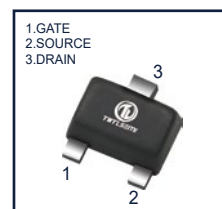


Description

The CJ3139K uses advanced trench technology to provide excellent $R_{DS(on)}$, low gate charge and operation with gate voltages as low as 4.5V. This device is suitable for use as a Battery protection or in other Switching application.

General Features

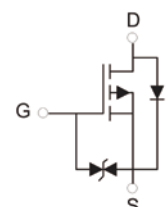
- Lead Free Product is Acquired
- Surface Mount Package
- P-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive



SOT-723

Applications

- Load/Power Switching
- Interfacing, Logic Switching
- Battery Management for Ultra Small Portable Electronics



Equivalent Circuit

Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
CJ3139K	SOT723	CJ3139K 产品名称 product name	KD	8000

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

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-20	V
V_{GS}	Typical Gate-Source Voltage	± 12	V
I_D	Continuous Drain Current (note 1)	-0.66	A
I_{DM}	Pulsed Drain Current ($t_p=10\mu\text{s}$)	-1.2	A
P_D	Power Dissipation (note 1)	150	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient (note 1)	833	$^{\circ}\text{C/W}$
T_J, T_{STG}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$
T_L	Lead Temperature for Soldering Purposes	260	$^{\circ}\text{C}$

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =-250μA	-20	---	---	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-20V,V _{GS} =0V	---	---	-1	μA
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±10V , V _{DS} =0V	---	---	±20	μA
V _{GS(th)}	Gate Threshold Voltage (note 2)	V _{GS} =V _{DS} , I _D =-250μA	-0.35	-0.45	-1.1	V
R _{DS(ON)}	Drain-source on-resistance (note 2)	V _{GS} =-4.5V, I _D =-1A	---	430	520	mΩ
		V _{GS} =-2.5V,I _D =-0.8A	---	624	700	
		V _{GS} =-1.8V , I _D =-0.5A	---	950	---	
g _{fs}	Forward Transconductance (note 2)	V _{DS} =-10V , I _D =-0.54A	---	1.2	---	S
V _{SD}	Diode Forward Voltage	I _S =-0.5A,V _{GS} =0V	---	---	-1.2	V
DYNAMIC CHARACTERISTICS(note 4)						
C _{iss}	Input Capacitance	V _{DS} =-16V , V _{GS} =0V , f=1MHz	---	113	170	pF
C _{oss}	Output Capacitance		---	15	25	
C _{rss}	Reverse Transfer Capacitance		---	9	15	
SWITCHING CHARACTERISTICS(note 4)						
T _{d(on)}	Turn-On Delay Time(note 3)	V _{GS} =-4.5V,V _{DS} =-10V, I _D =-200mA,R _{GEN} =10Ω	---	9	---	ns
T _r	Rise Time(note 3)		---	5.8	---	
T _{d(off)}	Turn-Off Delay Time(note 3)		---	32.7	---	
T _f	Fall Time(note 3)		---	20.3	---	

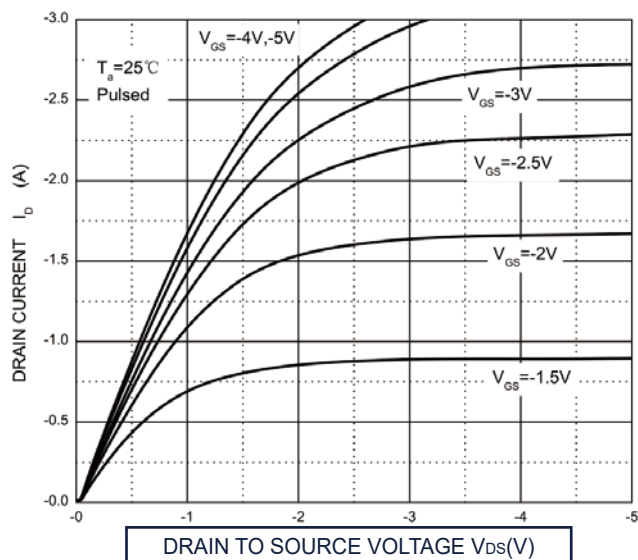
Notes :

- 1.Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producing.

