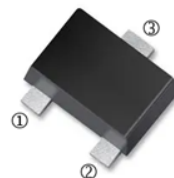


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Input Capacitance
- Fast Switching Speed
- Low Input / Output Leakage
- Voltage Controlled Small Signal Switch
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- ESD Protected up to 2kV (HBM)

SOT-723



MARKING

72

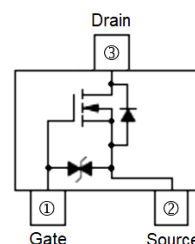
7K

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-723	8K	7 inch

ORDER INFORMATION

Part Number	Type
SSN72K-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}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	0.34	A
Pulsed Drain Current ¹ @ $V_{GS}=10\text{V}$, $t_p=10\mu\text{s}$	I_{DM}	0.8	A
Total Power Dissipation	P_D	0.35	W
Operating Junction & Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$
Thermal Data			
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$

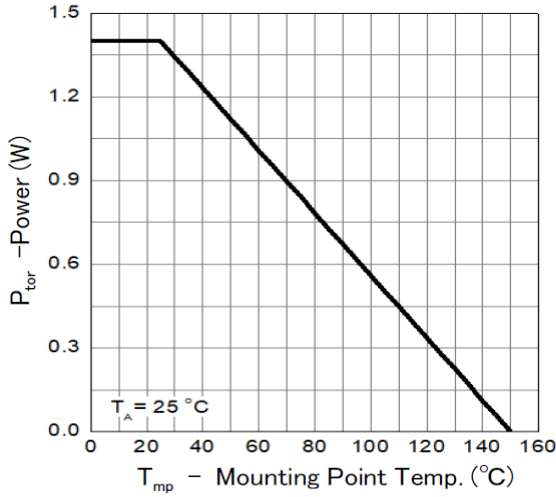
Note:

1. Surface Mounted on 1 in² pad area, $t \leq 10$ sec

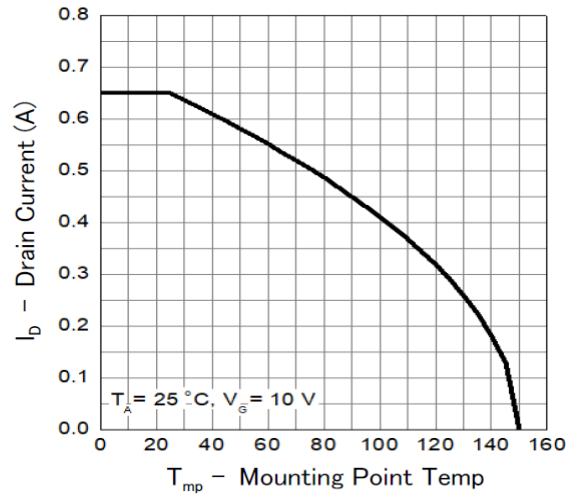
ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	60	-	-	V	$V_{GS}=0, I_D=10\mu\text{A}$
Gate Threshold Voltage	$V_{GS(th)}$	1	-	2.5	V	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$
Gate-Body Leakage Current	I_{GSS}	-	-	± 10	μA	$V_{DS}=0, V_{GS}=\pm 20\text{V}$
				± 100	nA	$V_{DS}=0, V_{GS}=\pm 5\text{V}$
Zero Gate Voltage Drain Current	I_{DSS}	-	-	1	μA	$V_{DS}=60\text{V}, V_{GS}=0$
Drain-Source On-Resistance	$R_{DS(ON)}$	-	-	3	Ω	$V_{GS}=10\text{V}, I_D=0.5\text{A}$
		-	-	4		$V_{GS}=4.5\text{V}, I_D=0.2\text{A}$
Total Gate Charge	Q_g	-	1.2	-	nC	$V_{DS}=30\text{V}$ $V_{GS}=10\text{V}$ $I_D=0.5\text{A}$
Gate-Source Charge	Q_{gs}	-	0.5	-		
Gate-Drain Charge	Q_{gd}	-	0.1	-		
Turn-on Delay Time	$T_{d(on)}$	-	3.8	-	nS	$V_{DS}=30\text{V}$ $V_{GS}=10\text{V}$ $I_D=0.2\text{A}$ $R_G=3.9\Omega$ $R_L=150\Omega$
Rise Time	T_r	-	3.5	-		
Turn-off Delay Time	$T_{d(off)}$	-	12.4	-		
Fall Time	T_f	-	44.4	-		
Input Capacitance	C_{iss}	-	28	-	pF	$V_{DS}=25\text{V}$ $V_{GS}=0$ $f=1\text{MHz}$
Output Capacitance	C_{oss}	-	1.6	-		
Reverse Transfer Capacitance	C_{rss}	-	1.1	-		
Source-Drain Diode						
Diode Forward Voltage	V_{SD}	-	-	1.3	V	$I_S=0.2\text{A}, V_{GS}=0\text{V}$

