

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60V	$3\Omega@10V$	0.115A
	$4\Omega@4.5V$	

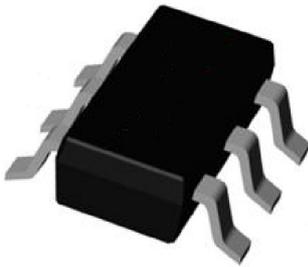
Feature

- Advanced trench process technology
- High density cell design for ultra low on-resistance

Application

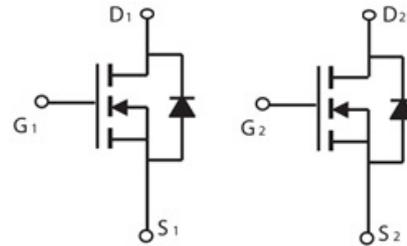
- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

Package

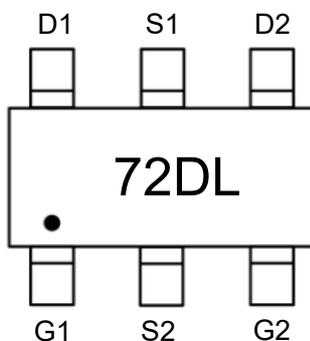


SOT-23-6L

Circuit diagram



Marking



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	0.115	A
Power Dissipation	P_D	0.225	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	277	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$

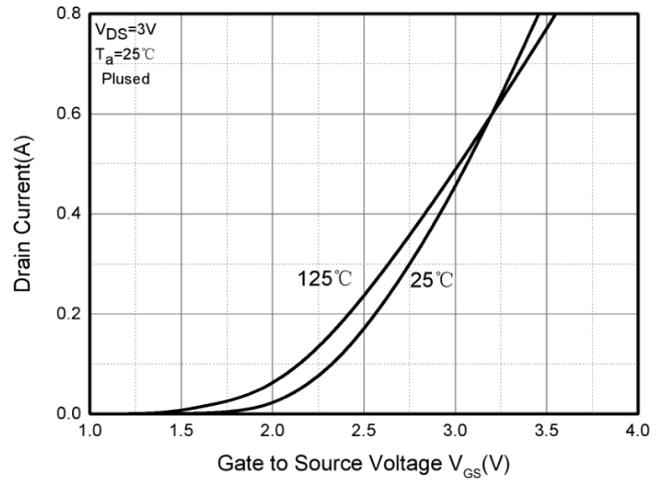
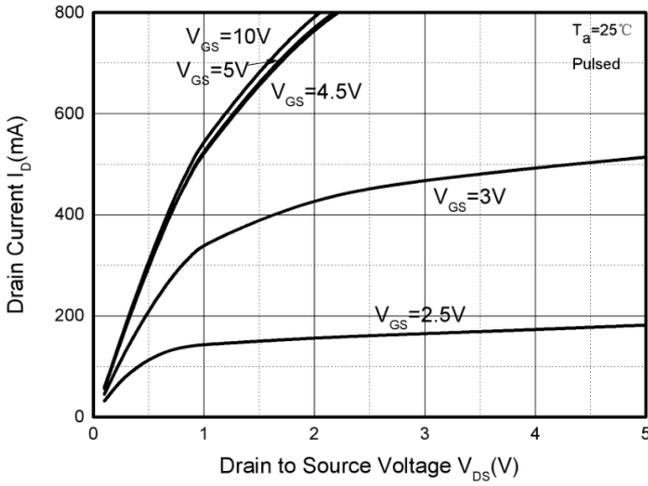
Electrical characteristics (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 48V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 1	μA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0		2.5	V
Drain-source on-resistance ¹⁾	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 0.5A$		1.1	3.0	Ω
		$V_{GS} = 4.5V, I_D = 0.2A$		1.4	4.0	
Dynamic characteristics²⁾						
Input Capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0V, f = 1MHz$			50	pF
Output Capacitance	C_{oss}				25	
Reverse Transfer Capacitance	C_{rss}				5	
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 25V, V_{GS} = 10V, I_D = 0.5A, R_L = 50\Omega, R_{GEN} = 25\Omega$			20	nS
Turn-off delay time	$t_{d(off)}$				40	
Source-Drain Diode characteristics						
Diode Forward voltage	V_{DS}	$V_{GS} = 0V, I_S = 0.115A$			1.2	V

Notes:

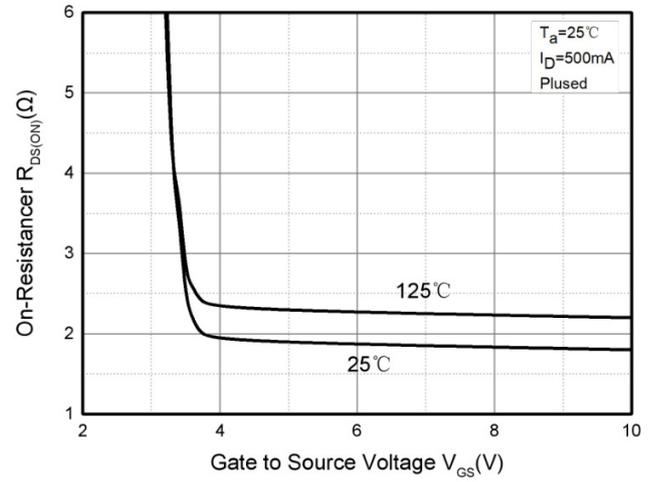
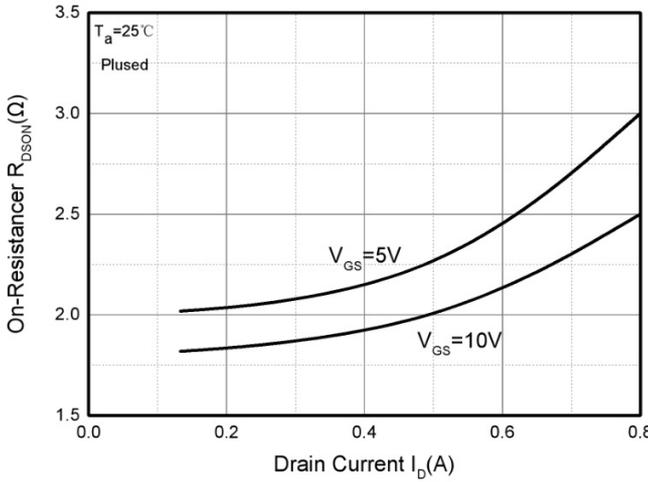
- 1) Pulse Test: Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.
- 2) Guaranteed by design, not subject to production testing.