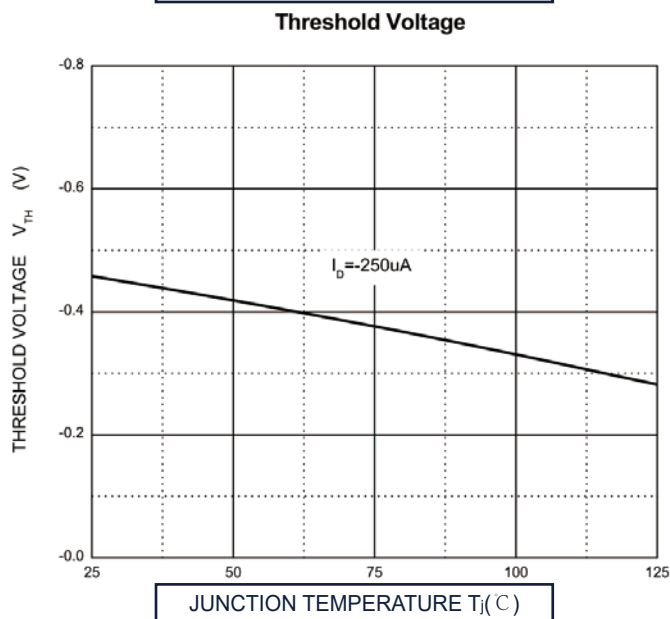
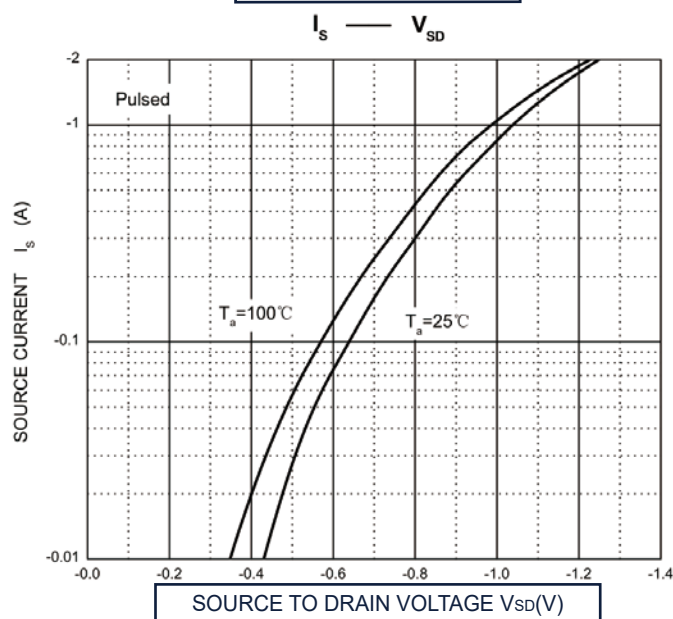
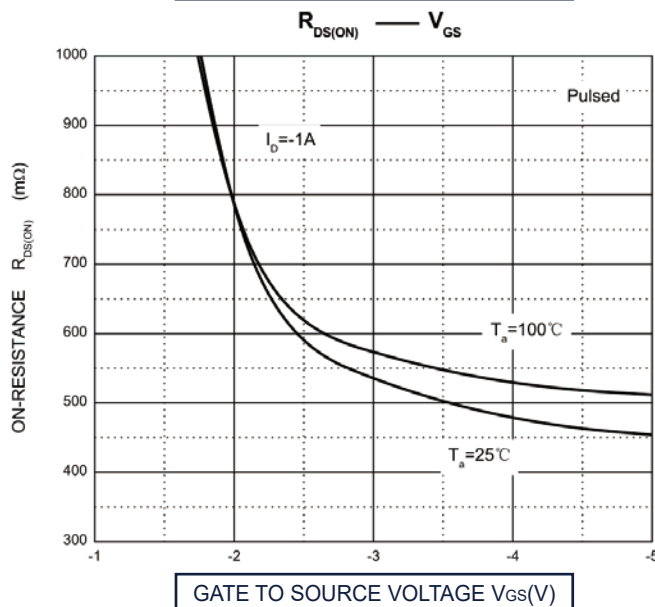
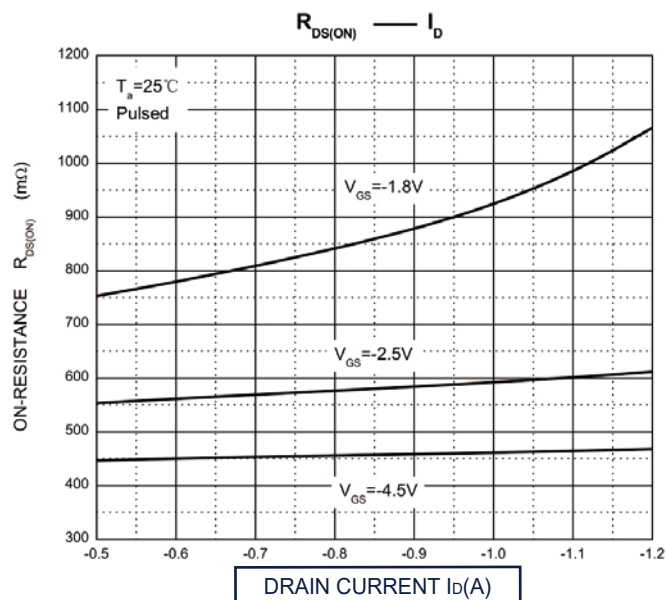
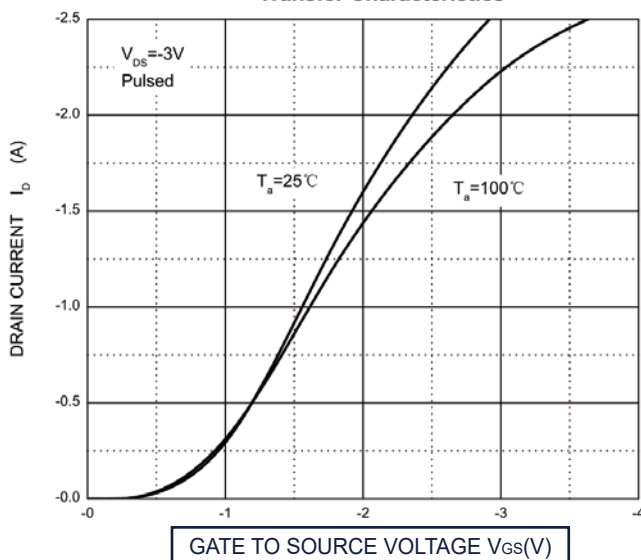