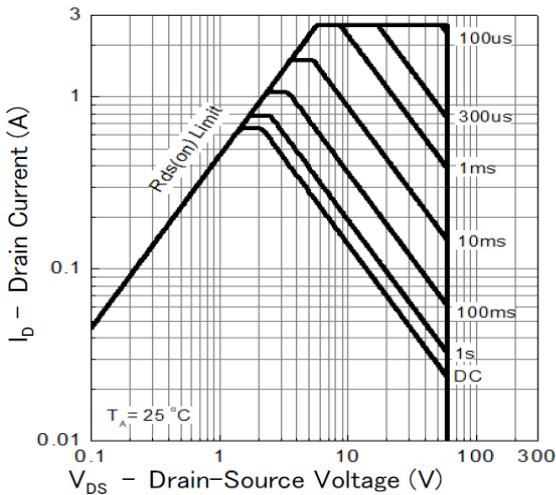
TYPICAL CHARACTERISTICS



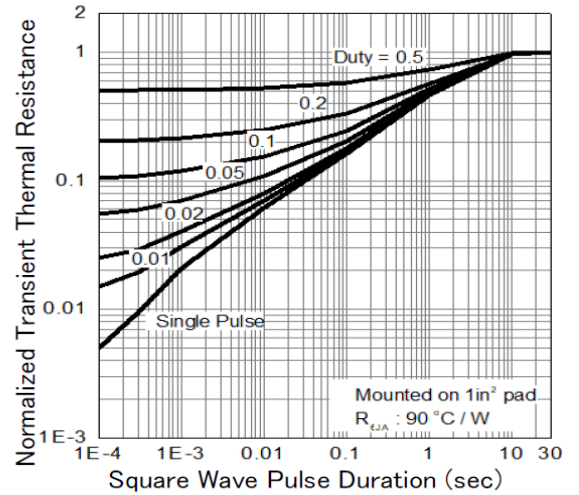
Power Capability



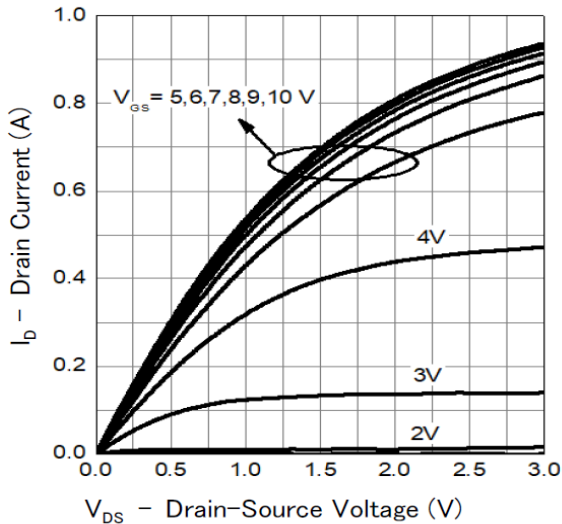
(°C)



