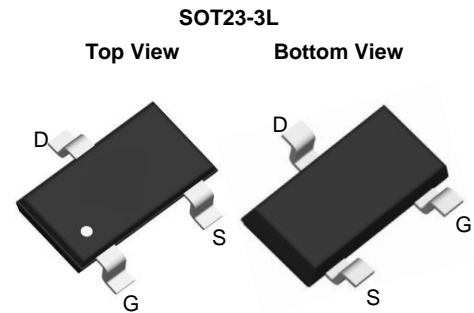


P-Channel Enhancement Mode MOSFET

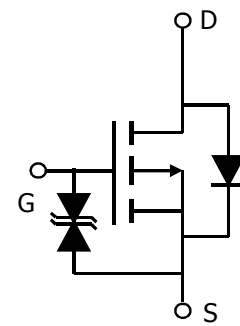
Features

- -30V / -3.5A
- $R_{DS(ON)}=40m\Omega$ (typ) @VGS=10V
 $R_{DS(ON)}=60m\Omega$ (typ) @VGS=4.5V
- 100% UIS & RG Tested
- Reliable and Rugged
- Lead Free and Green Devices Available (RoHS Compliant)



Applications

- Power Management for Industrial DC/DC Converters



P Channel

Marking

Marking	A3****
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Absolute Maximum Ratings (T_A= 25°C unless otherwise noted)

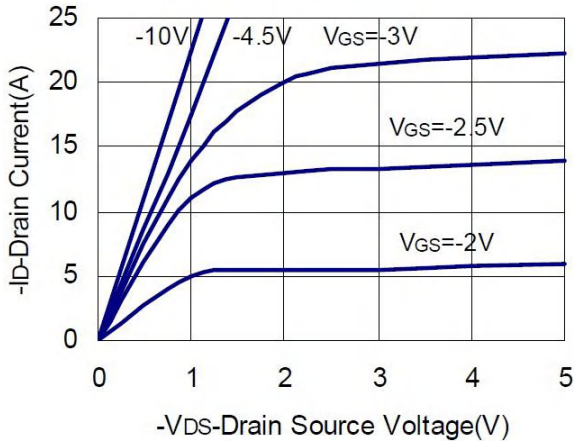
Symbol	Parameter	Rating	Unit	
Common Ratings				
V _{DSS}	Drain-Source Voltage	-30	V	
V _{GSS}	Gate-Source Voltage	±12		
I _D	Continuous Drain Current	T _J =150°C	A	
I _{DM}	Pulsed Drain Current			
I _S	Diode Continuous Forward Current	-1.5	A	
T _{STG} , T _J	Storage Temperature Range	-55 to 150	°C	
PD	Power Dissipation	T _A =25°C	1.4	W
		T _A =70°C	0.9	
R _{θJA}	Thermal Resistance-Junction to Ambient	120	°C/W	

Electrical Characteristics (T_A = 25°C unless otherwise noted)

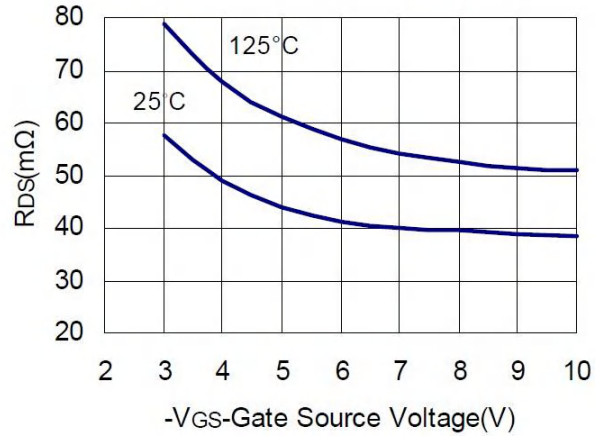
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =-250μA	-30	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = -24V, V _{GS} = 0V	-	-	-1	μA
		T _J = 55°C			-10	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _{DS} = -250μA	-0.6	-	-1.4	V
I _{GSS}	Gate Leakage Current	V _{GS} = ±12V, V _{DS} = 0V	-	-	±100	nA
R _{DS(ON)}	Drain-Source On-state Resistance	V _{GS} = -10V, I _{DS} = -3.5A	-	55	70	mΩ
		V _{GS} = -4.5V, I _{DS} = -3A	-	65	80	
		V _{GS} = -2.5V, I _{DS} = -2.5A		85	95	
Body Diode Characteristics						
V _{SD}	Diode Forward Voltage	I _{SD} = -1A, V _{GS} = 0V	-	-0.7	-1.0	V
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{GS} = 0V, V _{DS} = -15V, Frequency = 1.0MHz	-	245	-	pF
C _{oss}	Output Capacitance		-	57	-	
C _{riss}	Reverse transfer capacitance		-	32	-	
t _{d(ON)}	Turn-on delay Time	V _{GS} = -10V, V _{DS} = -15V R _G = 6Ω, I _D = 1A, R _L = 15Ω,	-	8	15	nS
t _r	Turn-on rise Time		-	2	5	
t _{d(OFF)}	Turn-off delay Time		-	31	40	
t _f	Turn-off rise Time		-	6	6	
Gate Charge Characteristics						
Q _g	Total Gate Charge	V _{DS} = -15V, V _{GS} = -10V, I _{DS} = -3.5A	-	6	-	nC
Q _{gs}	Gate-Source Charge		-	1.2	-	
Q _{gd}	Gate-Drain Charge		-	1.5	-	

