2SK3541KM

30V/0.1A N-Channel MOSFET

Features

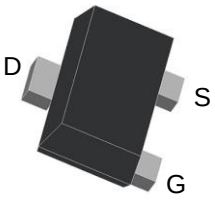
- Low on-resistance
- Fast switching speed
- Easily designed drive circuits
- Easy to parallel Portable equipment

Application

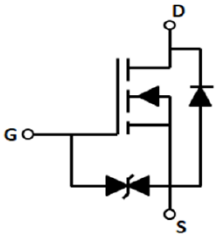
- Interfacing,Switching

Product Summary

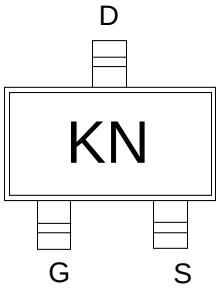
V_{DS}	$R_{DS(ON)}$ MAX	I_D MAX
30V	8Ω@4.5V	0.1A
	13Ω@2.5V	



SOT-723 top view



Schematic diagram



KN: Device code

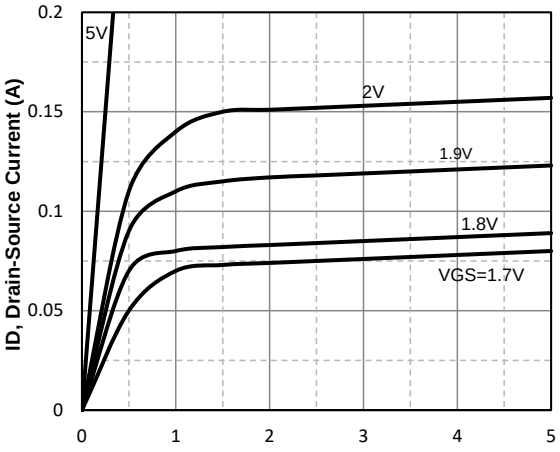
Marking and pin assignment

Absolute Maximum Ratings (TA=25℃unless otherwise noted)				
Symbol	**Parameter**		**Rating**	**Unit**
Common Ratings (TC=25°C Unless Otherwise Noted)				
V_{DS}	Drain-Source Breakdown Voltage		30	V
V_{GS}	Gate-Source Voltage		±20	V
T_J	Maximum Junction Temperature		150	℃
T_{STG}	Storage Temperature Range		-50 to 155	℃
I_S	Diode Continuous Forward Current	Tc=25°C	0.1	A
Mounted on Large Heat Sink				
I_{DM}	Pulse Drain Current Tested	Tc=25°C	0.43	A
I_D	Continuous Drain Current@GS=10V	Tc=25°C	0.1	A
P_D	Maximum Power Dissipation	Tc=25°C	0.15	W
ESD	Gate-Source ESD Rating (HBM, Method 3015)		2000	V

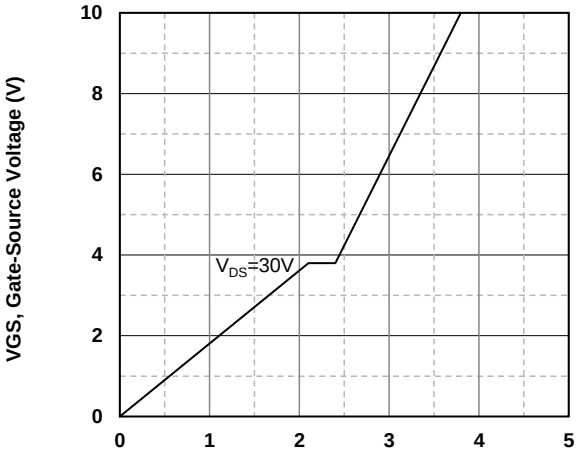
Ordering Information (Example)						
Type	**Package**	**Marking**	**Minimum Package(pcs)**	**Inner Box Quantity(pcs)**	**Outer Carton Quantity(pcs)**	**Delivery Mode**
2SK3541KM	SOT-723	KN	8,000	120,000	480,000	7"reel

