

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
100V	100mΩ@10V	4.5A
	120mΩ@4.5V	

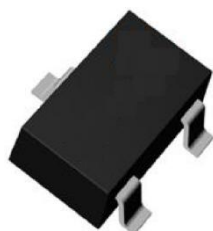
Feature

- High power and current handling capability
- Surface mount package

Application

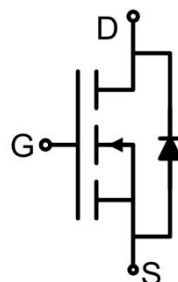
- Battery Switch
- DC-DC Converters

Package

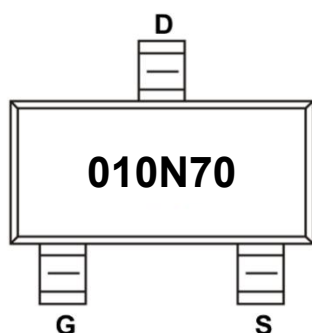


SOT-23-3L

Circuit diagram



Marking



Absolute maximum ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	4.5	A
Pulsed Drain Current	I_{DM}	18	A
Power Dissipation	P_D	1.2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	104	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

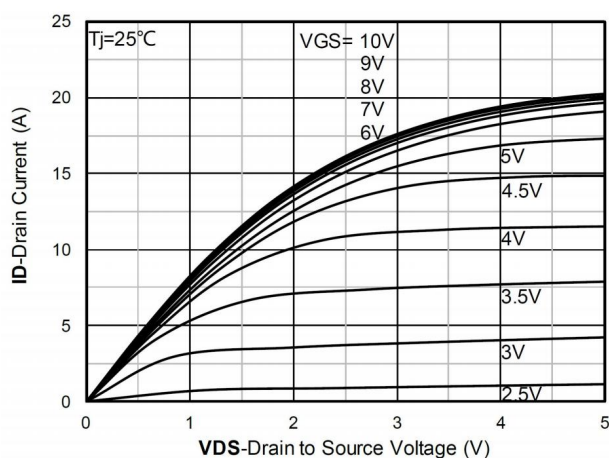
Electrical characteristics ($T_A=25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	100			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =60V,V _{GS} =0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	1.5	2.5	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} =10V, I _D =2A		70	100	mΩ
		V _{GS} =4.5V, I _D =1A		85	120	
Dynamic characteristics ¹⁾						
Input Capacitance	C _{iss}	V _{DS} =15V,V _{GS} =0V,f =1MHz		900		pF
Output Capacitance	C _{oss}			35		
Reverse Transfer Capacitance	C _{rss}			30		
Total Gate Charge	Q _g	V _{DS} =50V,V _{GS} =10V,I _D =5A		22		nC
Gate-Source Charge	Q _{gs}			2.9		
Gate-Drain Charge	Q _{gd}			5.4		
Turn-on delay time	t _{d(on)}	V _{DD} =50V, V _{GS} =10V, I _D =5A R _G =3Ω		3.9		nS
Turn-on rise time	t _r			26		
Turn-off delay time	t _{d(off)}			16.2		
Turn-off fall time	t _f			8.9		
Source-Drain Diode characteristics						
Diode Forward Current	I _S				4.5	A
Diode Forward voltage	V _{SD}	V _{GS} =0V, I _S =1A,T _J =25℃			1.2	V

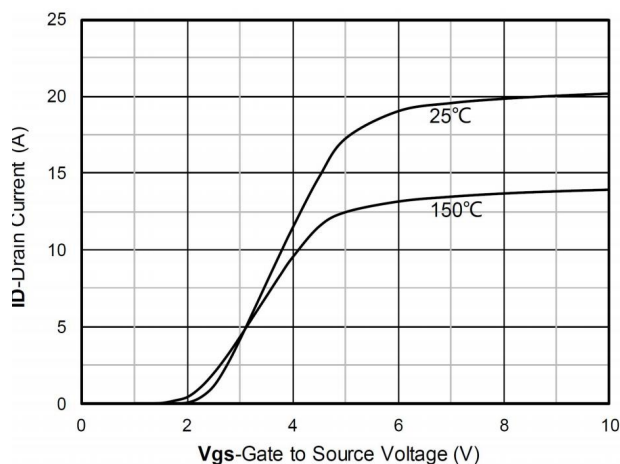
Notes:

1) Guaranteed by design, not subject to production testing.

