

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low On-Resistance
- Fast Switching Speed
- Drive Circuits can be Simple
- Parallel Use is Easy
- Low Voltage Drive Makes This Device Ideal for Portable Equipment

APPLICATION

- Interfacing
- Switching

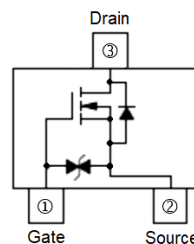
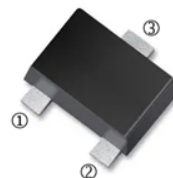
MARKING

KN

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-723	8K	7 inch

SOT-723



ORDER INFORMATION

Part Number	Type
SSN3541-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	100	mA
Total Power Dissipation	P_D	0.15	W
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Operating Junction & Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

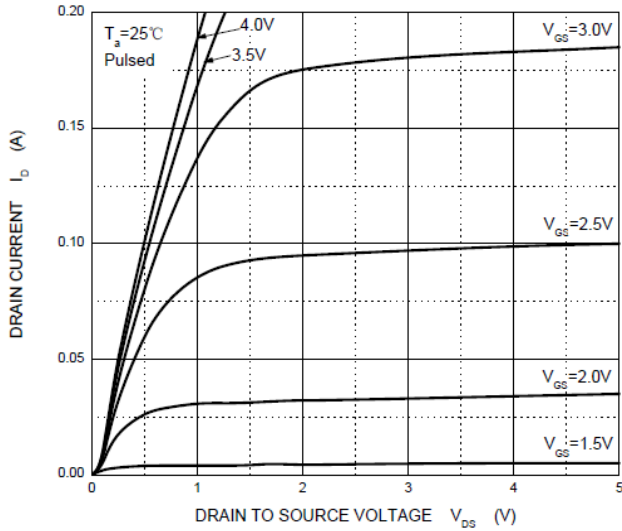
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	30	-	-	V	$V_{GS}=0, I_D=10\mu\text{A}$
Gate Threshold Voltage	$V_{GS(th)}$	0.8	-	1.5	V	$V_{DS}=3\text{V}, I_D=100\mu\text{A}$
Forward Transconductance ¹	g_{fs}	20	-	-	mS	$V_{DS}=3\text{V}, I_D=10\text{mA}$
Gate-Body Leakage Current	I_{GSS}	-	-	± 2	μA	$V_{DS}=0, V_{GS}=\pm 20\text{V}$
Zero Gate Voltage Drain Current	I_{DSS}	-	-	1	μA	$V_{DS}=30\text{V}, V_{GS}=0$
Drain-Source On-Resistance ¹	$R_{DS(ON)}$	-	5	8	Ω	$V_{GS}=4\text{V}, I_D=10\text{mA}$
		-	7	13		$V_{GS}=2.5\text{V}, I_D=1\text{mA}$
Turn-on Delay Time	$T_{d(on)}$	-	15	-	nS	$V_{DD}=5\text{V}$ $I_D=10\text{mA}$ $V_{GS}=5\text{V}$ $R_L=500\Omega$ $R_G=10\Omega$
Rise Time	T_r	-	35	-		
Turn-off Delay Time	$T_{d(off)}$	-	80	-		
Fall Time	T_f	-	80	-		
Input Capacitance	C_{iss}	-	13	-	pF	$V_{DS}=5\text{V}$ $V_{GS}=0$ $f=1\text{MHz}$
Output Capacitance	C_{oss}	-	9	-		
Reverse Transfer Capacitance	C_{rss}	-	4	-		

Note:

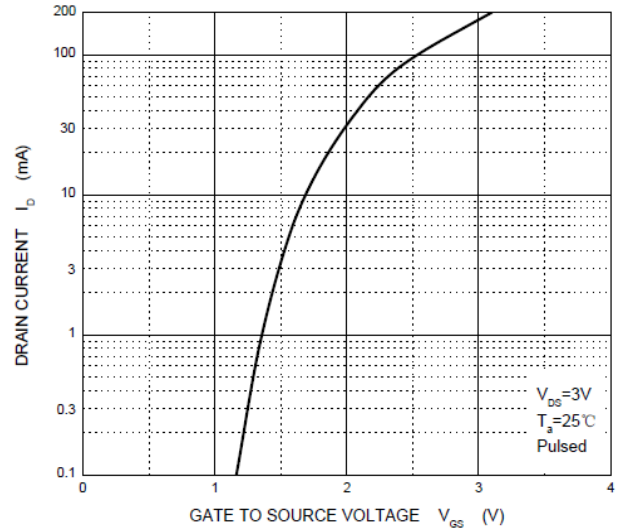
1. $P_w \leq 10\mu\text{s}$, Duty cycle $\leq 1\%$.