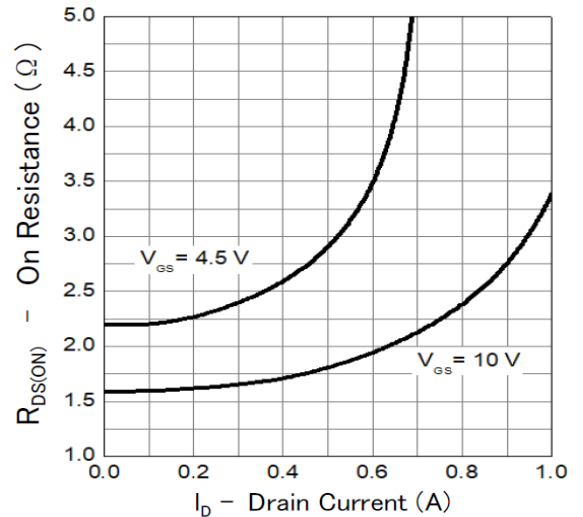
Operating



Transient Thermal Impedance

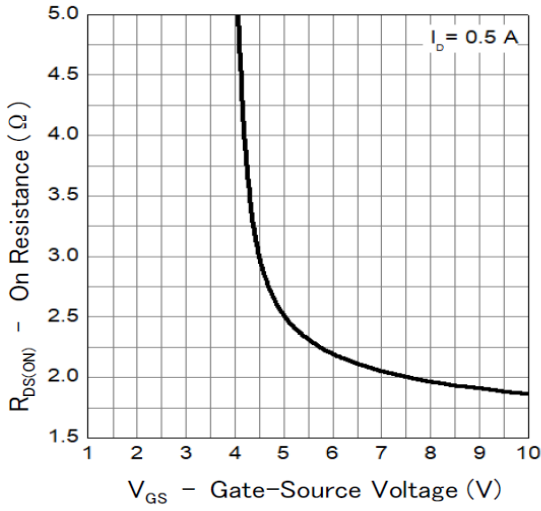


Output Characteristics

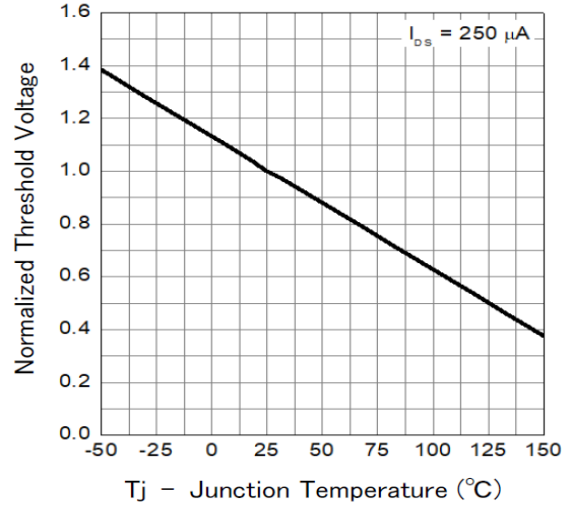


On Resistance

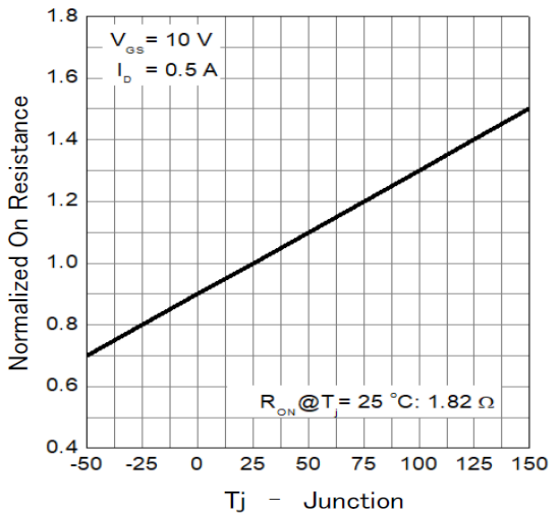
TYPICAL CHARACTERISTICS



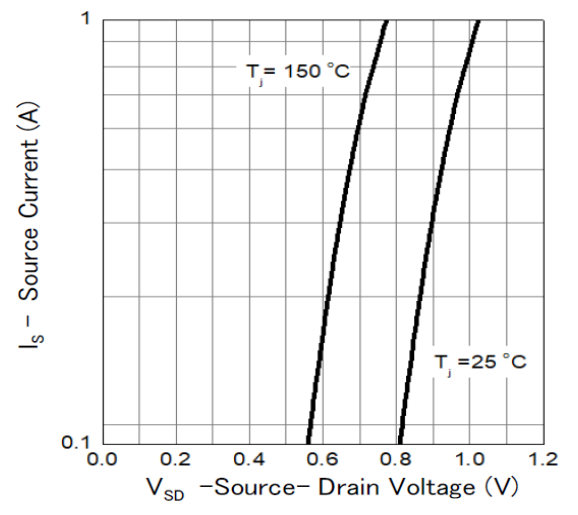
Transfer Characteristics



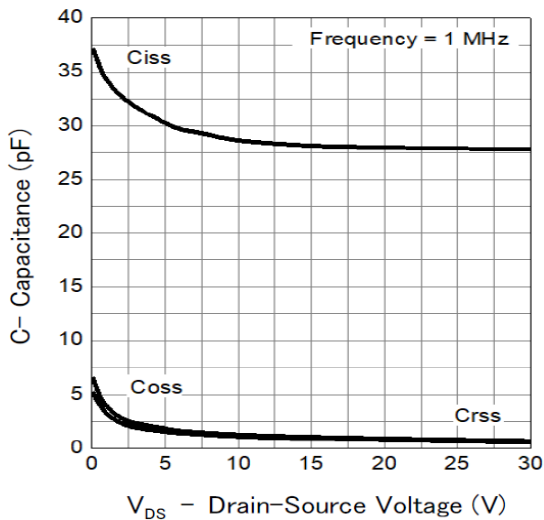
