

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-20V	26mΩ@-4.5V	-7A
	36mΩ@-2.5V	

Feature

- Low On-Resistance
- Super High Dense Cell Design
- Reliable and Rugged

Application

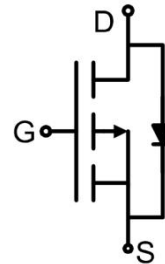
- Power Management

Package

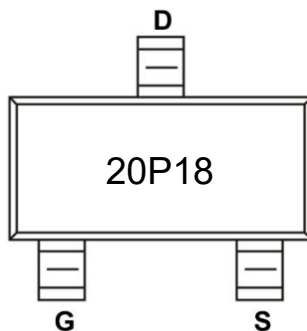


SOT-23-3L

Circuit diagram



Marking



Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±10	V
Continuous Drain Current	I_D	-7	A
Pulsed Drain Current	I_{DM}	-28	A
Power Dissipation	P_D	1.3	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	96	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

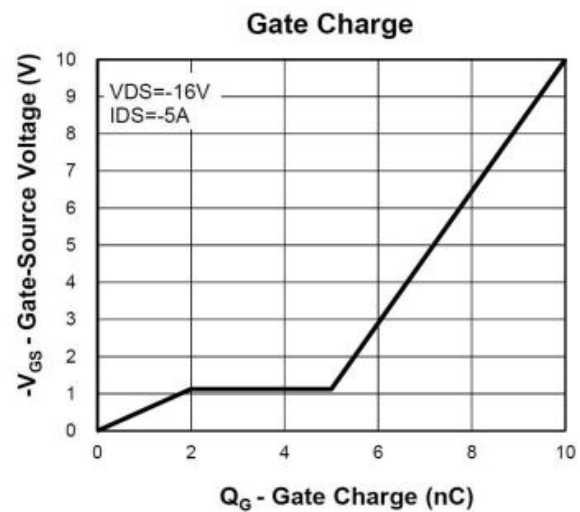
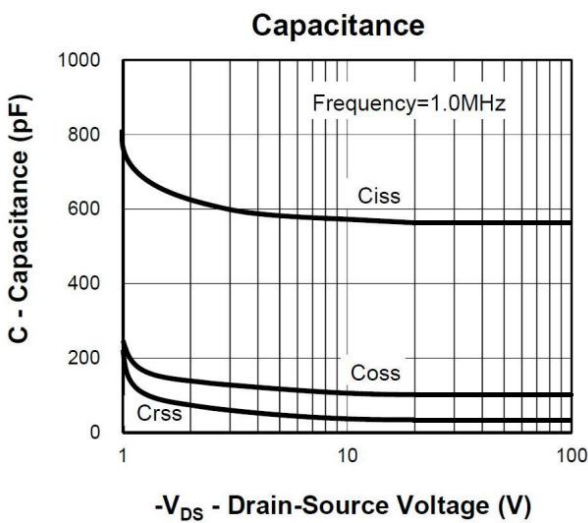
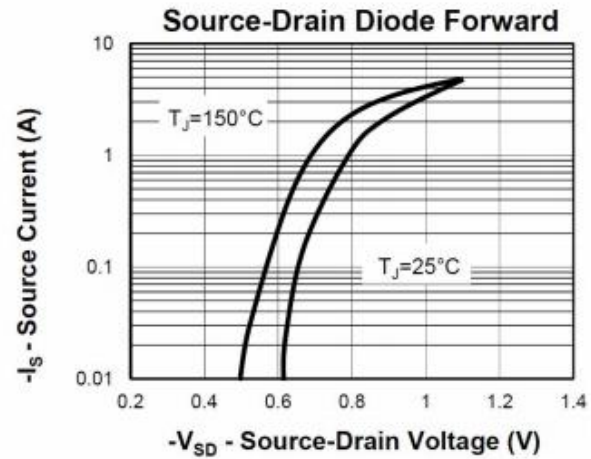
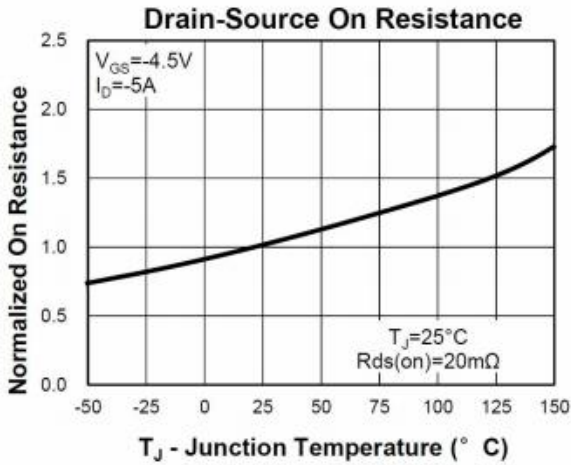
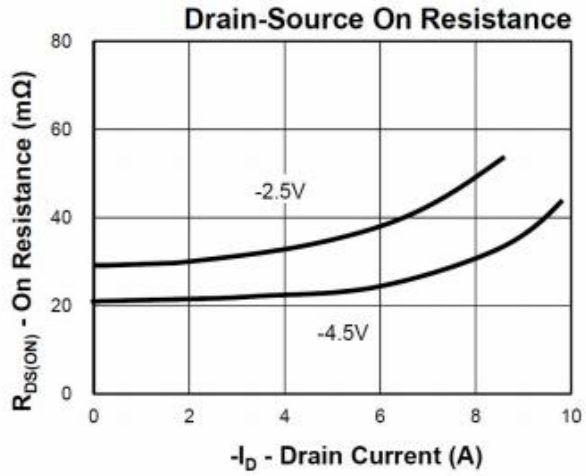
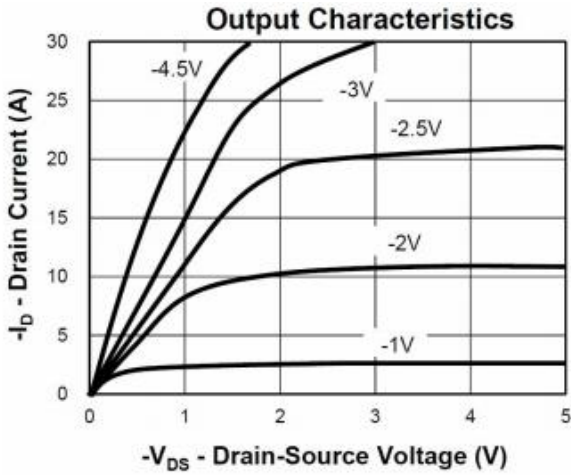
Electrical characteristics (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			±100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.7	-1.1	V
Drain-source on-resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -5A$		18	26	mΩ
		$V_{GS} = -2.5V, I_D = -4A$		28	36	
Dynamic characteristics²⁾						
Input Capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$		640		pF
Output Capacitance	C_{oss}			135		
Reverse Transfer Capacitance	C_{rss}			65		
Total Gate Charge	Q_g	$V_{DS} = -16V, V_{GS} = -10V, I_D = -5A$		10		nC
Gate-Source Charge	Q_{gs}			2		
Gate-Drain Charge	Q_{gd}			3		
Turn-on delay time	$t_{d(on)}$	$V_{DS} = -10V, V_{GS} = -4.5V, R_L = 3.8\Omega, R_{GEN} = 6\Omega,$		9		nS
Turn-on rise time	t_r			16		
Turn-off delay time	$t_{d(off)}$			45		
Turn-off fall time	t_f			21		
Source-Drain Diode characteristics						
Diode Forward voltage ¹⁾	V_{SD}	$V_{GS} = 0V, I_S = -1A$			-1.2	V