CHARACTERISTIC CURVES

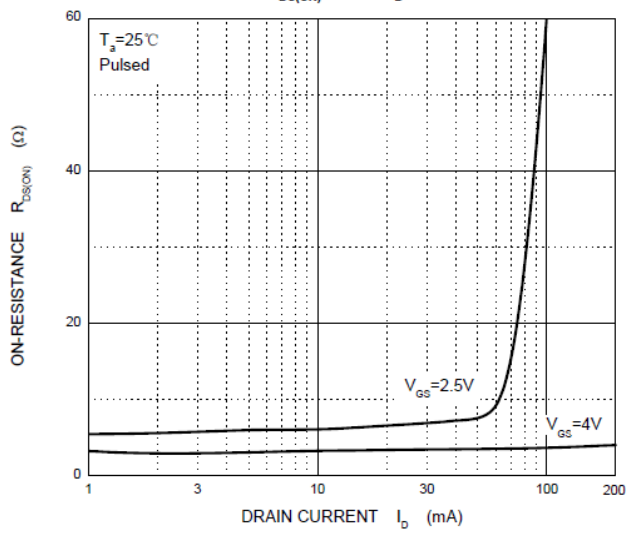
Output Characteristics



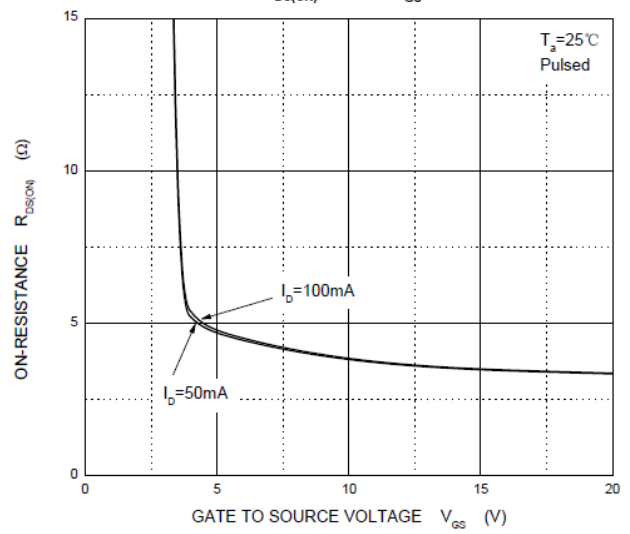
Transfer Characteristics



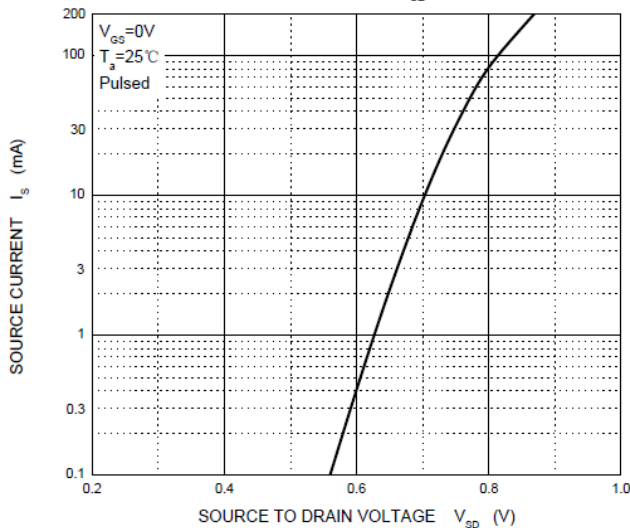
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}

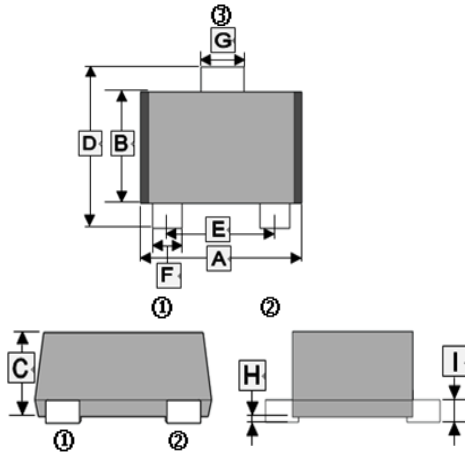


I_s — V_{SD}



PACKAGE OUTLINE DIMENSIONS

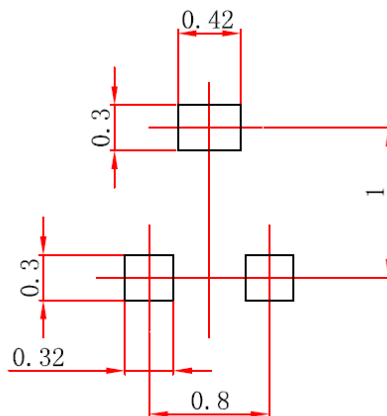
SOT-723



REF.	Millimeter	
	Min.	Max.
A	1.15	1.25
B	0.75	0.85
C	-	0.55
D	1.15	1.25
E	0.80 TYP.	
F	0.15	0.27
G	0.25	0.37
H	0.025 TYP.	
I	-	0.17

MOUNTING PAD LAYOUT

SOT-723



*Dimensions in millimeters