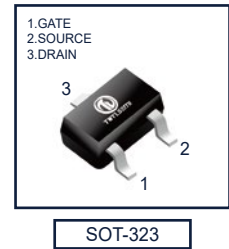


Description

This Single P-Channel MOSFET has been designed using advanced Power Trench process to optimize the RDS(ON).

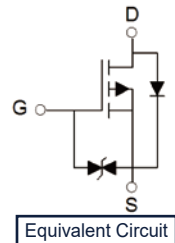
General Features

- High-Side Switching
- Low On-Resistance
- Low Threshold
- Fast Switching Speed



Applications

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



Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
CJ3139KW	SOT-323	CJ3139KW 产品名称 product name	39K	3000

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

Symbol	Parameter	Rating	Units
V _{DSS}	Drain-Source Voltage	-20	V
V _{GS}	Gate-Source Voltage	±12	V
I _D	Drain Current-Continuous	-0.66	A
I _{DM}	Drain Current -Pulsed(note1)	-2.64	A
P _D	Power Dissipation(note 2)	200	mW
R _{θJA}	Thermal Resistance from Junction to Ambient	625	°C/W
T _J ,T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Electrical Characteristics (T_A=25℃, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
On/Off States						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =-250μA	-20	---	---	V
V _{GS(th)}	Gate Threshold Voltage(note 3)	V _{GS} =V _{DS} , I _D =-250μA	-0.35	-0.45	-1.1	V
I _{GSS}	Gate-Source Leakage Current	V _{DS} =0V, V _{GS} =±10V	---	---	±20	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-20V, V _{GS} =0V	---	---	-1	μA
R _{DS(ON)}	Drain-source on-resistance(note 3)	V _{GS} =-4.5V, I _D =-1A	---	430	520	mΩ
		V _{GS} =-2.5V,I _D =-800mA	---	624	700	
		V _{GS} =-1.8V , I _D =-500mA	---	950	---	
g _{fs}	Forward Transconductance	V _{DS} =-10V, I _D =-540mA	0.8	---	---	S
Dynamic Characteristics(note 4)						
C _{iss}	Input Capacitance	V _{DS} =-16V , V _{GS} =0V , f=1MHz	---	---	170	pF
C _{oss}	Output Capacitance		---	---	25	
C _{rss}	Reverse Transfer Capacitance		---	---	15	
Switching Times (note 4)						
T _{d(on)}	Turn-On Delay Time(note 4)	V _{DD} =-10V,I _D =-200mA, V _{GS} =-4.5V,R _G =10Ω	---	9	---	ns
T _r	Rise Time(note 4)		---	5.8	---	
T _{d(off)}	Turn-Off Delay Time(note 4)		---	32.7	---	
T _f	Fall Time(note 4)		---	20.3	---	
Drain-Source Diode Characteristics						
V _{SD}	Diode Forward Voltage(note 3)	I _S =-0.5A, V _{GS} = 0V	---	---	-1.2	V

Notes:

- 1.Repetitive Rating: Pulse width limited by maximum junction temperature.
- 2.This test is performed with no heat sink at T_A=25℃.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.
- 4.These parameters have no way to verify.