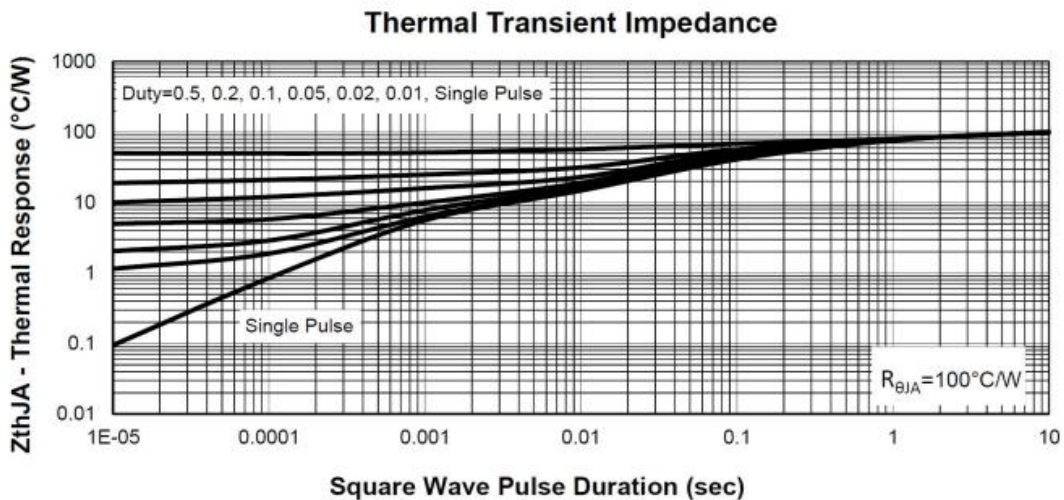
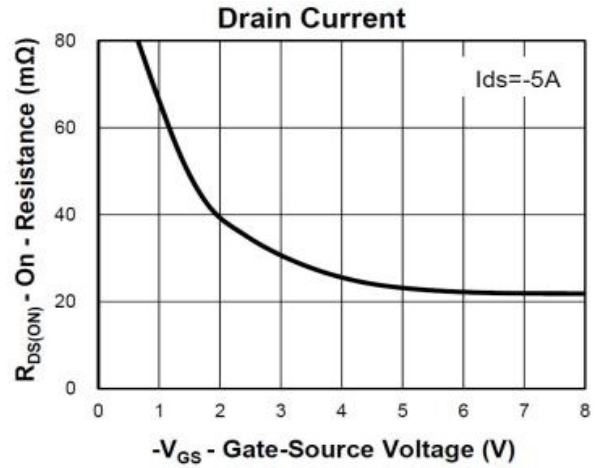
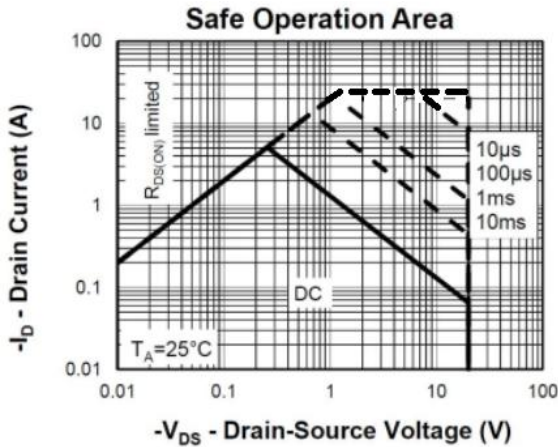
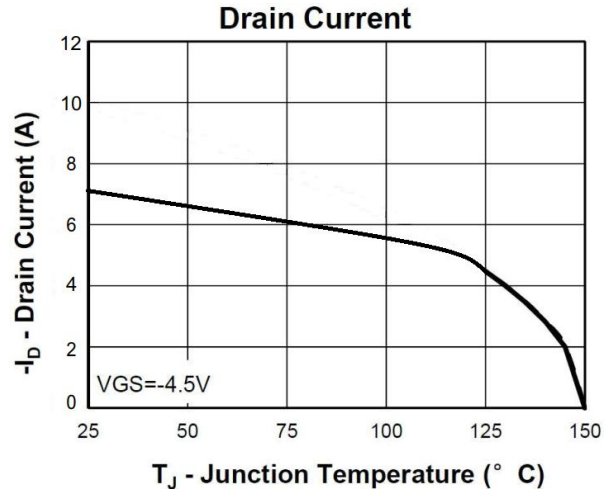
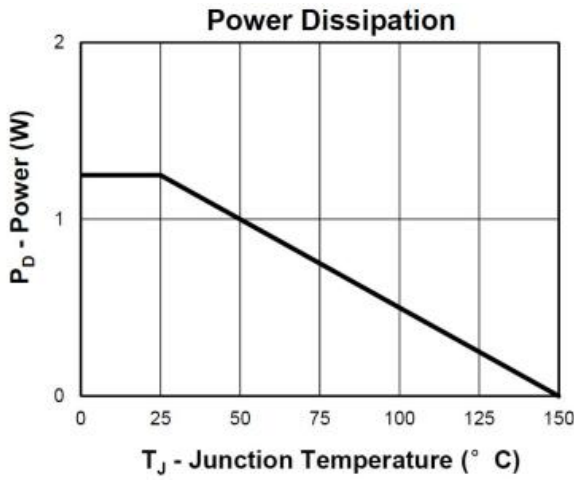
Notes:

