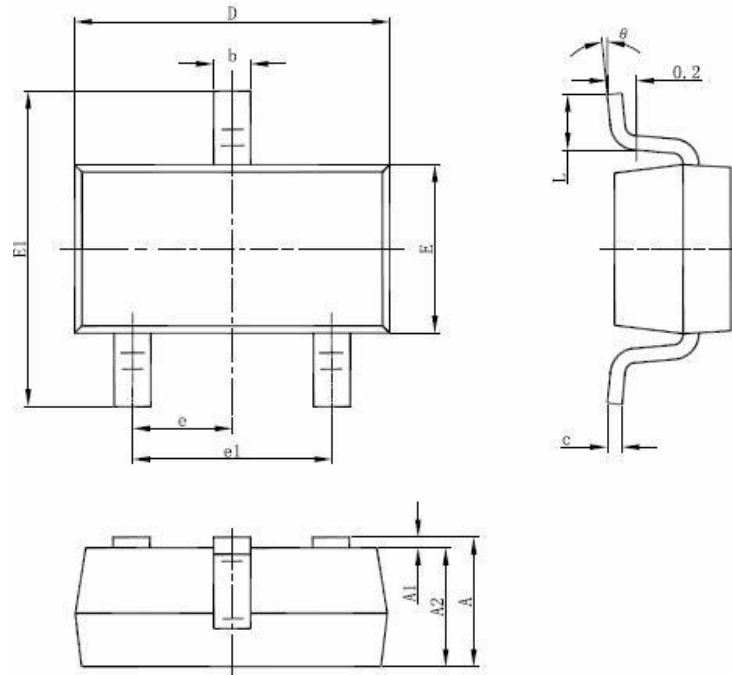


Figure 10. Maximum Safe Operating Area



SOT-23-3L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°