Electrical Characteristics (TJ=25℃ unless otherwise noted)						
Symbol	**Parameter**	**Condition**	**Min**	**Typ**	**Max**	**Unit**
Static Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
$BV_{(BR)DSS}$	Drain-Source Breakdown Voltage	VGS=0V，ID=250μA	30	--	--	V
I_{DSS}	Zero Gate Voltage Drain Current	VDS=30V，VGS=0V	--	--	1	uA
I_{GSS}	Gate-Body Leakage Current	VGS=±20V，VDS=0V	--	--	±10	uA
$V_{GS(th)}$	Gate Threshold Voltage	VDS=VGS，ID=250μA	0.8	1.1	1.5	V
$R_{DS(on)}$	Drain-Source On-State Resistance	VGS=4.5V，ID=10mA	--	--	8	Ω
		VGS=2.5V，ID=1mA	--	--	13	Ω
Dynamic Electrical Characteristics @ TJ = 25°C (unless otherwise stated)						
C_{ISS}	Input Capacitance	VDS=30V，VGS=0V， f=1MHz	--	22	--	pF
C_{OSS}	Output Capacitance		--	3.5	--	pF
C_{RSS}	Reverse Transfer Capacitance		--	2.9	--	pF
Switching Characteristics						
Q_g	Total Gate Charge	VDS=30V，ID=0.2A，VGS=4.5V	--	1.4	--	nC
Q_{gs}	Gate Source Charge		--	2.1	--	nC
Q_{gd}	Gate Drain Charge		--	0.27	--	nC
$t_{d(on)}$	Turn-on Delay Time	VDD=30V，ID=0.2A，VGS=4.5V，RG=10Ω	--	3.6	--	nS
t_r	Turn-on Rise Time		--	23.2	--	nS
$t_{d(off)}$	Turn-Off Delay Time		--	5.5	--	nS
t_f	Turn-Off Fall Time		--	23.3	--	nS
Source- Drain Diode Characteristics						
V_{SD}	Forward on voltage	Tj=25℃，Is=0.1A，	--	--	1.2	V

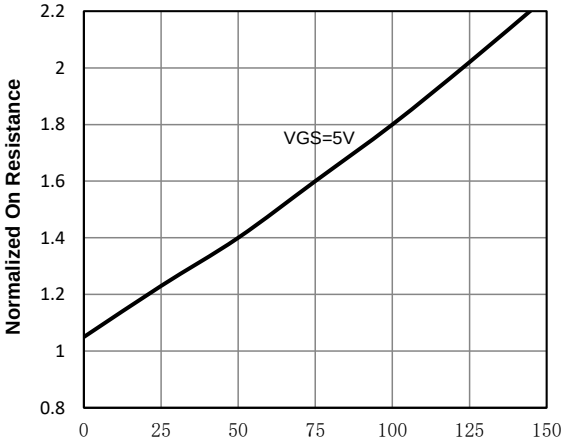
Typical Operating Characteristics



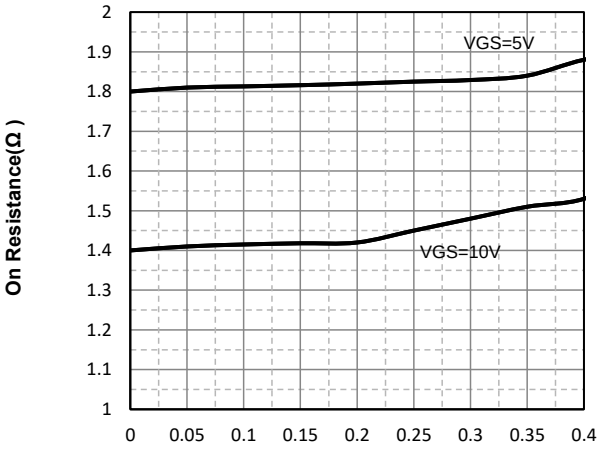
VDS, Drain -Source Voltage (V)
Fig1. Typical Output Characteristics



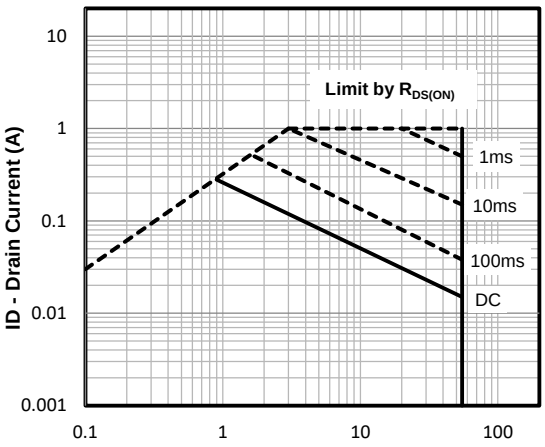
Qg -Total Gate Charge (nC)
Fig2. Typical Gate Charge Vs.Gate-Source Voltage