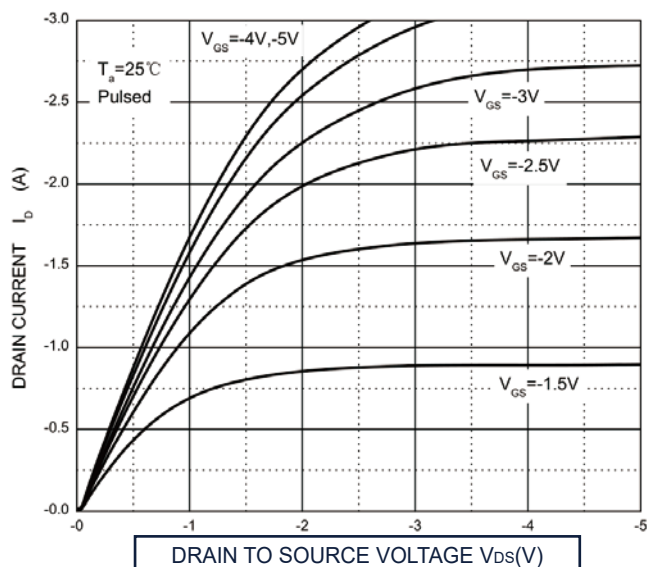
TWTLSEMI

TL-CJ3139KW

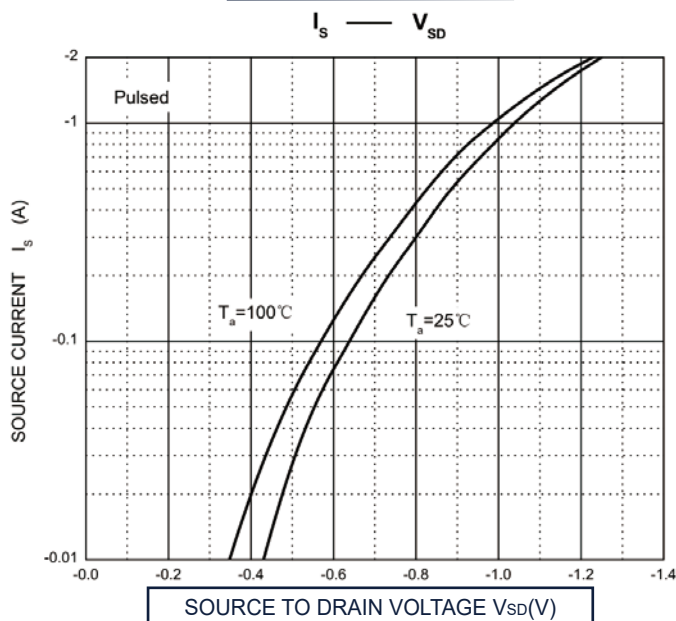
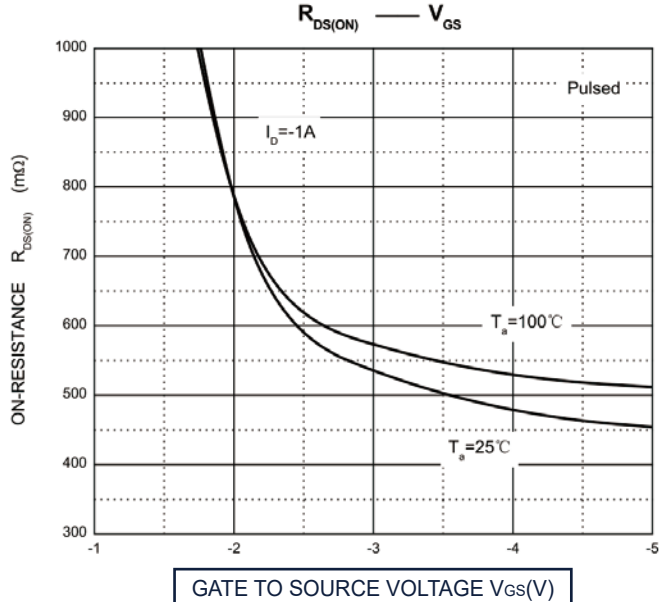
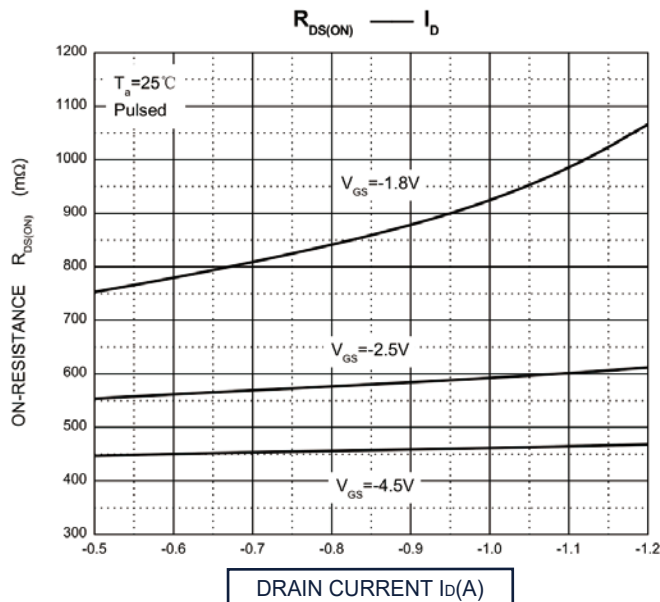
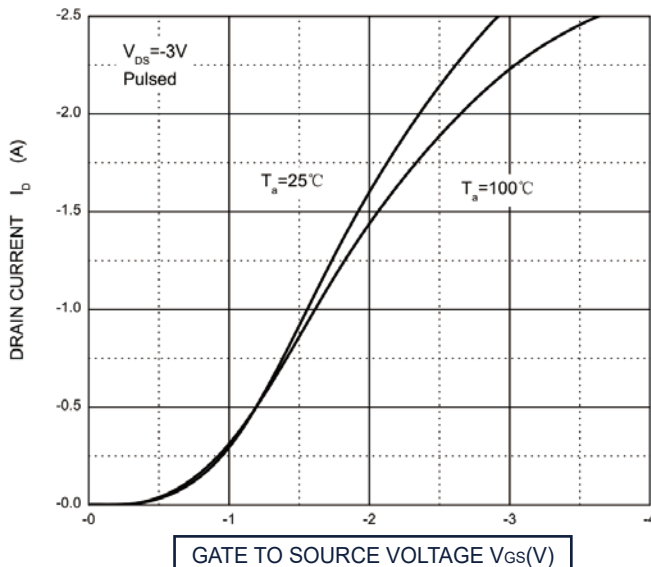
SOT-323 -20V P-Channel Enhancement Mode MOSFET