TYPICAL CHARACTERISTICS (25 °C Unless Note)

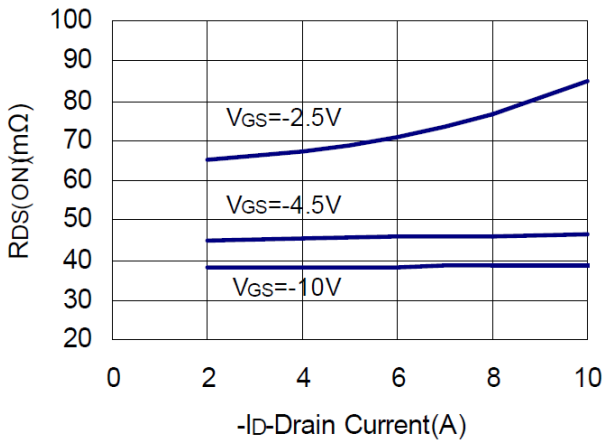
Output Characteristics



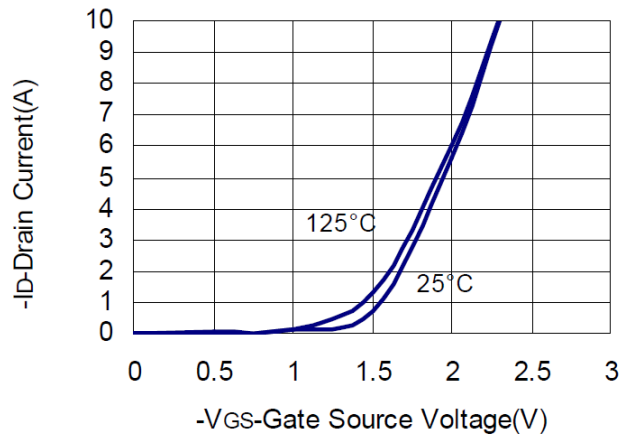
Drain-Source On Resistance



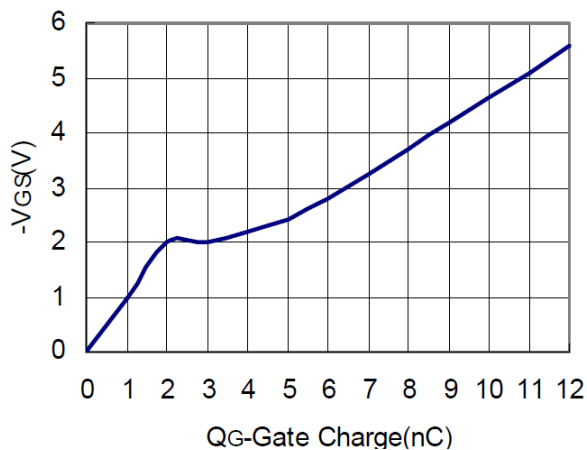
Drain Source On Resistance



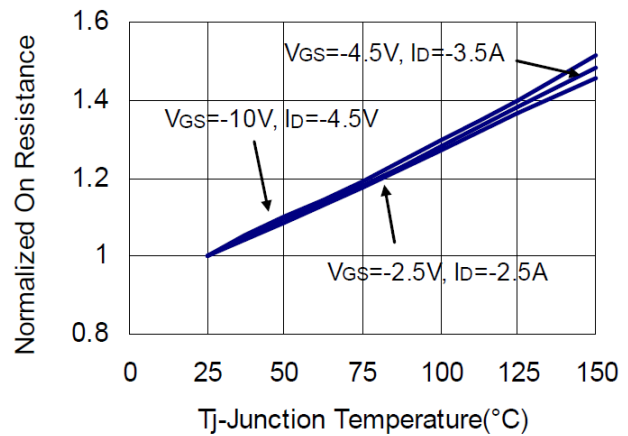
Transfer Characteristics



Gate Charge

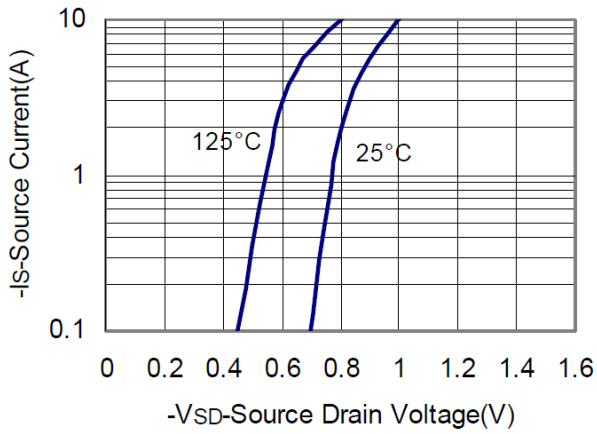


Drain Source Resistance

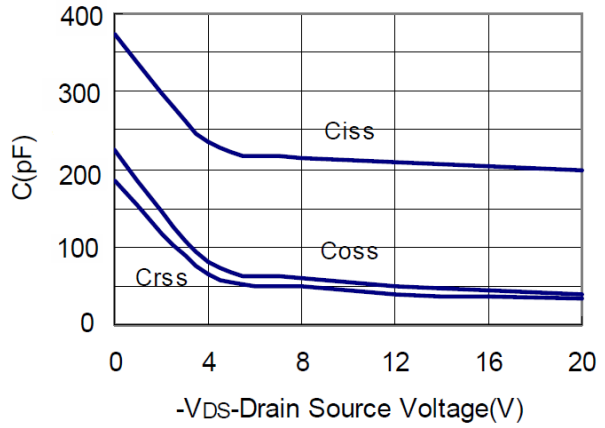


TYPICAL CHARACTERISTICS (continuous)