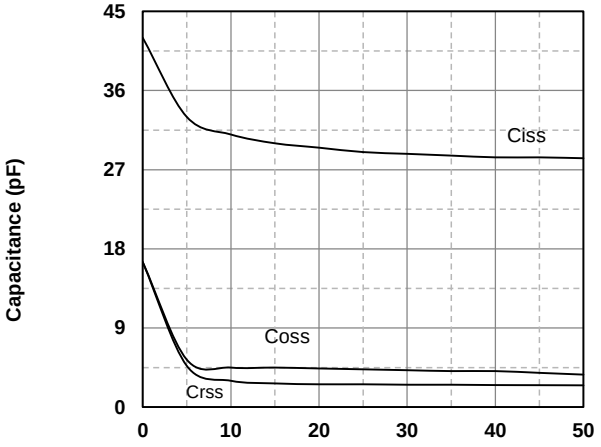
Tj - Junction Temperature (°C)
Fig3. Normalized On-Resistance Vs. Temperature



ID, Drain-Source Current (A)
Fig4. On-Resistance Vs. Drain-Source Current

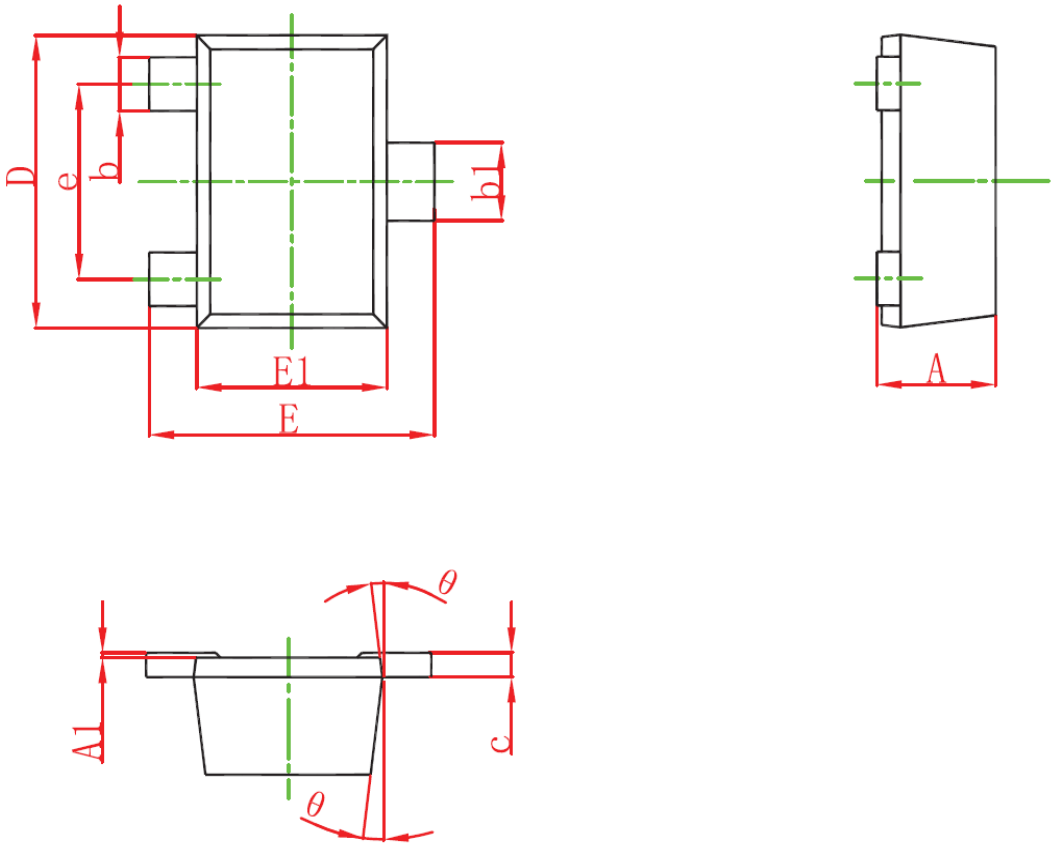


VDS, Drain -Source Voltage (V)
Fig5. Maximum Safe Operating Area



VDS , Drain-Source Voltage (V)
Fig6 Typical Capacitance Vs.Drain-Source

SOT-723 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.400	0.500	0.016	0.020
A1	0.000	0.050	0.000	0.002
b	0.150	0.250	0.006	0.010
b1	0.200	0.300	0.008	0.012
c	0.100	0.200	0.004	0.008
D	1.100	1.300	0.043	0.051
E	1.100	1.300	0.043	0.051
E1	0.700	0.900	0.028	0.035
e	0.800TYP		0.020TYP	
θ	7°REF		7°REF	