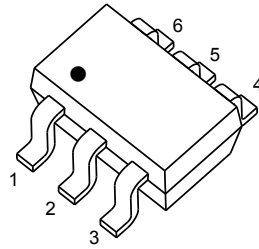


Main Product Characteristics

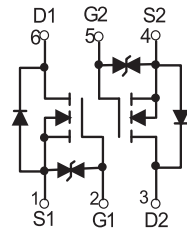
$V_{(BR)DSS}$	20V
$R_{DS(on)MAX}$	380 mΩ@4.5V
	450 mΩ@2.5V
	800mΩ@1.8V
I_D	0.75A



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Marking and Pin Assignment



Schematic Diagram

Features and Benefits

- Advanced MOSFET process technology
- Ideal for battery operated systems, load switching, power converters and other general purpose applications
- Low on-resistance with low gate charge
- Fast switching and reverse body recovery



Description

The SSF3134KDW utilizes the latest techniques to achieve high cell density and low on-resistance. These features make this device extremely efficient and reliable for use in high efficiency switch mode power supply and a wide variety of other applications.

Absolute Maximum Ratings ($T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Typical Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current ($t \leq 10s$)	I_D	0.75	A
Power Dissipation*	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

* Repetitive rating : Pulse width limited by junction temperature.

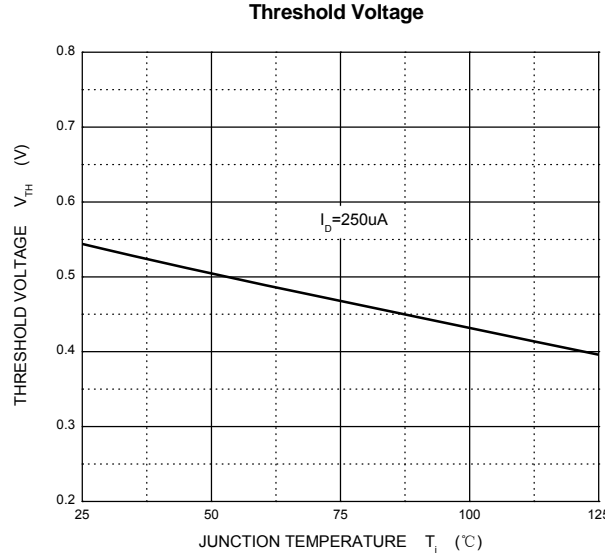
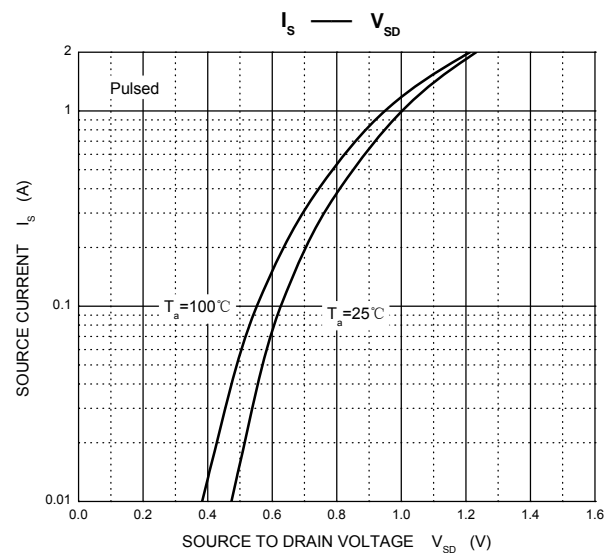
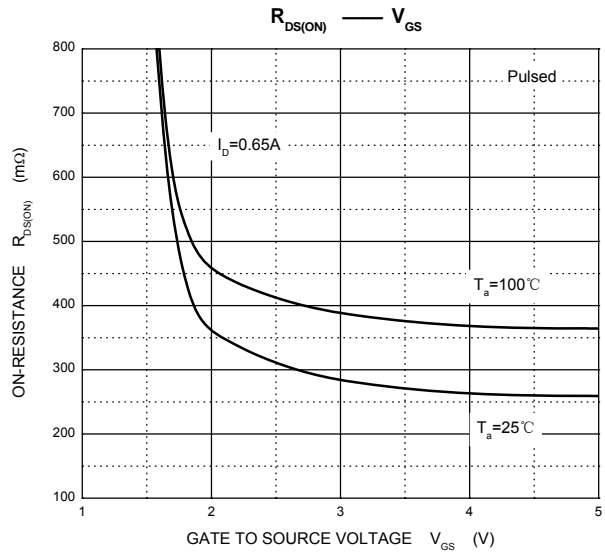
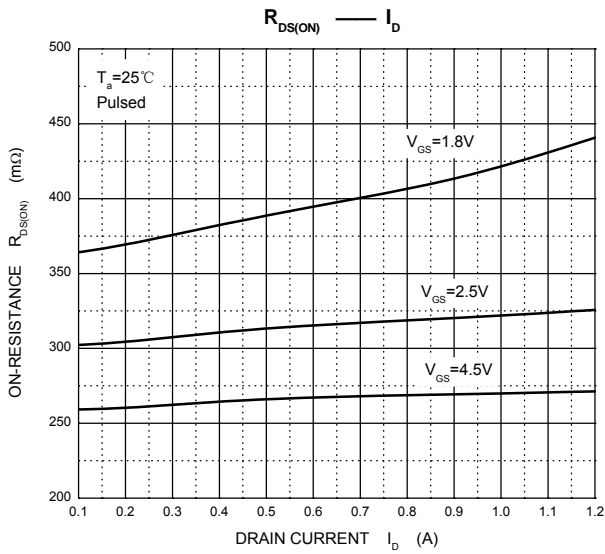
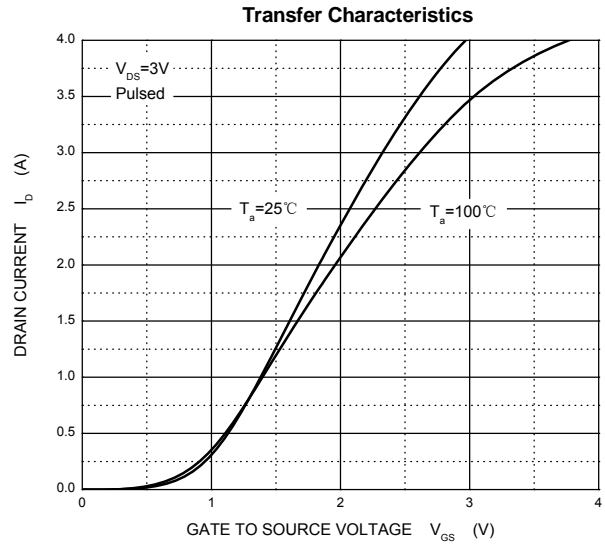
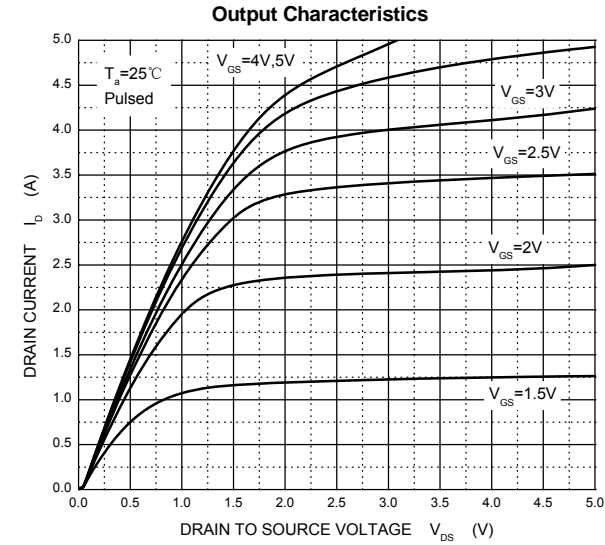
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Parameters						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20	---	---	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$	---	---	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$	---	---	± 20	μA
Gate Threshold Voltage ¹	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.35	0.54	1.1	V
Drain-Source On-Resistance ¹	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 0.65A$	---	270	380	m Ω
		$V_{GS} = 2.5V, I_D = 0.55A$	---	320	450	m Ω
		$V_{GS} = 1.8V, I_D = 0.45A$	---	390	800	m Ω
Forward Transconductance ¹	g_{FS}	$V_{DS} = 10V, I_D = 0.8A$	---	1.6	---	S
Diode Forward Voltage ¹	V_{SD}	$I_S = 0.15A, V_{GS} = 0V$	---	---	1.2	V
Dynamic Parameters²						
Input Capacitance	C_{iss}	$V_{DS} = 16V, V_{GS} = 0V, f = 1MHz$	---	79	120	pF
Output Capacitance	C_{oss}		---	13	20	pF
Reverse Transfer Capacitance	C_{rss}		---	9	15	pF
Switching Parameters²						
Turn-On Delay Time	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V,$ $I_D = 0.5A, R_{GEN} = 10\Omega$	---	6.7	---	ns
Turn-On Rise Time	t_r		---	4.8	---	ns
Turn-Off Delay Time	$t_{d(off)}$		---	17.3	---	ns
Turn-Off Fall Time	t_f		---	7.4	---	ns
Total Gate Charge	Q_g	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 0.25A$	---	750	---	pC
Gate-Source Charge	Q_{gs}		---	75	---	pC
Gate-Drain Charge	Q_{gd}		---	225	---	pC