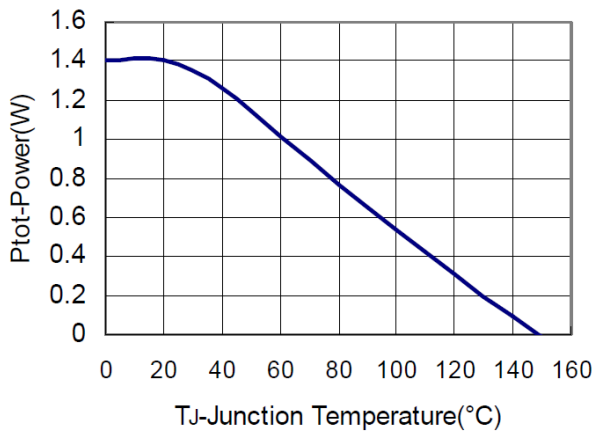
Source Drain Diode Forward



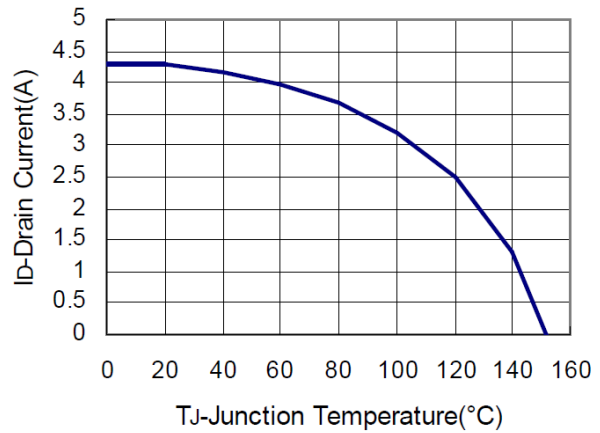
Capacitance



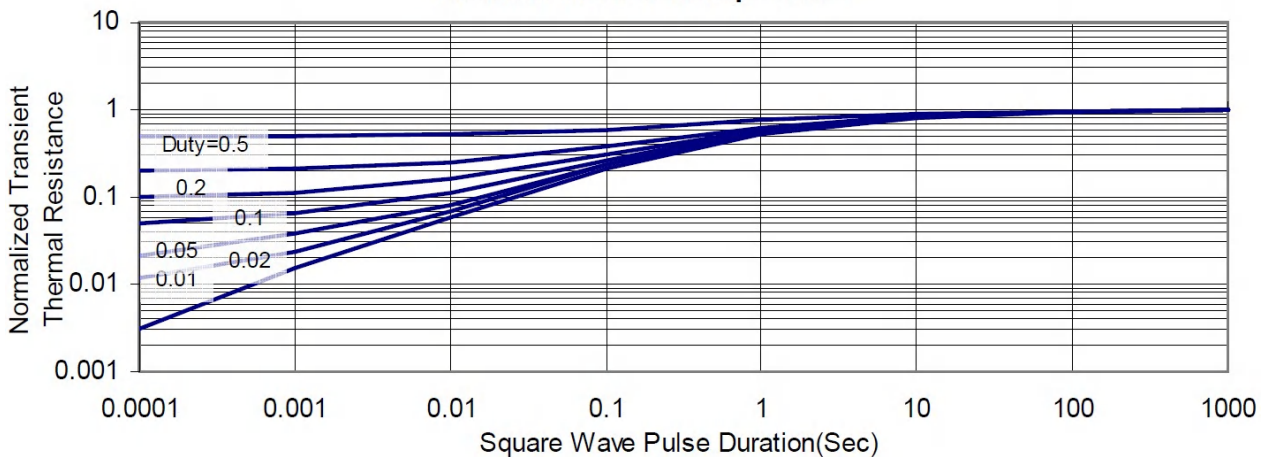
Power Dissipation



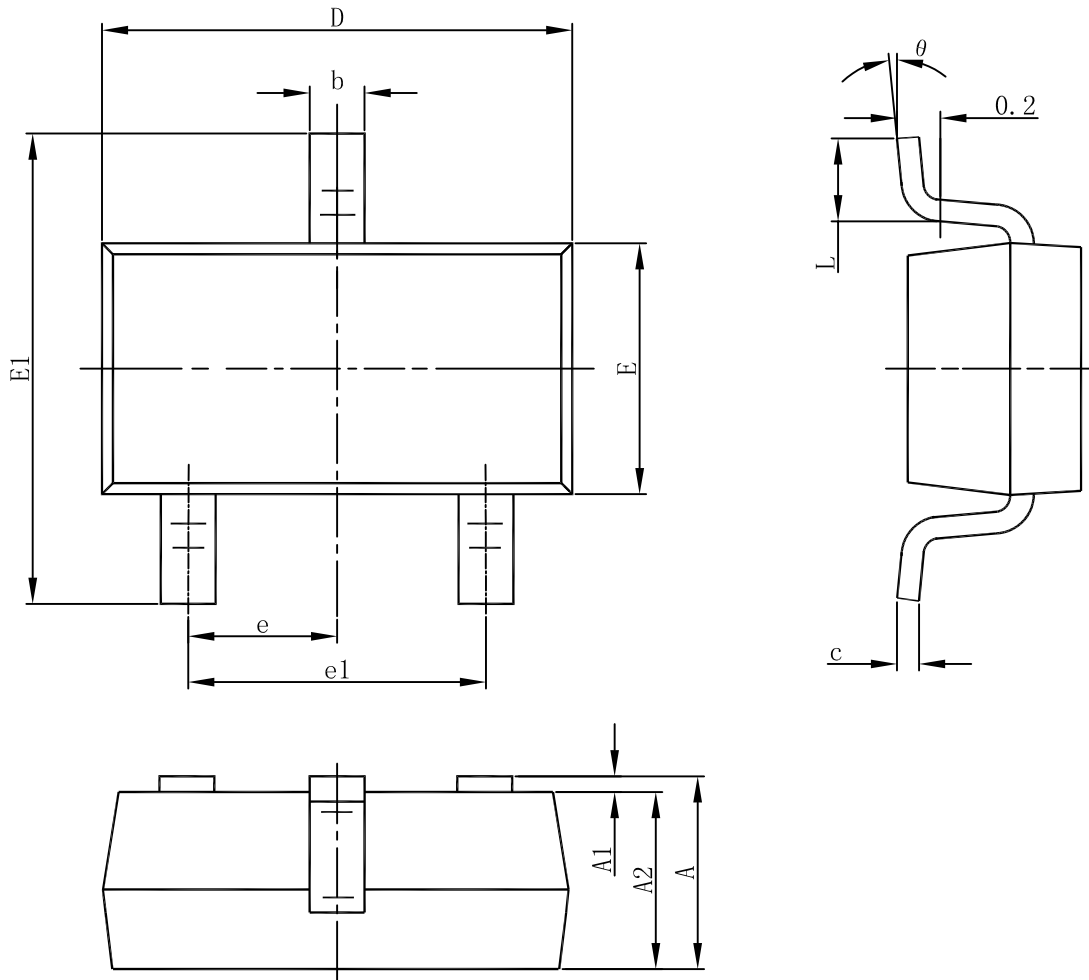
Drain Current



Thermal Transient Impedance



SOT23-3L PACKAGE OUTLINE DIMENSIONS



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°

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