

Description

The 2SK3541 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

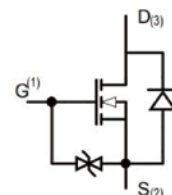
- $V_{DS} = 60V$ $I_D = 115mA$
- $R_{DS(ON)} < 3\Omega$ @ $V_{GS} = 10V$



SOT723

Applications

- Load switch
- Power management
- Battery operated systems
- Level Shift Circuits
- DC-DC Converter



Equivalent Circuit

Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
2SK3541	SOT723	2SK3541 产品名称 product name	KN	8000

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

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current ($T_J = 150^\circ C$)	115	mA
I_{DM}	Pulsed Drain Current ²	800	mA
P_D	Total Power Dissipation ³	150	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ C$
T_J	Operating Junction Temperature Range	125	$^\circ C$
$R_{\theta JA}$	Thermal Resistance Junction-ambient ¹	833	$^\circ C/W$

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
On/Off States						
B _{VDS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250uA	60	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance ²	V _{GS} =10V , I _D =0.3A	---	---	3	Ω
		V _{GS} =5V , I _D =0.3A	---	---	3.5	
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250uA	1.0	1.8	2.5	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =48V,V _{GS} = 0V	---	---	1	uA
			---	---		
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±20V , V _{DS} =0V	---	---	±10	nA
Switching Times						
T _{d(on)}	Turn-On Delay Time	V _{GS} =10V,V _{DS} =30V, I _D =200mA,R _G =3.3Ω	---	10	---	ns
T _r	Rise Time		---	20	---	
T _{d(off)}	Turn-Off Delay Time		---	15	---	
T _f	Fall Time		---	10	---	
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =10V , V _{GS} =0V , f=1MHz	---	40	---	pF
C _{oss}	Output Capacitance		---	30	---	
C _{rss}	Reverse Transfer Capacitance		---	10	---	
Drain-Source Diode Characteristics						
I _S	Continuous Source Current ^{1,4}	V _G =V _D =0V , Force Current	---	---	0.15	A
V _{SD}	Diode Forward Voltage ²	V _{GS} =0V , I _S =1A , T _J =25°C	---	---	1.2	V
I _{SM}	Maximum Pulsed Drain to Source Diode Forward Current	---	---	---	0.8	A

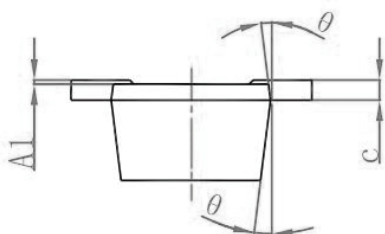
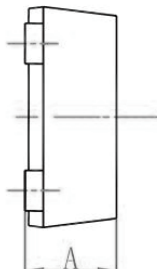
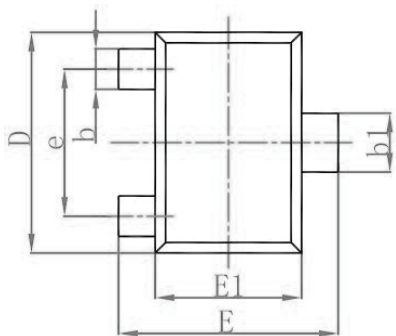
Notes:

1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
3. These parameters have no way to verify.



SOT723 Package Outline Dimensions

SOT723



SYMBOL	MILLIMETERS	
	MIN	MAX
A	0.40	0.50
A1	0.00	0.10
b	0.15	0.25
b1	0.20	0.30
c	0.06	0.16
D	1.10	1.30
e	0.8TYP	
E	1.10	1.30
E1	0.70	0.90
θ	8°	10°