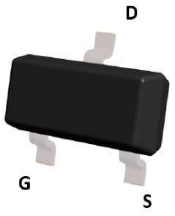
DN3134KW
N-Channel Enhancement Mode Field Effect Transistor

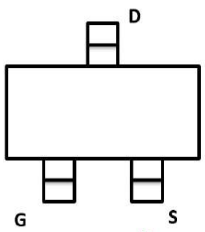
General description
N-Channel Enhancement Mode Field Effect Transistor

Features:
- V_{DS} : 20V
- I_D : 0.75A
- $R_{DS(ON)}$(at V_{GS}=4.5V) ＜270 mohm
- $R_{DS(ON)}$(at V_{GS}=2.5V) ＜330 mohm

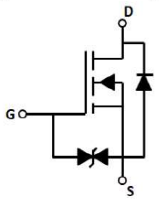
Applications
- Drivers: Relays, Solenoid, Lamps, Hammers, Displays, Memories
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers



Top View



SOT-323



Device Marking Code:

Device Type	Device Marking
DN3134KW	34K

Absolute Maximum Ratings (TA=25℃unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source Voltage	V_{DS}	20	V
Gate-source Voltage	V_{GS}	±8	V
Continuous Drain Current	I_D	750	mA
Pulsed Drain Current [A]	I_{DM}	1000	mA
Power Dissipation with no heat sink @ T_A=25℃	P_D	150	mW
Maximum Power Dissipation with infinite heat sink @ T_C=25℃		275	mW
Thermal Resistance From Junction To Ambient	R_{thJA}	833	℃/W
Operation Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55～+150	℃

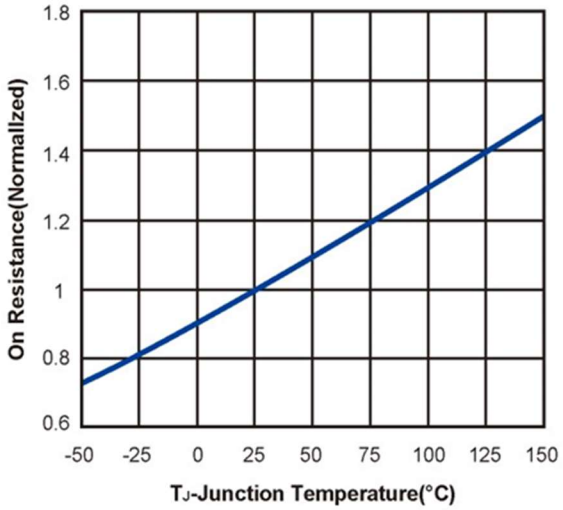
Electrical Characteristics (T_J=25℃ unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS}= 0V, I_D=250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS}=20V,V_{GS}=0V			1	μA
Gate-body leakage current	I_{GSS1}	V_{GS}= ±8V, V_{DS}=0V			±10	μA
Gate threshold voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	0.45	0.75	1.2	V
Drain-source on-resistance	$R_{DS(ON)}$	V_{GS}= 4.5V, I_D=750mA		220	300	mΩ
		VGS= 2.5V, ID=400mA		260	400	
Dynamic characteristics [B]						
Input Capacitance	C_{iss}	V_{DS}=15V,V_{GS}=0V,f=1MHZ		21		pF
Output Capacitance	C_{oss}			15		
Reverse Transfer Capacitance	C_{rss}			8		
Switching Characteristics [B]						
Turn-on delay time	$t_{d(on)}$	V_{GS}=4.5V,V_{DD}=10V,R_G=10Ω,I_D=500mA		6.7		ns
Turn-on rise time	t_r			4.8		
Turn-off delay time	$t_{d(off)}$			17.3		
Turn-off fall time	t_f			7.4		
Source-Drain Diode characteristics						
Diode Forward voltage [C]	V_{DS}	V_{GS}=0V,I_S=150mA			1.2	V

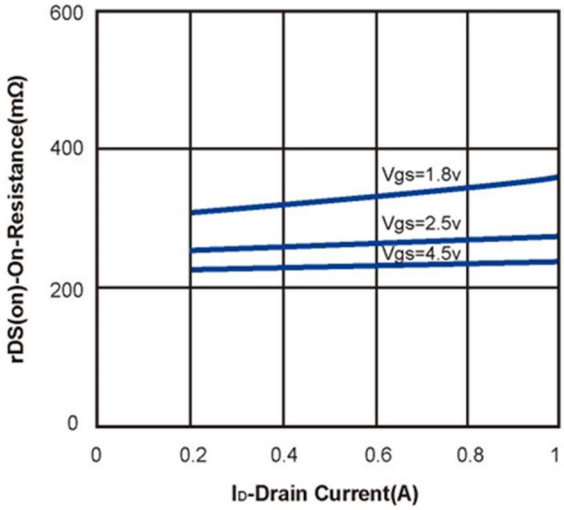
Notes:
A. Repetitive Rating: Pulse width limited by maximum junction temperature.
B. These parameters have no way to verify.
C. Pulse Test: Pulse Width≤300us, Duty Cycle≤0.5%.

