

Product Summary

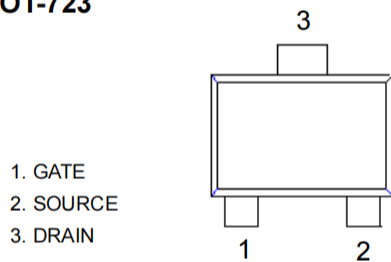
- $V_{DS} = 60V, I_D = 0.3A$
 $R_{DS(ON)} < 2.5 \Omega @ V_{GS}=4.5V$
 $R_{DS(ON)} < 3.0 \Omega @ V_{GS}=10V$
- ESD Rating : HBM 2000V

Application

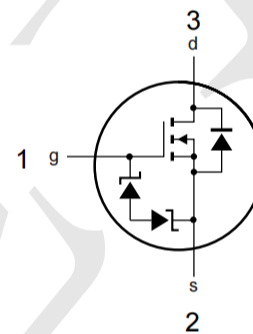
- Load/Power Switching
- Interfacing Switching
- Logic Level Shift

Package and Pin Configuration

SOT-723



Circuit diagram



Marking: RK* Or RK

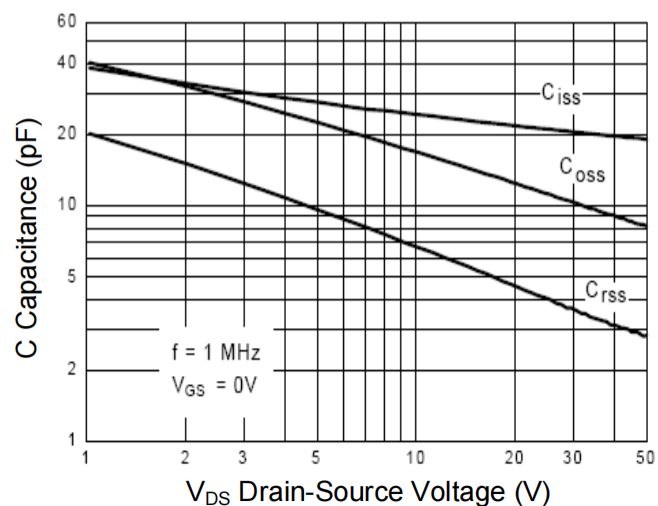
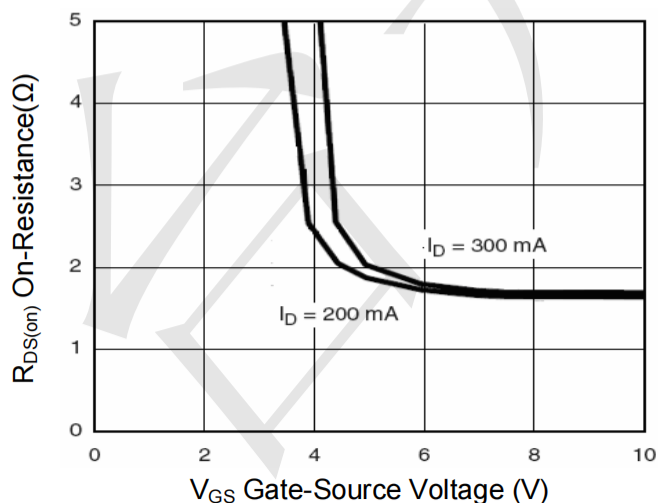
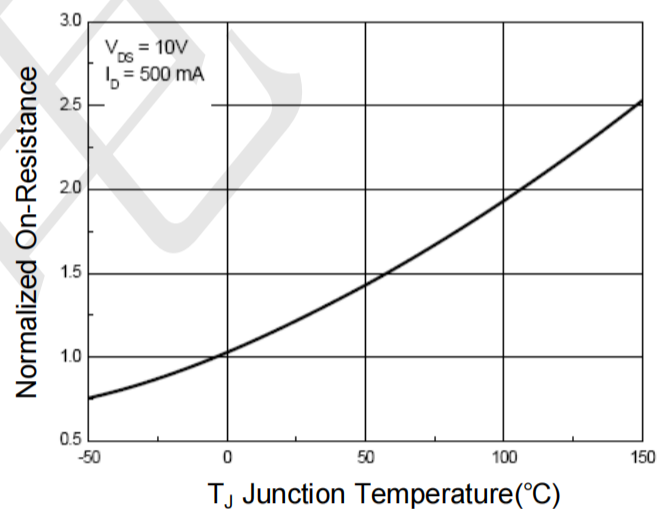
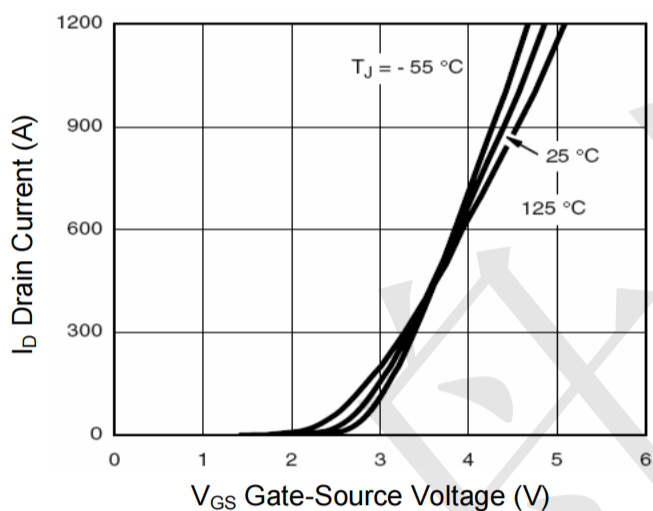
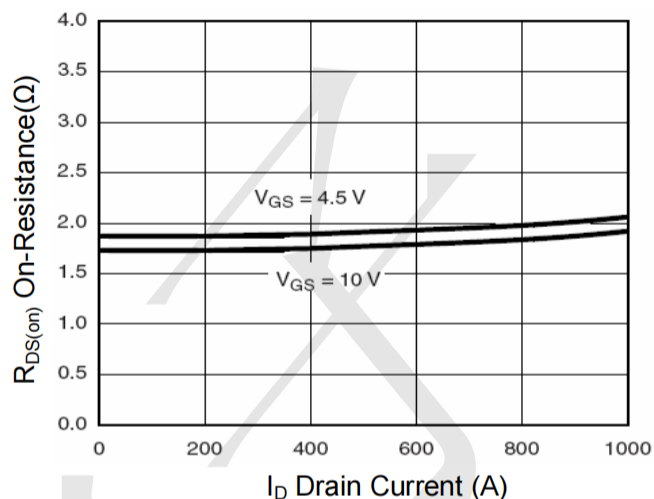
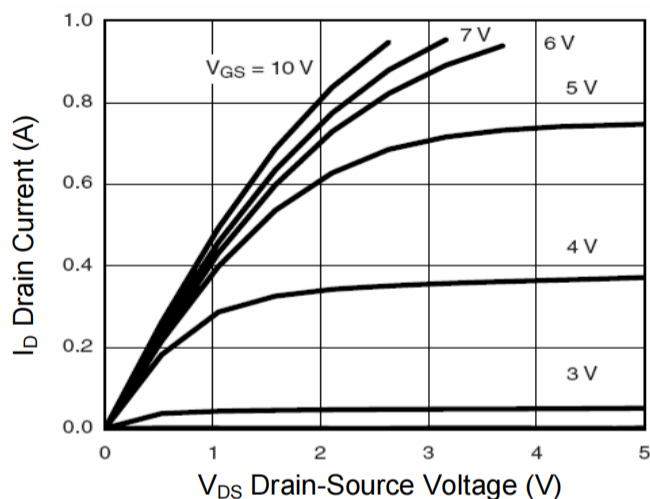
Absolute Maximum Ratings ($T_A=25^\circ C$ unless otherwise noted)

