WEITRON

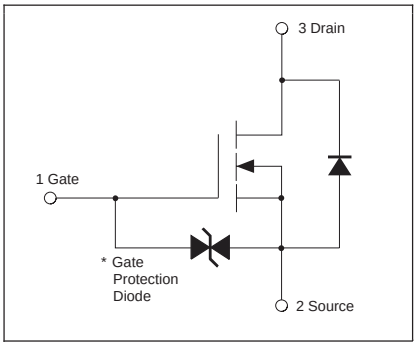
2SK3541M

Surface Mount N-Channel MOSFET

Lead(Pb)-Free

1. Gate
2. Source
3. Drain

SOT-723



Features:

* Low on-resistance
* Fast switching speed
* Low voltage drive(2.5V) makes this ideal for portable eqipment
* Drive Circuits Can Be Simple
* Parallel Use Is Easy
* We Declare That The Material Of Product
* Compliance With RoHS Requirements.

Applications:

* Interfacing,switching(30V,100mA)

Maximum Ratings(T_A=25 ˚C Unless Otherwise Specified)

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	±20	
Continuous Drain Current	I_D	±100	mA
Power Dissipation	P_D	150	mW
Pulsed Drain Current	I_{DM}	±400	mA
Operating Junction and Storage Temperature Range	TJ,Tstg	-55~+150	˚C

* Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.
1. Pw≤10μs,Duty Cycle≤1%
2. With Each Pin Mounted On The Recommended Lands.

Electrical Characteristics (T_A = 25℃ Unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Static					
Drain-Source Breakdown Voltage @V_{GS}=0,I_D=10μA	$V_{(BR)DSS}$	30	-	-	V
Gate Threshold Voltage @V_{DS}=3V,I_D=100μA	$V_{GS(Th)}$	0.8	-	1.5	V
Gate-Source Leakage current @V_{GS}= ±20V,V_{DS}=0V	I_{GSS}	-	-	±1	μA
Zero Gate Voltage Drain Current @V_{DS}=30V,V_{GS}=0	I_{DSS}	-	-	1.0	μA
Drain-Source On-State Resistance @V_{GS}=4V,I_D=10mA @V_{GS}=2.5V,I_D=1mA	$R_{DS(on)}$	- -	5 7	8 13	Ω
Forward Transfer Admittance @V_{DS}=3V,I_D=10mA	$\|Y_{fs}\|$	20	-	-	m s
Dynamic					
Input Capacitance @V_{GS}=0V,V_{DS}=5V,f=1.0MHz	C_{iss}	-	13	-	pF
Output Capacitance @V_{GS}=0V,V_{DS}=5V,f=1.0MHz	C_{oss}	-	9.0	-	pF
Reverse Transfer Capacitance @V_{GS}=0V,V_{DS}=5V,f=1.0MHz	C_{rss}	-	4.0	-	pF
Switching					
Turn-on Delay Time V_{GS}=5V, V_{DD}=5V,I_D=10mA,R_G=10Ω, R_L=500Ω	$t_{d(on)}$	-	15	-	ns
Turn-on Rise Time V_{GS}=5V, V_{DD}=5V,I_D=10mA,R_G=10Ω, R_L=500Ω	t_r	-	35	-	ns
Turn-off Delay Time V_{GS}=5V, V_{DD}=5V,I_D=10mA,R_G=10Ω, R_L=500Ω	$t_{d(off)}$	-	80	-	ns
Turn-off Fall Time V_{GS}=5V, V_{DD}=5V,I_D=10mA,R_G=10Ω, R_L=500Ω	t_f	-	80	-	ns