Notes :

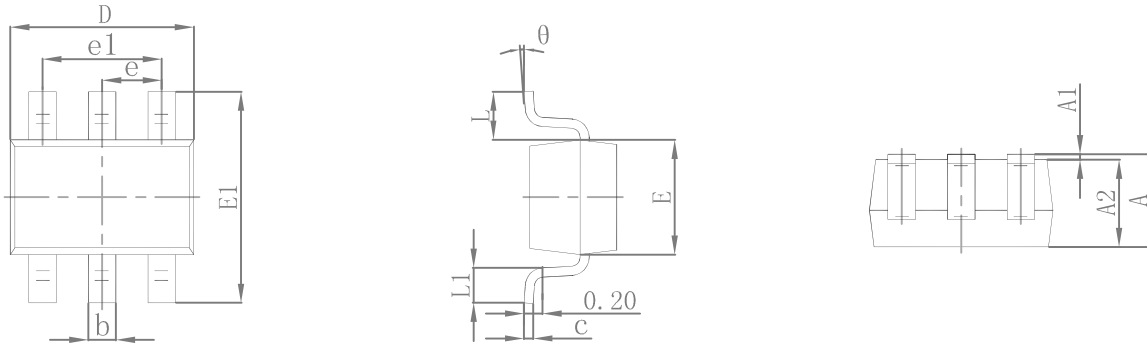
1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristic Curves



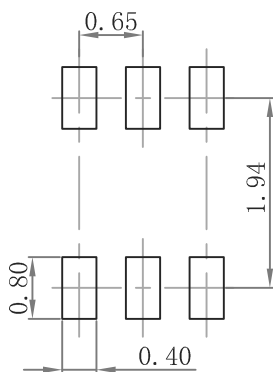
Package Outline Dimensions

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Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05mm.
 3. The pad layout is for reference purposes only.