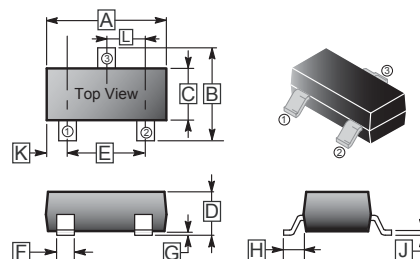


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- $R_{DS(ON)}$, $V_{GS}@10V$, $I_{DS}@500mA=3\Omega$
- $R_{DS(ON)}$, $V_{GS}@4.5V$, $I_{DS}@200mA=4\Omega$
- Advanced Trench Process Technology
- High Density Cell Design For Ultra Low On-Resistance
- Very Low Leakage Current In Off Condition
- Specially Designed for Battery Operated Systems, Solid-State Relays Drivers : Relays, Displays, Lamps, Solenoids, Memories, etc.
- ESD Protected 2KV HBM
- In compliance with EU RoHS 2002/95/EC directives

SOT-323



MECHANICAL DATA

- Case: SOT-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026

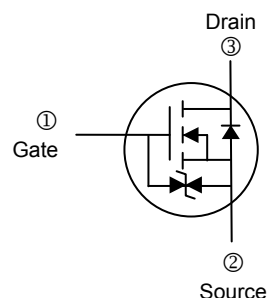
MARKING

K72

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650 TYP.	
F	0.20	0.40			

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-323	3K	7' inch



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	115	mA
Pulsed Drain Current ¹	I_{DM}	800	mA
Maximum Power Dissipation	P_D	200	mW
		120	
Thermal Resistance Junction-Ambient (PCB mounted) ²	$R_{\theta JA}$	625	$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature	T_J, T_{STG}	-55~150	$^\circ\text{C}$

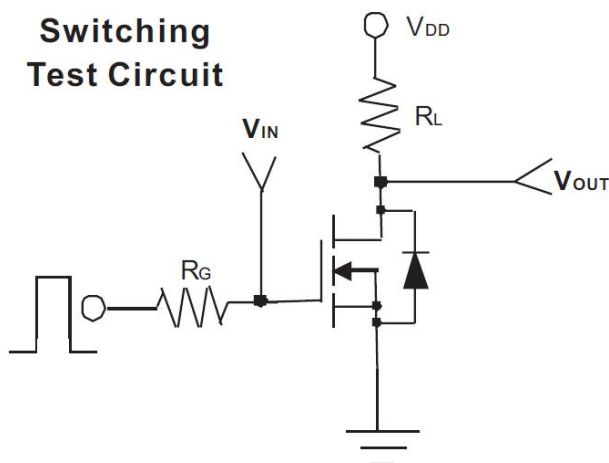
Notes:

1. Maximum DC current limited by the package.
2. Surface mounted on FR4 board, $t < 5\text{sec}$.

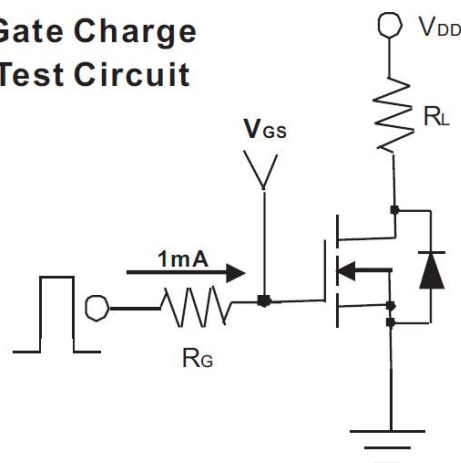
N-CHANNEL ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ. ²	Max.	Unit	Test Conditions
Static						
Drain-Source Breakdown Voltage	BV _{DSS}	60	-	-	V	V _{GS} =0, I _D =10μA
Gate-Threshold Voltage	V _{GS(th)}	1	-	2.5		V _{DS} = V _{GS} , I _D =250μA
Drain-Source On-Resistance	R _{DS(ON)}	-	-	4	Ω	V _{GS} =4.5V, I _D =200mA
		-	-	3		V _{GS} =10V, I _D =500mA
Zero Gate Voltage Drain Current	I _{DSS}	-	-	1	μA	V _{DS} =60V, V _{GS} =0
Gate-Body Leakage Current	I _{GSS}	-	-	±10	μA	V _{DS} =0, V _{GS} = ±20V
Forward Transconductance	g _{fs}	100	-	-	mS	V _{DS} =15V, I _D =250mA
Dynamic						
Total Gate Charge	Q _g	-	-	0.8	nC	V _{DS} =15V, V _{GS} =4.5V, I _D =200mA
Turn-On Time	t _(on)	-	-	20	nS	V _{DD} =30V, R _L =150Ω, I _D =200mA, V _{GEN} =10V, R _G =10Ω
Turn-Off Time	t _(off)	-	-	40		
Input Capacitance	C _{iss}	-	-	35	pF	V _{DS} =25V, V _{GS} =0V, f=1MHz
Output Capacitance	C _{oss}	-	-	10		
Reverse Transfer Capacitance	C _{rss}	-	-	5		
Source-Drain Diode						
Diode Forward Voltage	V _{SD}	-	0.82	1.3	V	I _S =200mA, V _{GS} =0V
Continuous Diode Forward Current	I _S	-	-	115	mA	
Pulse Diode Forward Current	I _{SM}	-	-	800	mA	