Typical Performance Characteristics

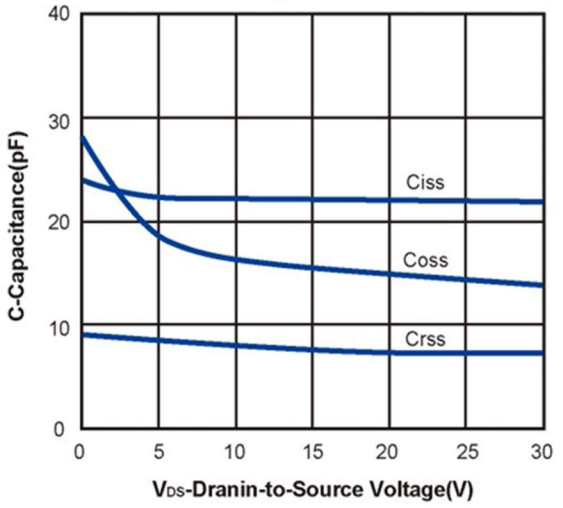
On Resistance vs. Junction Temperature



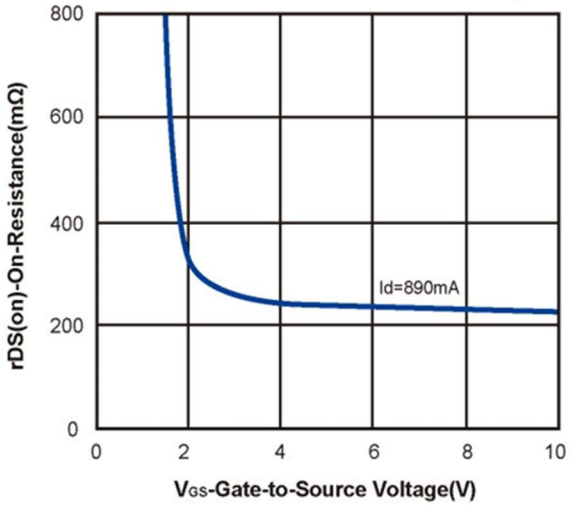
On Resistance vs. Drain Current



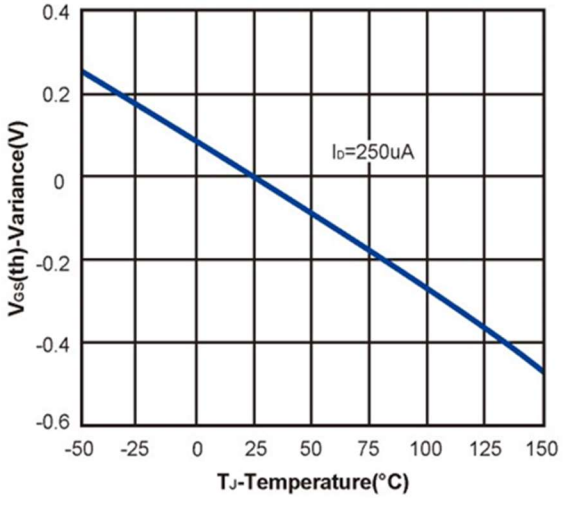
Capacitance



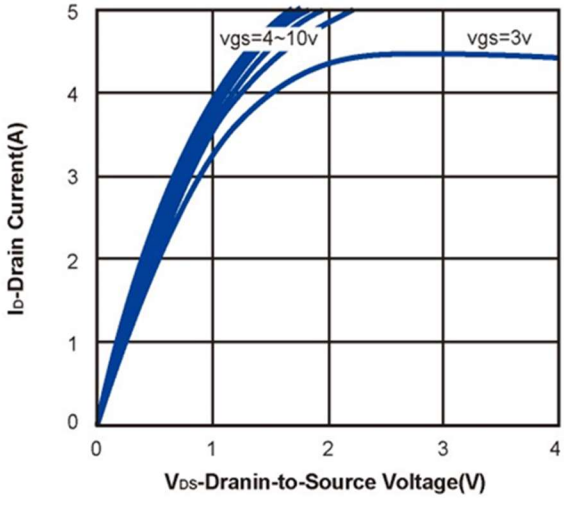
On Resistance vs. Gate-to-Source Voltage