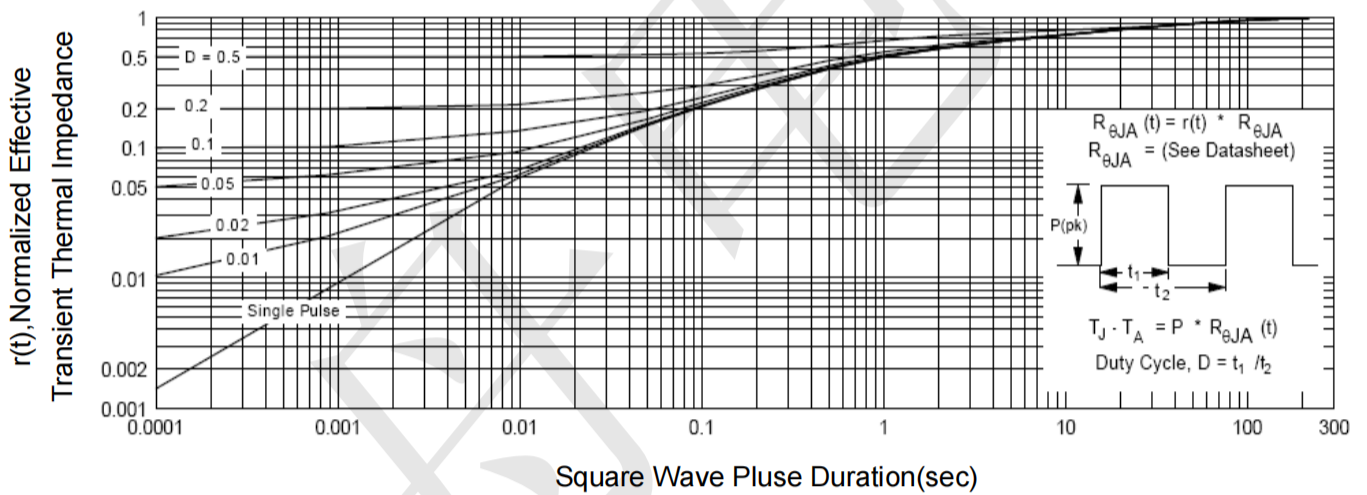
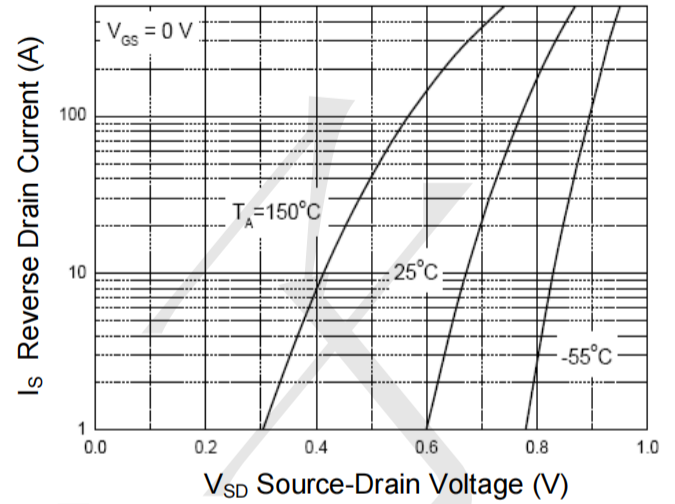
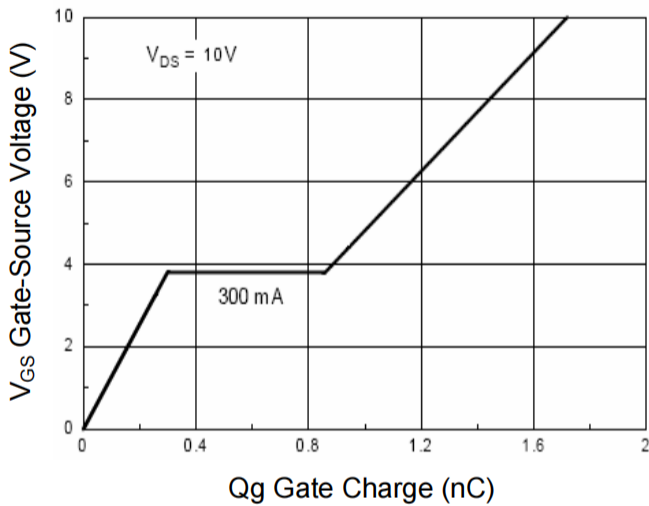
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	300	mA
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55~ +150	$^\circ C$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