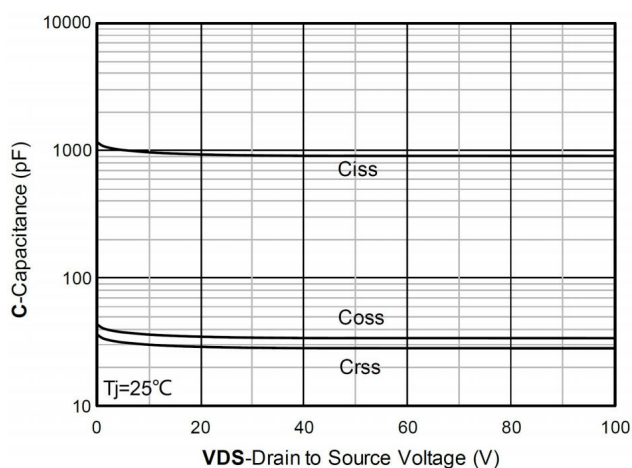
Typical Characteristics



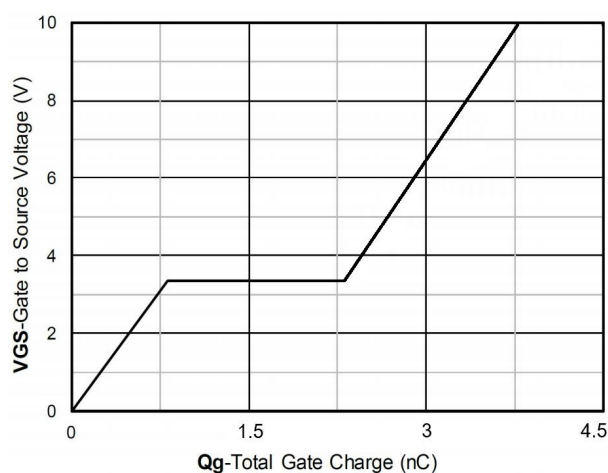
Output Characteristics



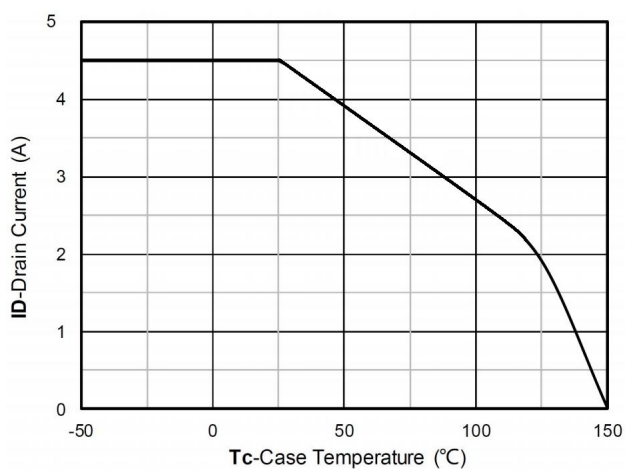
Transfer Characteristics



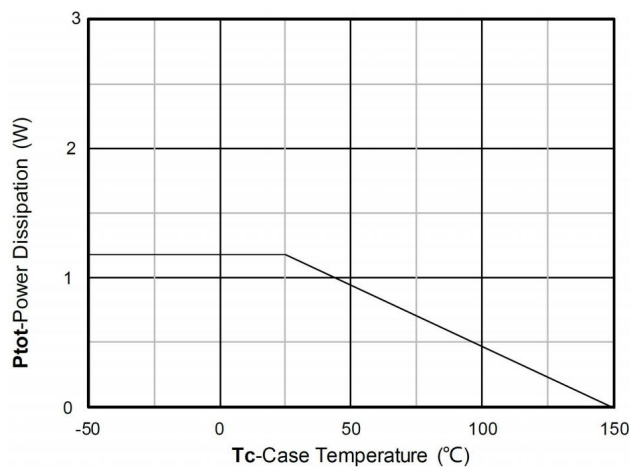
Capacitance Characteristics



Gate Charge

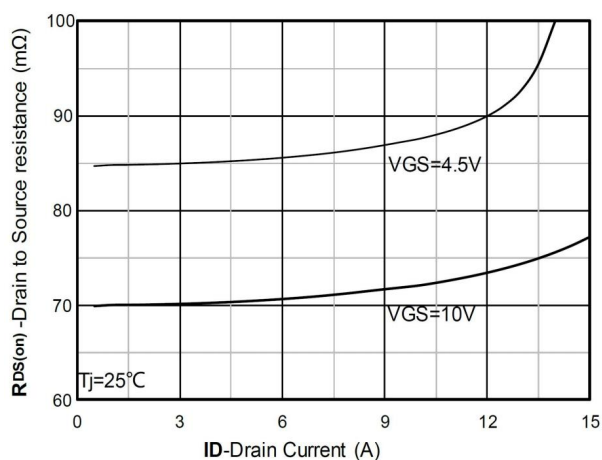