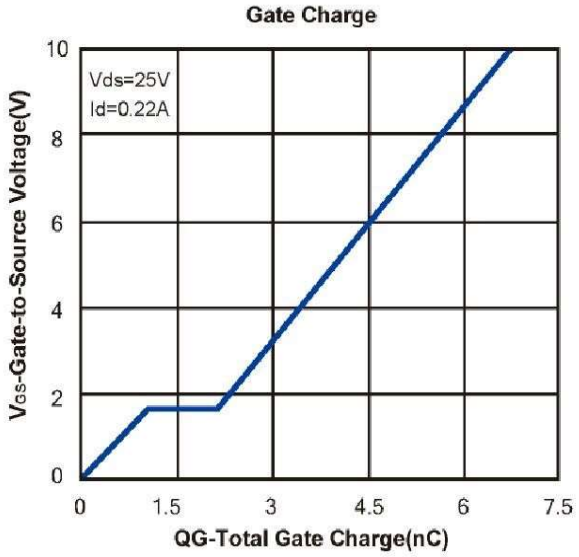


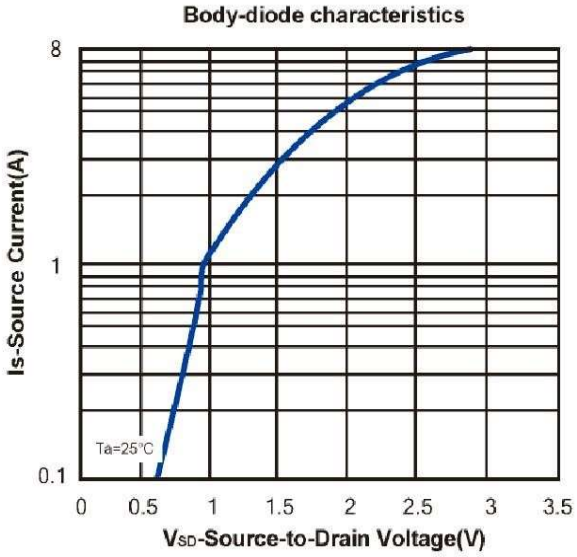
Threshold Voltage



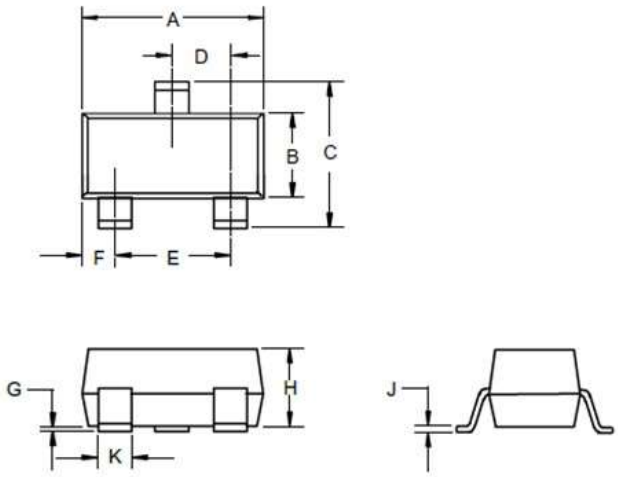
On-Region Characteristics





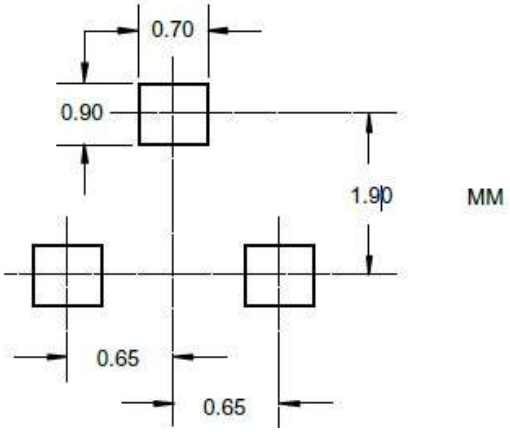


SOT-323 Package Outline



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

Suggested Pad Layout



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