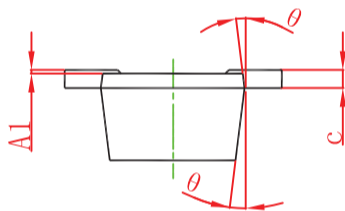
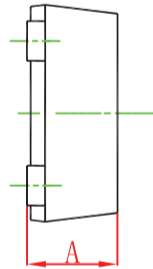
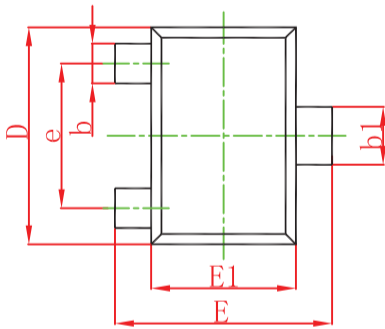
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =250μA	60		-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V	-	-	1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±10V, V _{DS} =0V	-	-	±1	uA
		V _{GS} =±20V, V _{DS} =0V	-		±10	uA
On Characteristics (Note 3)						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	1.6	2.5	
Drain-Source On-State Resistance	R _{DS(ON)}	V _{GS} =4.5V, I _D =0.2A	-	1.7	2.5	Ω
		V _{GS} =10V, I _D =0.3A	-	2.0	3.0	Ω
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =0.2A	0.1	-	-	S
Dynamic Characteristics (Note4)						
Input Capacitance	C _{ISS}	V _{DS} =30V, V _{GS} =0V, F=1.0MHz		27		PF
Output Capacitance	C _{OSS}			18		PF
Reverse Transfer Capacitance	C _{rSS}			2		PF
Switching Characteristics (Note 4)						
Turn-on Delay Time	t _{d(on)}	V _{DD} =30V, I _D =0.2A V _{GS} =10V, R _{GEN} =10Ω	-	10	-	nS
Turn-on Rise Time	t _r		-	50	-	nS
Turn-Off Delay Time	t _{d(off)}		-	17	-	nS
Turn-Off Fall Time	t _f		-	10	-	nS
Total Gate Charge	Q _g	V _{DS} =10V, I _D =0.3A, V _{GS} =4.5V	-	1.7	3	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage (Note 3)	V _{SD}	V _{GS} =0V, I _S =0.2A	-	-	1.2	V
Diode Forward Current (Note 2)	I _S		-	-	0.3	A

Typical Characteristic Curves





SOT-723 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

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