Current dissipation

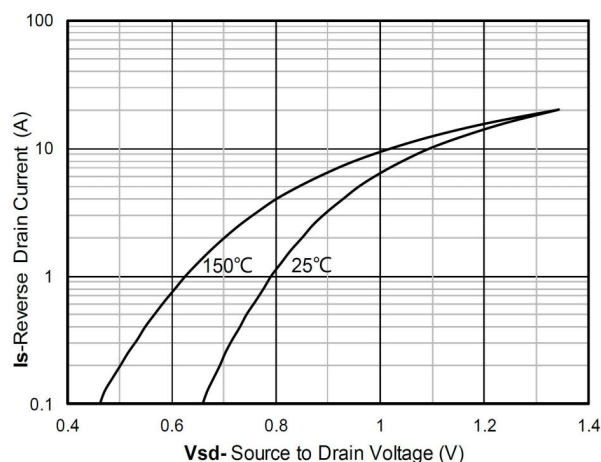


Power dissipation

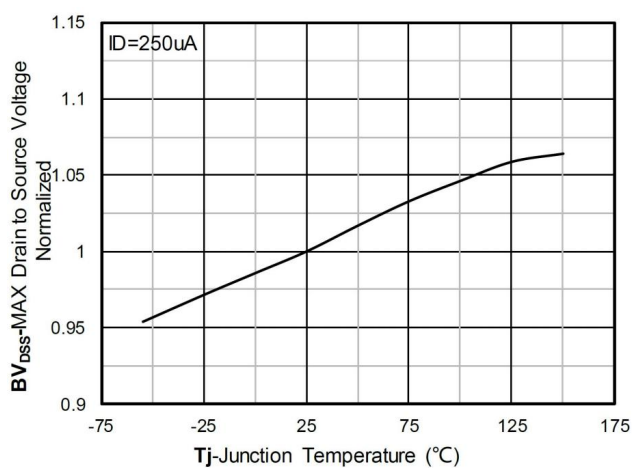
Typical Characteristics



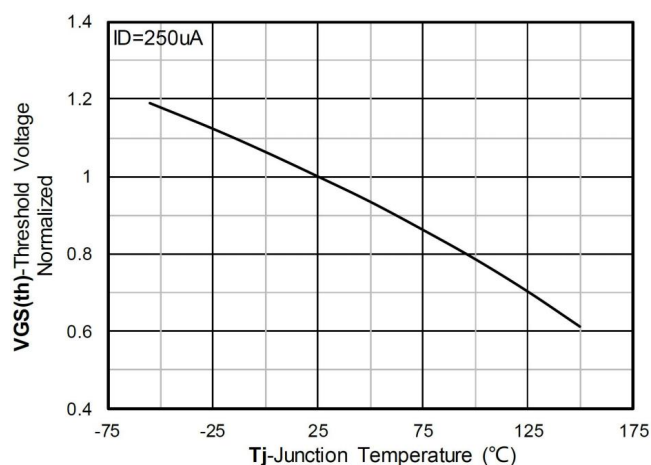
$R_{DS(on)}$ VS Drain Current



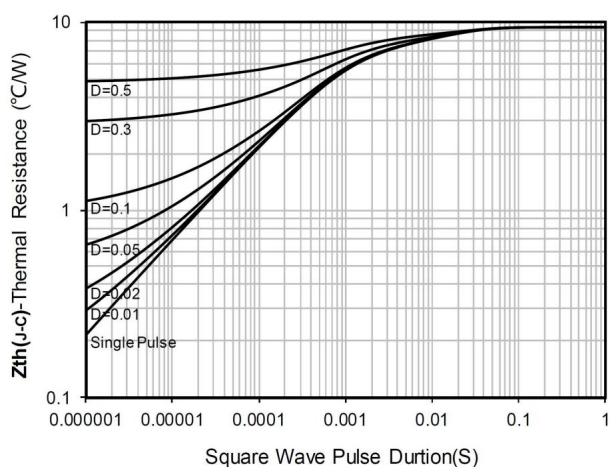
Forward characteristics of reverse diode