Typical Characteristics

Output Characteristics

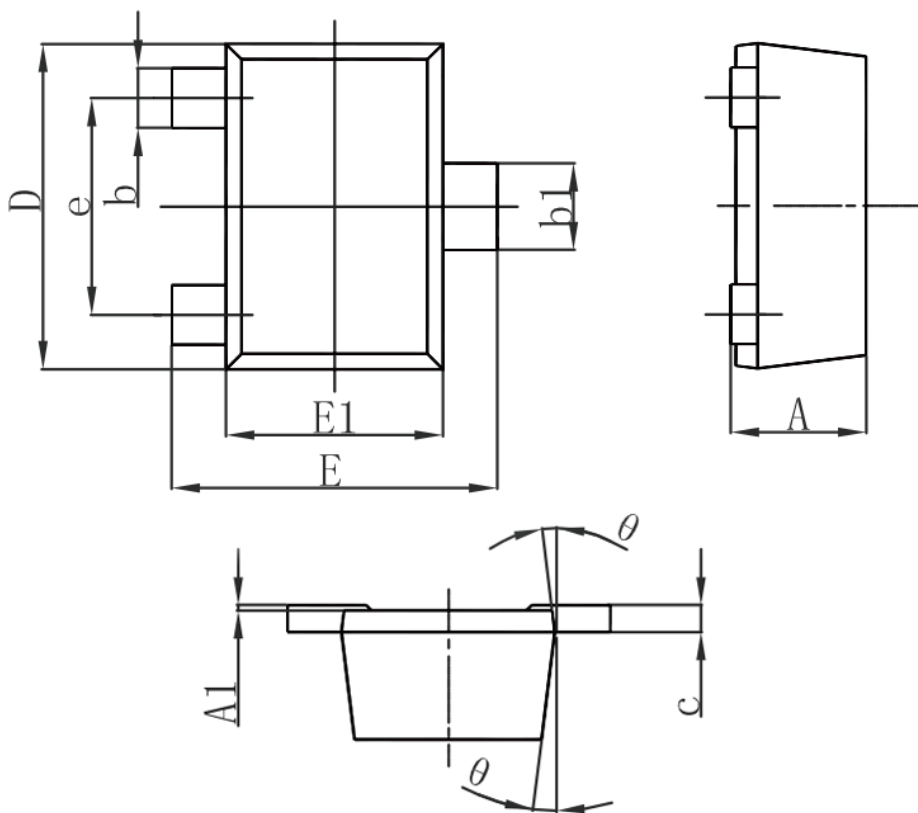


Transfer Characteristics





SOT-723 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		0.500		0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c		0.150		0.006
D	1.150	1.250	0.045	0.045
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	