Typical Characteristics



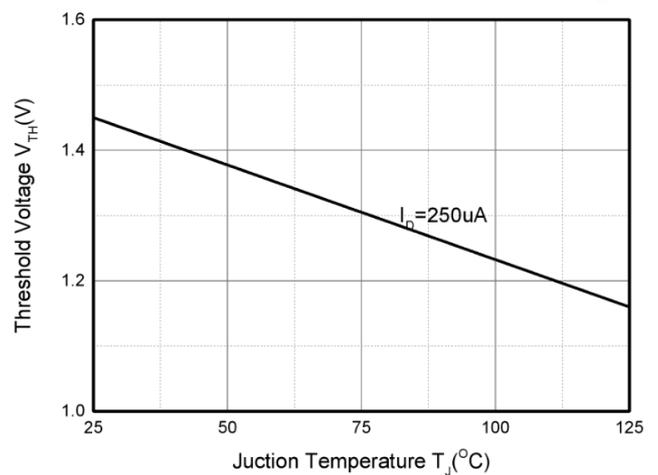
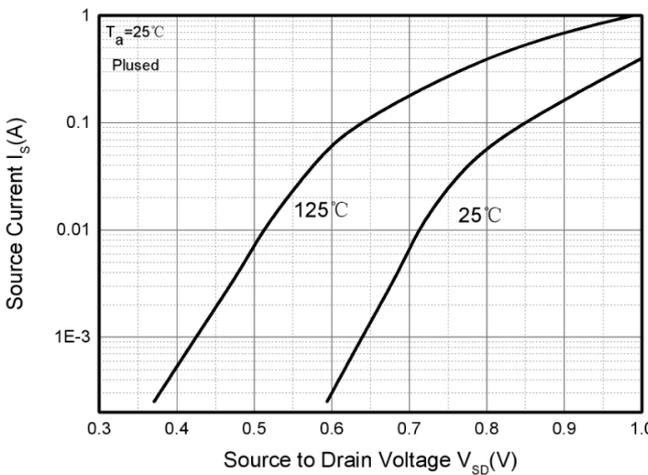
Output Characteristics

Transfer Characteristics



On-Resistance vs. Drain current

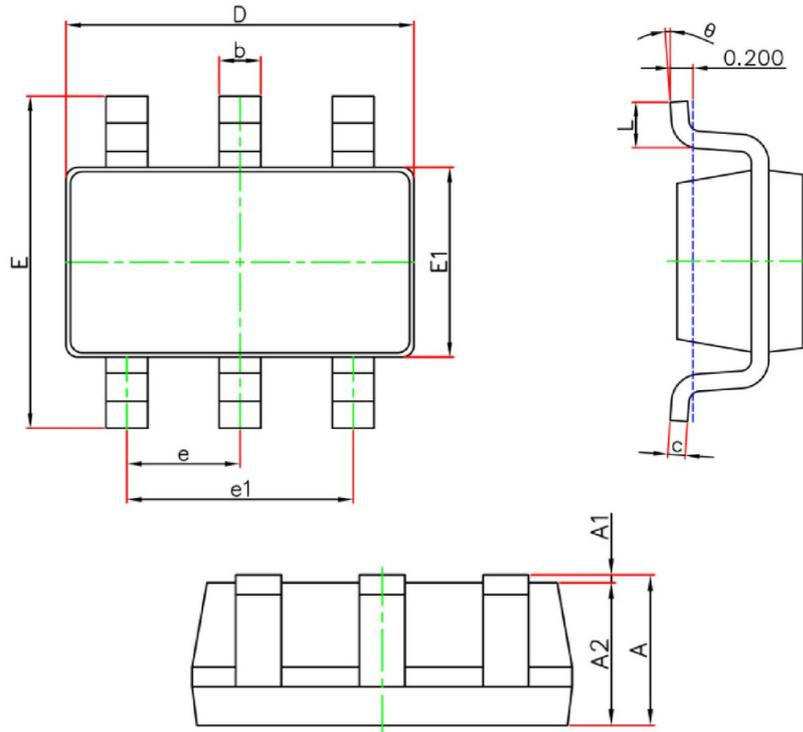
On-Resistance vs. Gate to Source Voltage



Source Current vs. Source to Drain Voltage

Threshold voltage vs. Junction temperature

SOT-23-6L 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	2.650	2.950	0.104	0.116
E1	1.500	1.700	0.059	0.067
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°