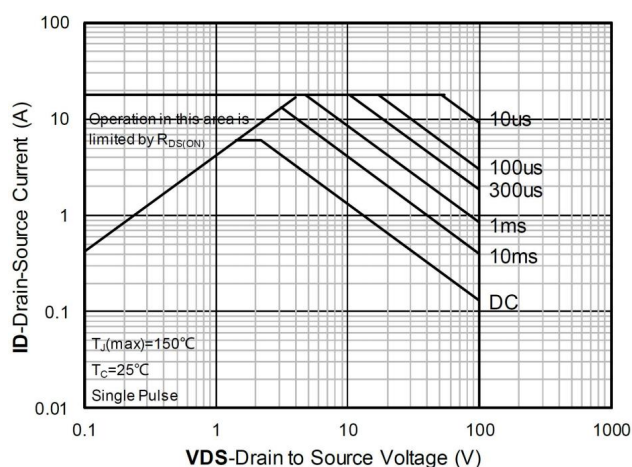
Normalized breakdown voltage



Normalized Threshold voltage

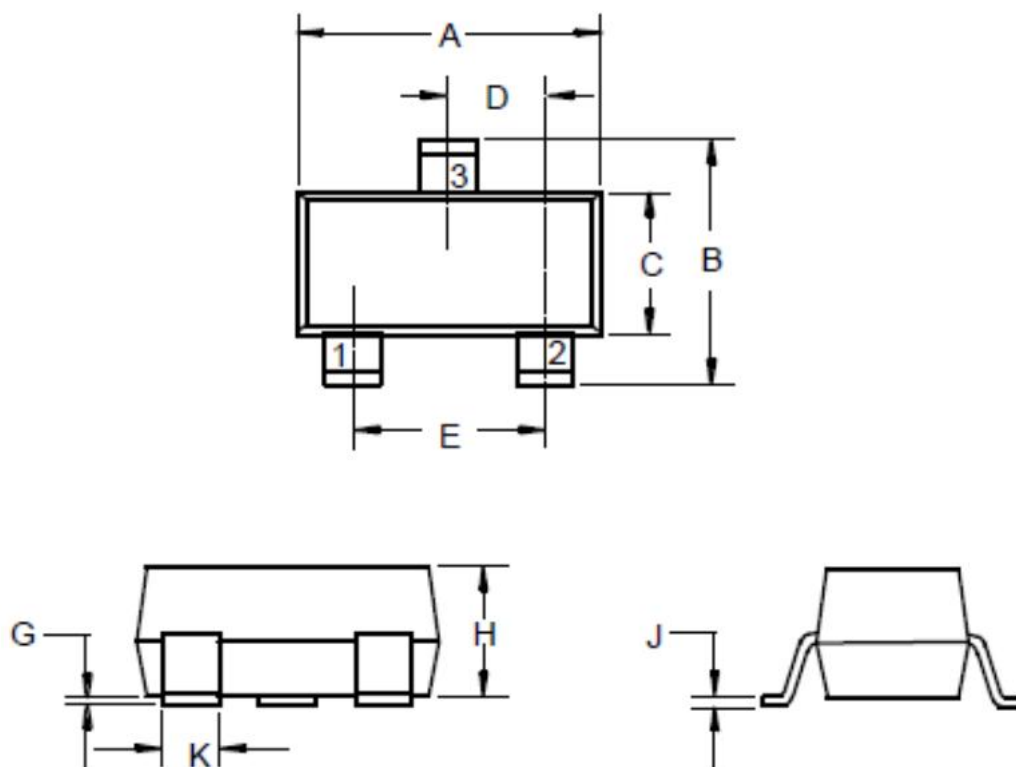


Maximum Transient Thermal Impedance



Safe Operation Area

SOT-23-3L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.820	3.020	0.111	0.119
B	2.650	2.950	0.104	0.116
C	1.500	1.700	0.059	0.067
D	0.950 TYP.		0.038 TYP.	
E	1.800	2.000	0.071	0.079
G	0.000	0.100	0.000	0.004
H	1.050	1.250	0.041	0.049
J	0.100	0.200	0.004	0.008
K	0.300	0.500	0.012	0.020