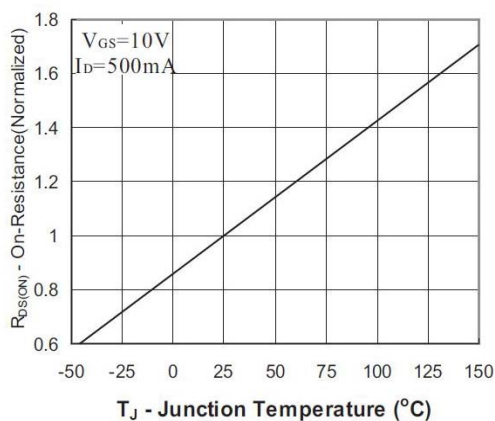
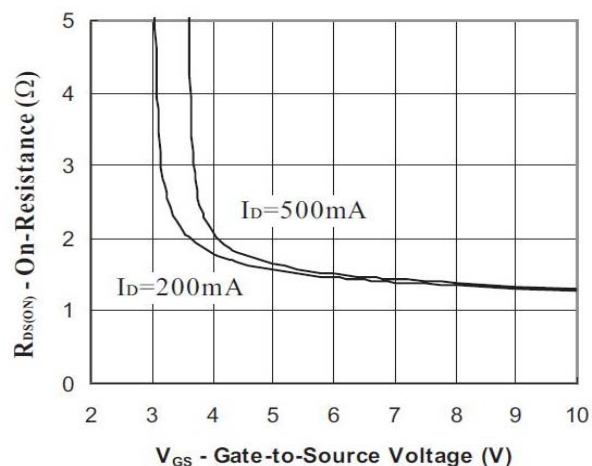
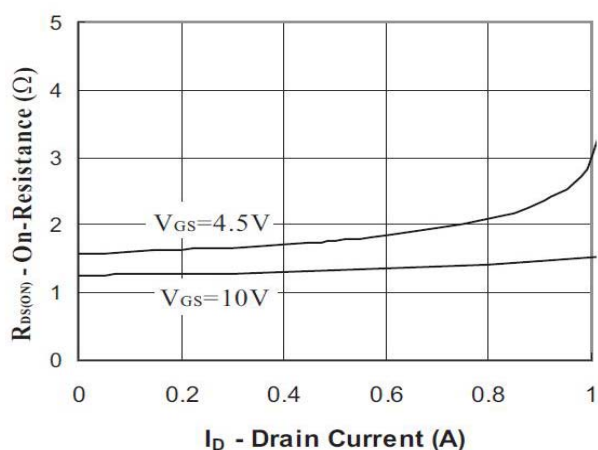
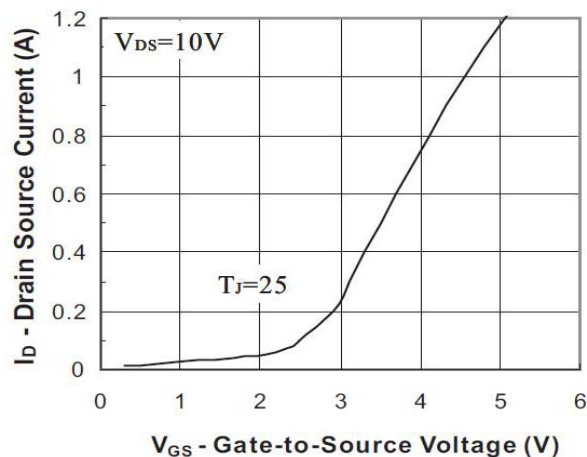
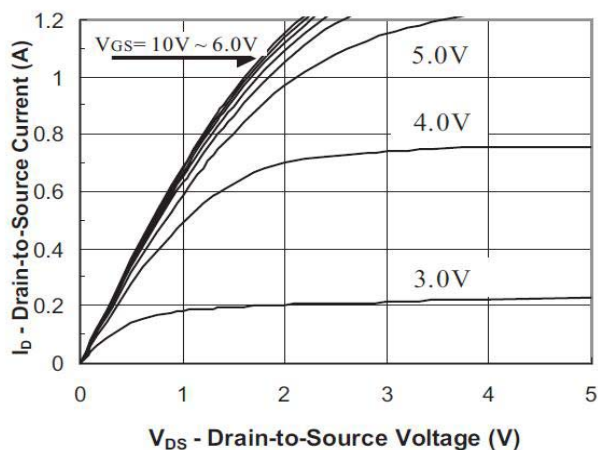
Switching Test Circuit



Gate Charge Test Circuit



CHARACTERISTIC CURVE



CHARACTERISTIC CURVE