Typical Characteristics

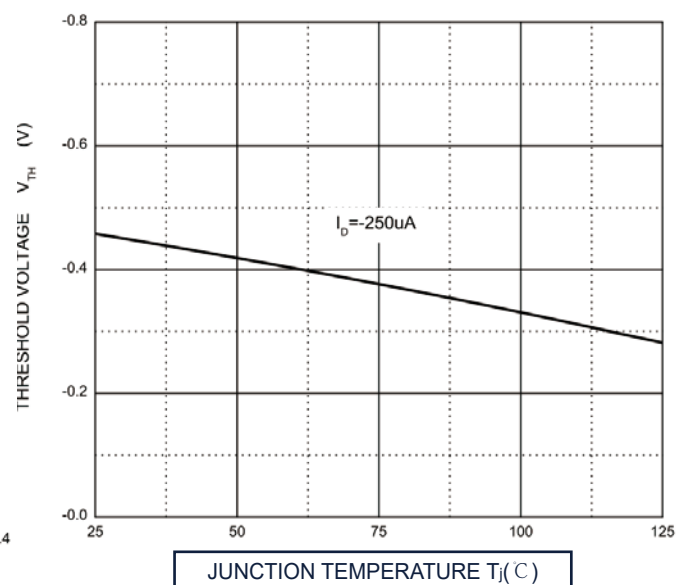
Output Characteristics



Transfer Characteristics

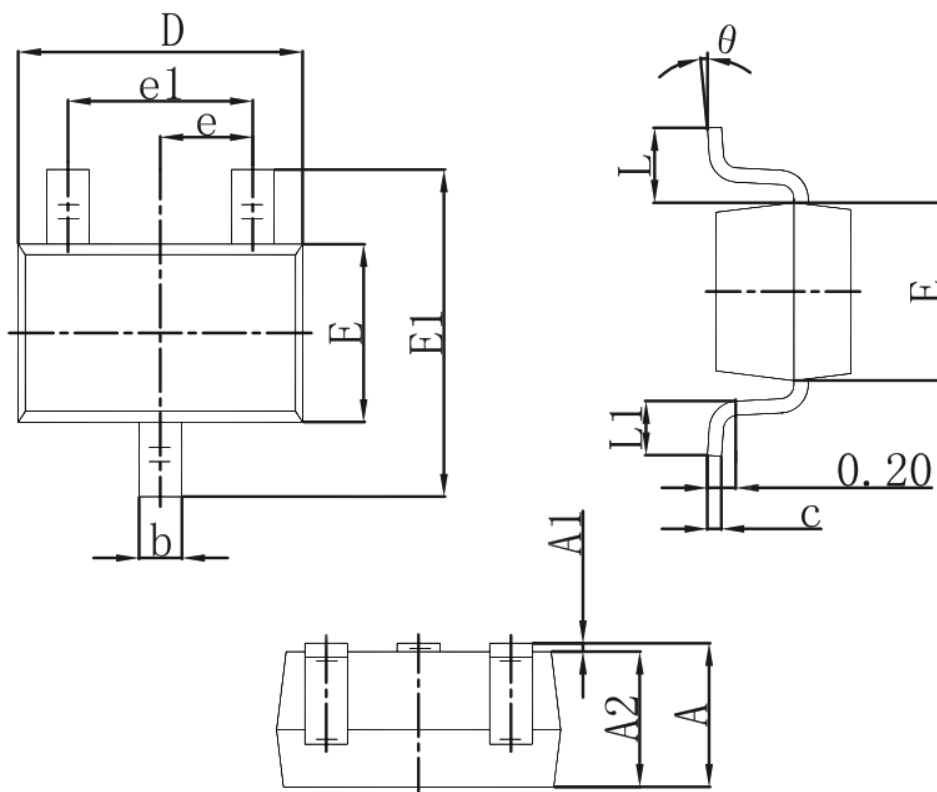


Threshold Voltage





SOT-323 Package Outline Dimensions



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	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	1.350	2.450	0.085	0.096
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°