Device Marking

2SK3541M = KN

Electrical Characteristic

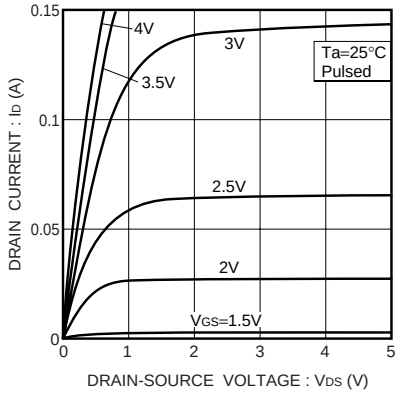


Fig.1 Typical output characteristics

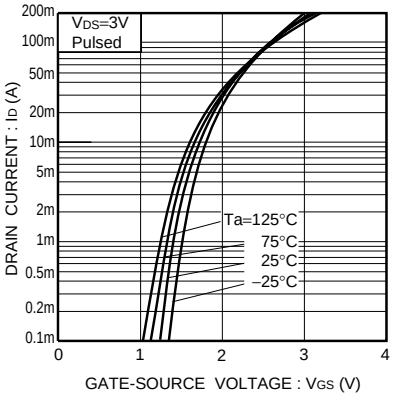


Fig.2 Typical transfer characteristics

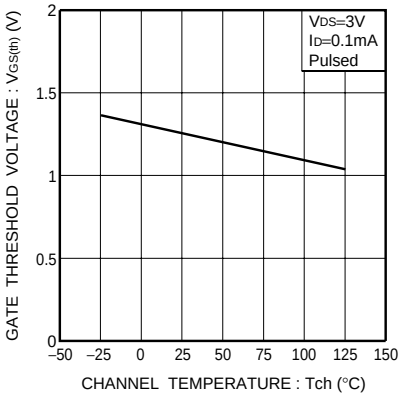


Fig.3 Gate threshold voltage vs. channel temperature

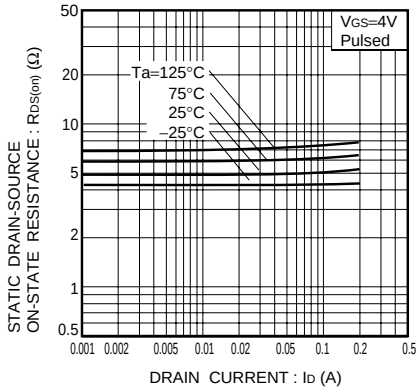


Fig.4 Static drain-source on-state resistance vs. drain current (I)

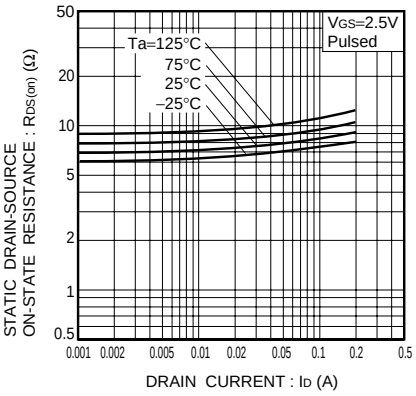


Fig.5 Static drain-source on-state resistance vs. drain current (II)

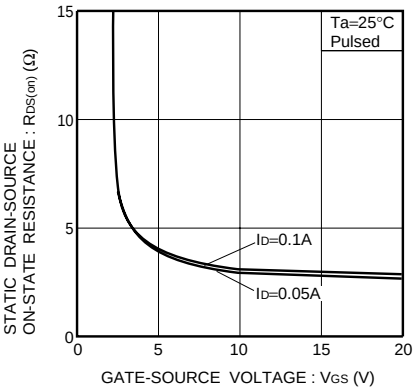


Fig.6 Static drain-source on-state resistance vs. gate-source voltage

Typical Characteristics

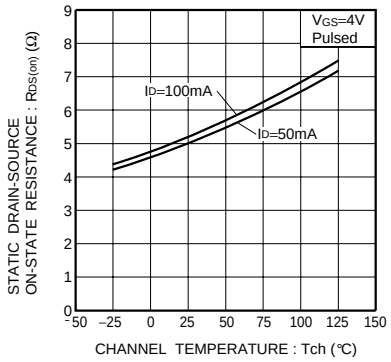


Fig.7 Static drain-source on-state resistance vs. channel temperature

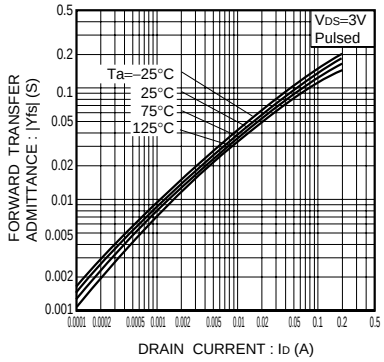


Fig.8 Forward transfer admittance vs. drain current

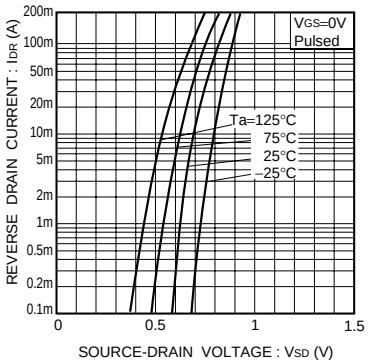


Fig.9 Reverse drain current vs. source-drain voltage (I)

