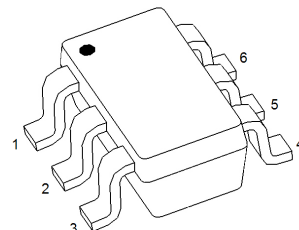


$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30V	130mΩ@-10V	-3A
	180mΩ@-4.5V	



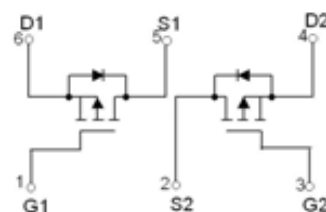
SOT-23-6L

FEATURE

- TrenchFET Power MOSFET
- Low Gate Charge
- Low On-resistance
- Surface Mount Package

APPLICATION

- DC/DC converter
- Load switch for portable devices
- Commercial-industrial applications



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-3	A
Pulsed Drain Current (note 1)	I_{DM}	-20	A
Power Dissipation (note 2)	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~ 150	$^{\circ}\text{C}$

- Notes :**
1. Pulse width limited by Max.junction temperature.
 - 2.Per element must not be exceeded

MOSFET ELECTRICAL CHARACTERISTICS $T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

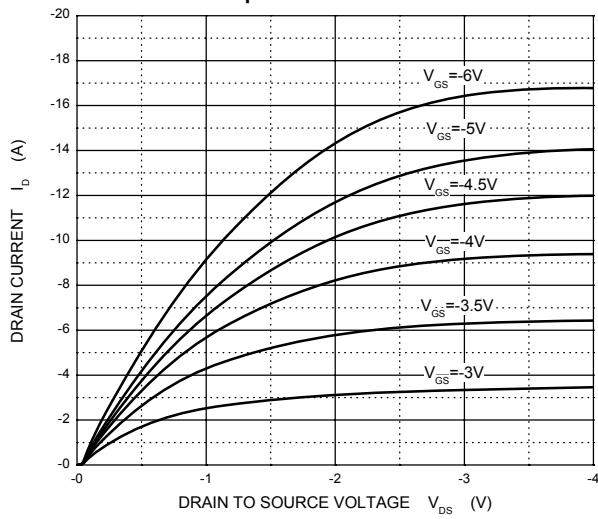
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1		-3	V
Drain-source on-resistance (note 3)	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -3A$		75	130	m Ω
		$V_{GS} = -4.5V, I_D = -2A$		115	180	m Ω
Forward tranconductance	g_{FS}	$V_{DS} = -5V, I_D = -2A$		2		S
Diode forward voltage (note 3)	V_{SD}	$I_S = -1A, V_{GS} = 0V$			-1.2	V
DYNAMIC PARAMETERS(note 4)						
Input Capacitance	C_{iss}	$V_{DS} = -25V, V_{GS} = 0V, f = 1MHz$			240	pF
Output Capacitance	C_{oss}			42		pF
Reverse Transfer Capacitance	C_{rss}			32		pF
SWITCHING PARAMETERS (note 3,4)						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -15V, V_{GS} = -10V, I_D = -1A$ $R_D = 15\Omega, R_G = 3.3\Omega$		5		ns
Turn-on rise time	t_r			6		ns
Turn-off delay time	$t_{d(off)}$			15		ns
Turn-off fall time	t_f			3		ns
Total Gate Charge	Q_g	$V_{DS} = -24V, V_{GS} = -4.5V, I_D = -2A$			4.5	nC
Gate-Source Charge	Q_{gs}			0.5		nC
Gate-Drain Charge	Q_{gd}			1.4		nC

