CHENMKO ENTERPRISE CO.,LTD

2SK3541MGP

SURFACE MOUNT
N-Channel Enhancement Mode Field Effect Transistor

Halogens free devices

VOLTAGE 30 Volts CURRENT 100 mAmpere

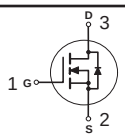
APPLICATION
* Interfacing, switching (30V, 100mA)

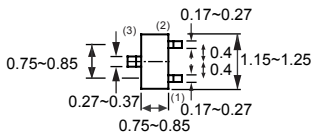
FEATURE
* Small surface mounting type. (SOT-723)
* Low on-resistance
* Fast switching speed
* Easily designed drive circuits
* Easy to parallel

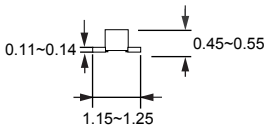
CONSTRUCTION
Silicon N-Channel MOSFET

SOT-723

CIRCUIT







Dimensions in millimeters

SOT-723

Absolute Maximum Ratings T_A = 25°C unless otherwise noted

Symbol	Parameter	2SK3541MGP	Units
V_{DSS}	Drain-Source Voltage	30	V
V_{GSS}	Gate-Source Voltage - Continuous	±20	V
I_D	Drain Current - Continuous	100	mA
	- Pulsed (Note1)	400	mA
I_{DR}	Reverse Drain Current - Continuous	100	mA
	- Pulsed (Note1)	400	mA
P_D	Power Dissipation (Note2)	150	mW
T_J	Operating Temperature Range	-55 to 150	°C
T_{STG}	Storage Temperature Range	-55 to 150	°C

Note:
1. Pw < 10uA , Duty cycle < 1%
2. With each pin mounted on the recommended land

2007-02

RATING CHARACTERISTIC CURVES (2SK3541MGP)

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS} = 0 V, I_D = 10μA	30			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = 30 V, V_{GS} = 0 V			1	μA
		T_C=125°C			0.5	mA
I_{GSSF}	Gate - Body Leakage, Forward	V_{GS} = 20 V, V_{DS} = 0 V			1	μA
I_{GSSR}	Gate - Body Leakage, Reverse	V_{GS} = -20 V, V_{DS} = 0 V			-1	μA
ON CHARACTERISTICS						
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} = 3V, I_D = 100 μA	0.8		1.65	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS} = 4.0 V, I_D = 10 mA		5.0	8.0	Ω
		V_{GS} = 2.5 V, I_D = 1.0 mA		7.0	13	
g_{FS}	Forward Transconductance	V_{DS} = 3.0 V, I_D = 10 mA	20			mS
DYNAMIC CHARACTERISTICS						
C_{iss}	Input Capacitance	V_{DS} = 5.0 V, V_{GS} = 0 V, f = 1.0 MHz		13		pF
C_{oss}	Output Capacitance			9		
C_{rss}	Reverse Transfer Capacitance			4		
t_{on}	Turn-On Time	V_{DD} = 5.0 V, R_L = 500 Ω, I_D = 10 mA, V_{GS} = 5.0 V, R_{GEN} = 10 Ω		15		nS
t_r				35		
t_{off}	Turn-Off Time	V_{DD} = 5.0 V, R_L = 500 Ω, I_D = 10 mA, V_{GS} = 5.0 V, R_{GEN} = 10 Ω		80		nS
t_f				80		

RATING CHARACTERISTIC CURVES (2SK3541MGP)

Typical Electrical Characteristics

FIG. 1 TYPICAL TRANSFER CHARACTERISTICS

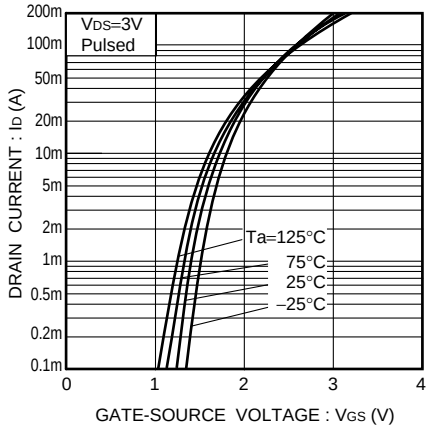


FIG. 2 REVERSE DRAIN CURRENT V.S SOURCE-DRAIN VOLTAGE

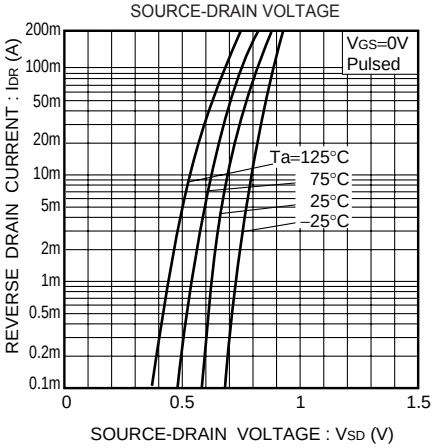


FIG. 3 GATE THRESHOLD VOLTAGE V.S CHANNEL TEMPERATURE

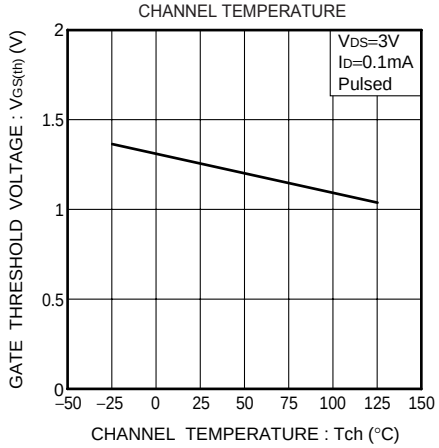
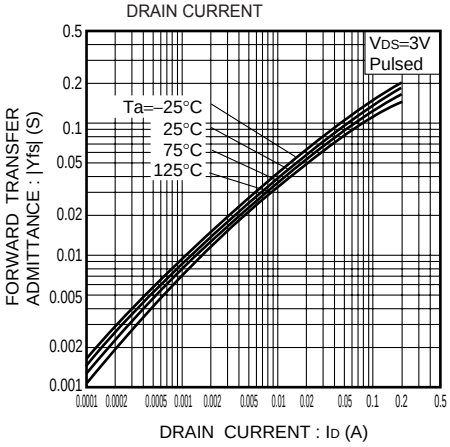


FIG. 4 FROWARD TRANSFER ADMITTANCE V.S DRAIN CURRENT



RATING CHARACTERISTIC CURVES (2SK3541MGP)

Typical Electrical Characteristics (continued)

FIG. 5 STATIC DRAIN-SOURCE ON-STATE RESISTANCE V.S DRAIN CURRENT

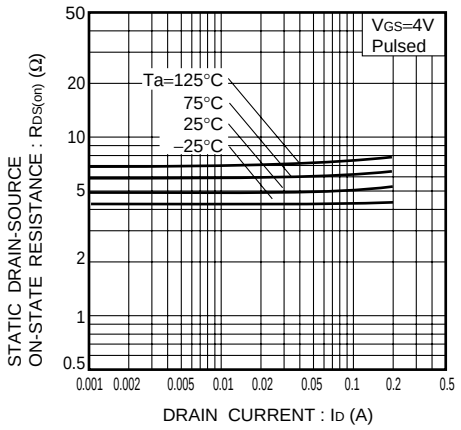


FIG. 6 STATIC DRAIN-SOURCE ON-STATE RESISTANCE V.S DRAIN CURRENT