Normalized Threshold Voltage



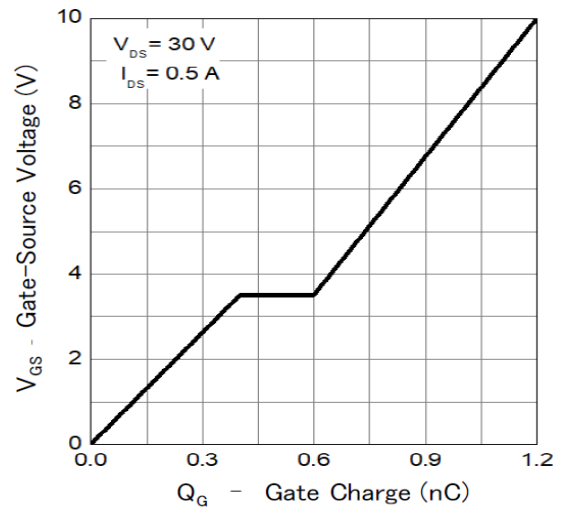
Normalized On Resistance



Diode Forward Current



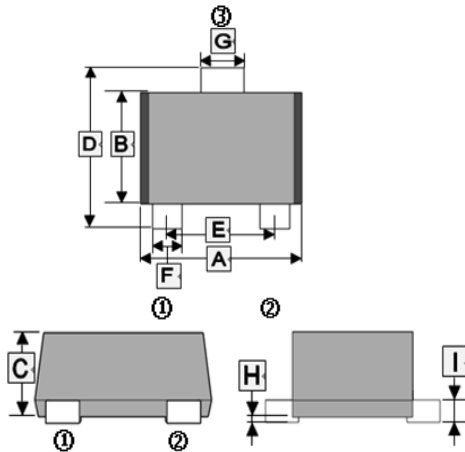
Capacitance



Gate Charge

PACKAGE OUTLINE DIMENSIONS

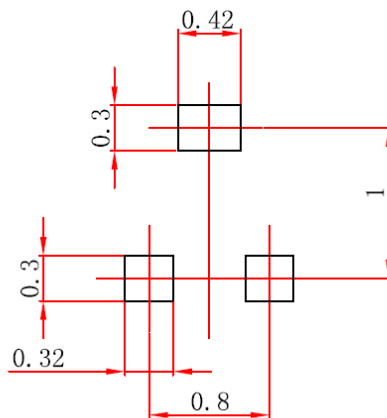
SOT-723



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	-	0.20

MOUNTING PAD LAYOUT

SOT-723



*Dimensions in millimeters