Notes : 3. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

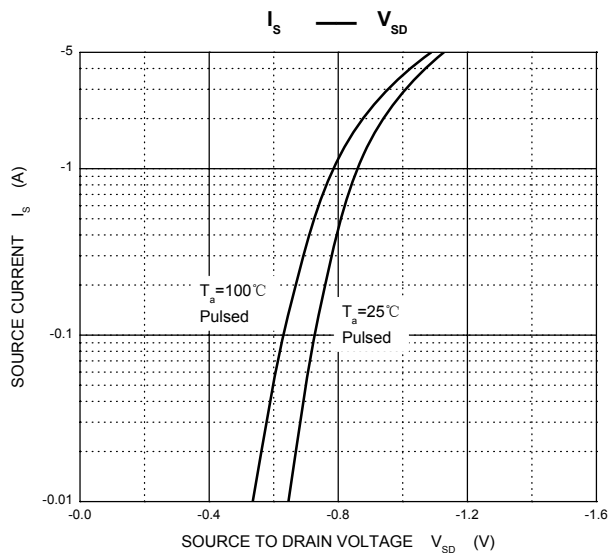
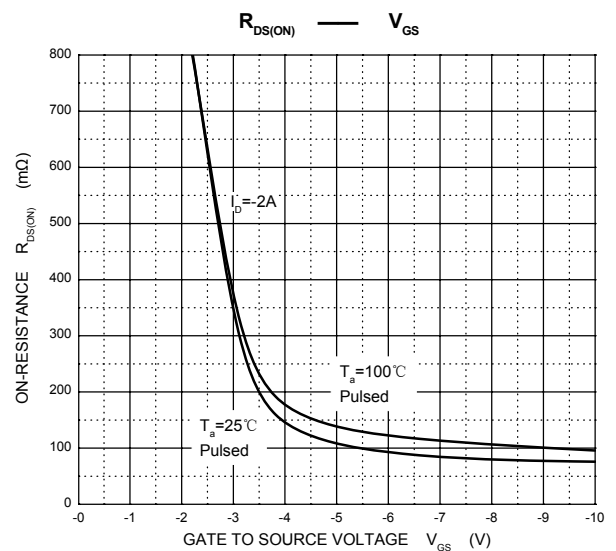
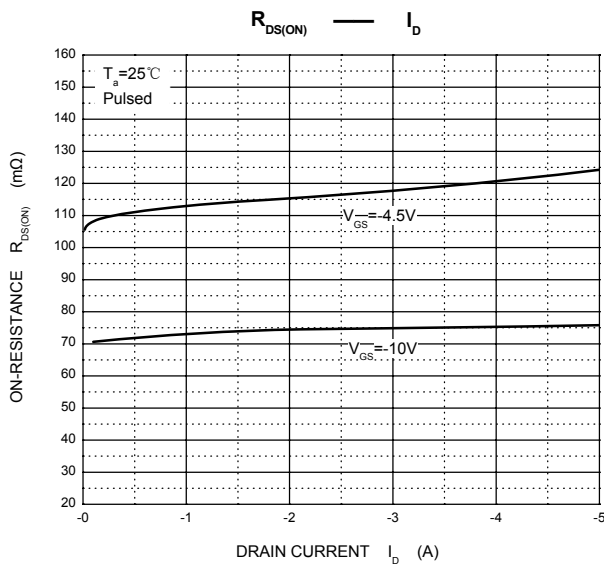
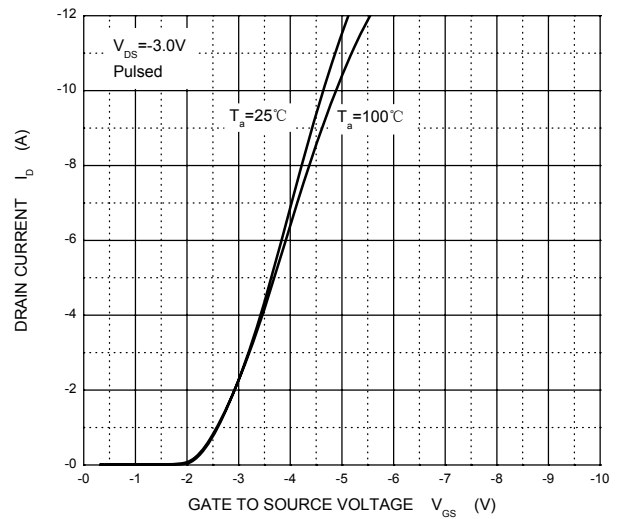
4. Granted by design, not subject to production testing.