- 1) Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
- 2) Guaranteed by design, not subject to production.

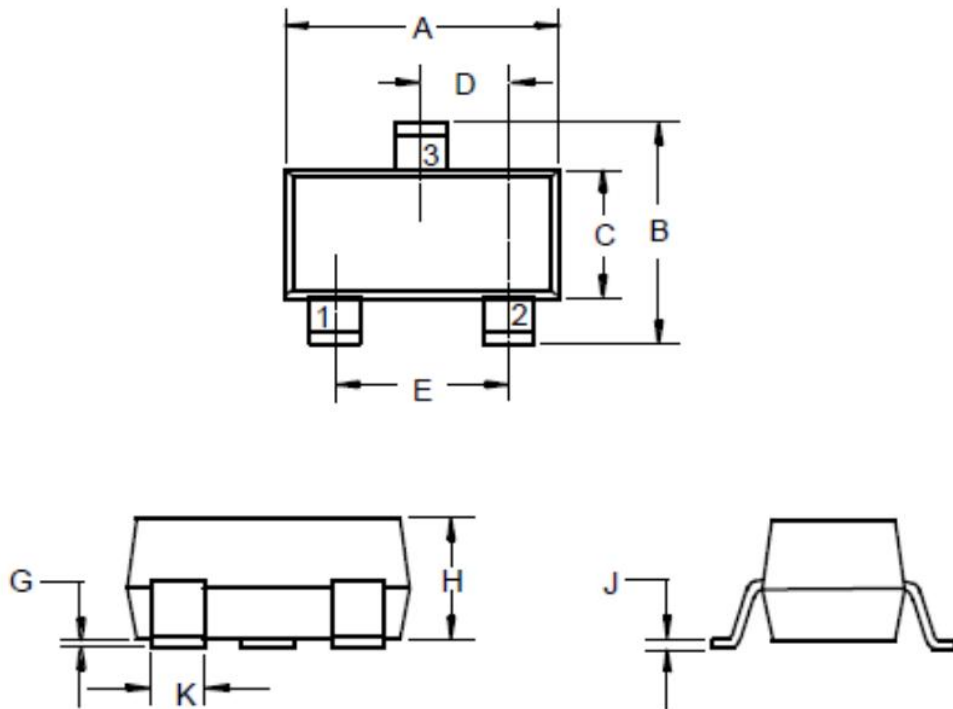
Typical Characteristics



Typical Characteristics



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	0.865	1.015	0.034	0.040
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