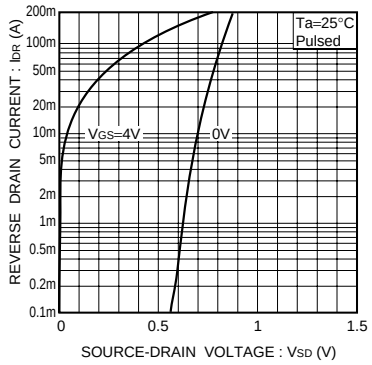


Fig.10 Reverse drain current vs. source-drain voltage (II)

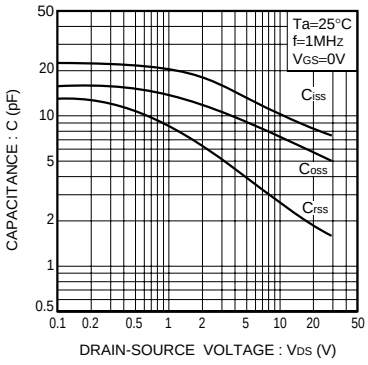


Fig.11 Typical capacitance vs. drain-source voltage

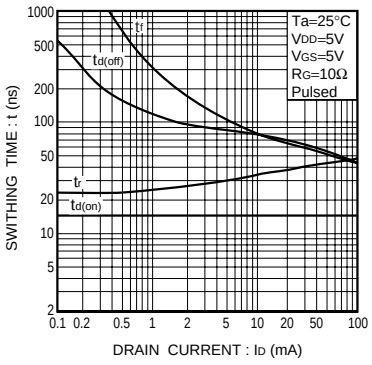


Fig.12 Switching characteristics (See Figures 13 and 14 for the measurement circuit and resultant waveforms)

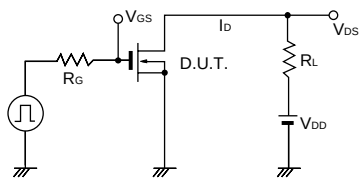


Fig.13 Switching time measurement circuit

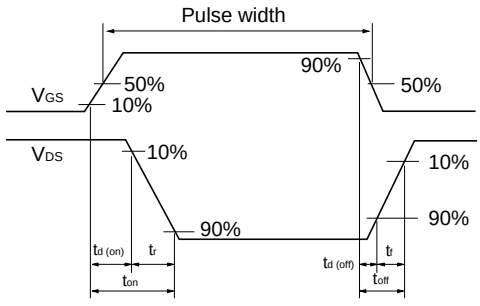
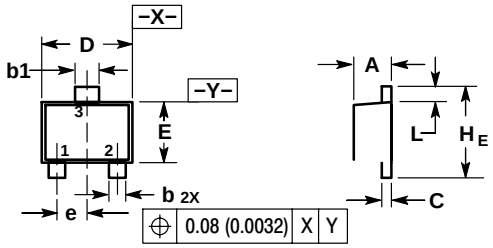


Fig.14 Switching time waveforms

Typical Characteristics

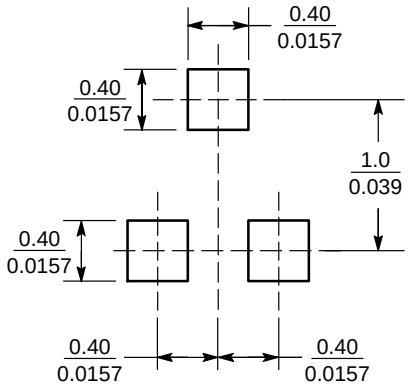
SOT−723



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
b	0.15	0.20	0.27	0.0059	0.0079	0.0106
b1	0.25	0.3	0.35	0.010	0.012	0.014
C	0.07	0.12	0.17	0.0028	0.0047	0.0067
D	1.15	1.20	1.25	0.045	0.047	0.049
E	0.75	0.80	0.85	0.03	0.032	0.034
e	0.40 BSC			0.016 BSC		
H_E	1.15	1.20	1.25	0.045	0.047	0.049
L	0.15	0.20	0.25	0.0059	0.0079	0.0098

SOLDERING FOOTPRINT



(mm / inches)