Typical Characteristics

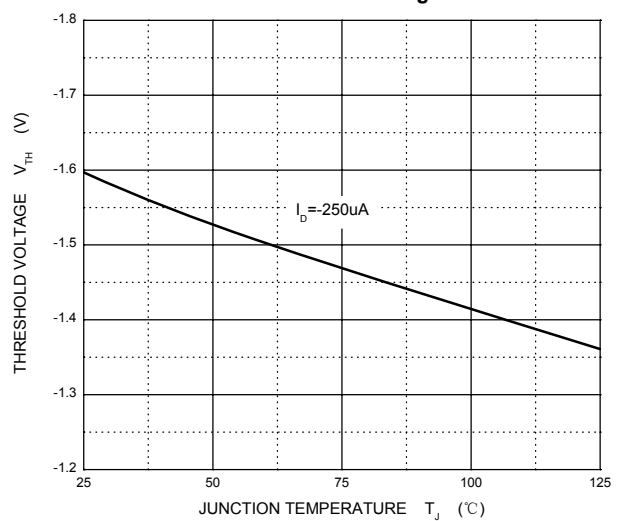
Output Characteristics



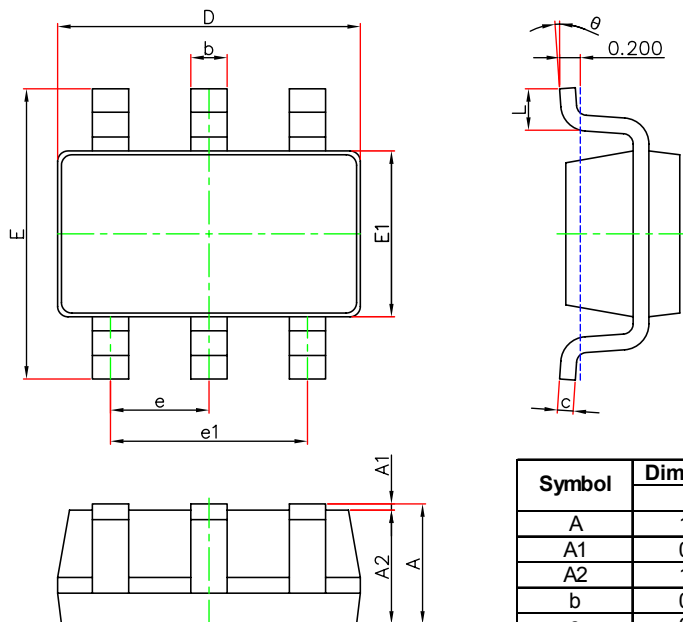
Transfer Characteristics



Threshold Voltage

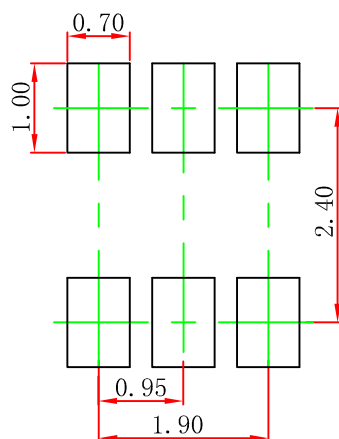


SOT-23-6L Package Outline Dimensions



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
E1	1.500	1.700	0.059	0.067
E	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°

SOT-23-6L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

CCS Semiconductor and are trademarks of Semiconductor Components Industries. CCS Semiconductor reserves the right to make changes without further notice to any products herein. CCS Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CCS Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. CCS Semiconductor does not convey any license under its patent rights nor the rights of others.