SOT-363 Plastic-Encapsulate MOSFETs

Dual N-channel MOSFET

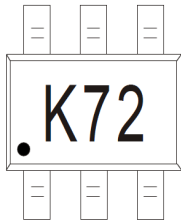| $V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
60 V	5Ω@10V	115mA
	7Ω@5V	

SOT-363
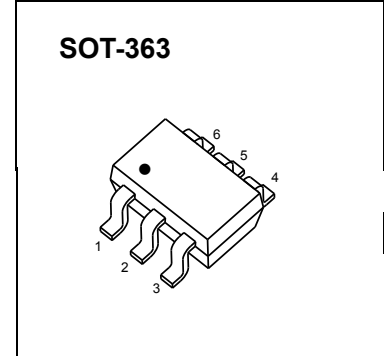
FEATURE

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switch
- Rugged and reliable
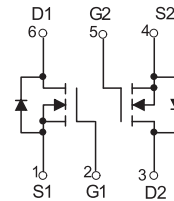- High saturation current capability

APPLICATION

- Load Switch for Portable Devices
- DC/DC Converter

MARKING

.K72

Equivalent Circuit

MAXIMUM RATINGS (T$_a$=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source voltage	60	V
V_{GS}	Gate-Source voltage	±20	V
I_D	Drain Current	115	mA
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

T$_a$=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	V$_{(BR)DSS}$	V$_{GS}$=0 V, I$_D$=250 μA	60			V
Gate-threshold voltage *	V$_{th(GS)}$	V$_{DS}$=V$_{GS}$, I$_D$=250 μA	1	1.6	2.5	
Gate-body leakage	I$_{GSS}$	V$_{DS}$=0 V, V$_{GS}$=±20 V			±80	nA
Zero gate voltage drain current	I$_{DSS}$	V$_{DS}$=60 V, V$_{GS}$=0 V			80	nA
Drain-source on-resistance *	R$_{DS(on)}$	V$_{GS}$=10 V, I$_D$=500mA		1.1	5	Ω
		V$_{GS}$=5 V, I$_D$=50mA		1.2	7	
Forward transconductance *	g$_{fs}$	V$_{DS}$=10 V, I$_D$=200mA	80			ms
Drain-source on-voltage *	V$_{DS(on)}$	V$_{GS}$=10V, I$_D$=500mA			3.75	V
		V$_{GS}$=5V, I$_D$=50mA			0.375	V
Diode forward voltage	V$_{SD}$	I$_S$=115mA, V$_{GS}$=0 V	0.55		1.2	V
Input capacitance **	C$_{iss}$				50	
Output capacitance **	C$_{oss}$	V$_{DS}$=25V, V$_{GS}$=0V, f=1MHz			25	pF
Reverse transfer capacitance **	C$_{rss}$				5	

SWITCHING TIME

Turn-on time **	t$_{d(on)}$	V$_{DD}$=25 V, R$_L$=50Ω			20	ns
Turn-off time **	t$_{d(off)}$	I$_D$=500mA,V$_{GEN}$=10V,$_G$=25 Ω			40	

* Pulse Test: Pulse width ≤300μs,duty cycle≤2%.
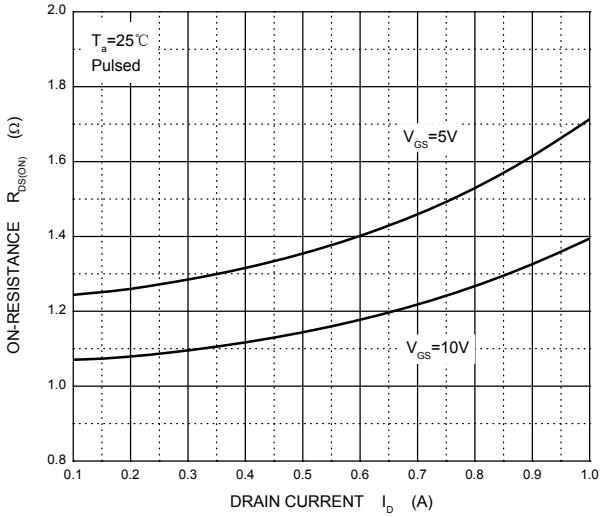
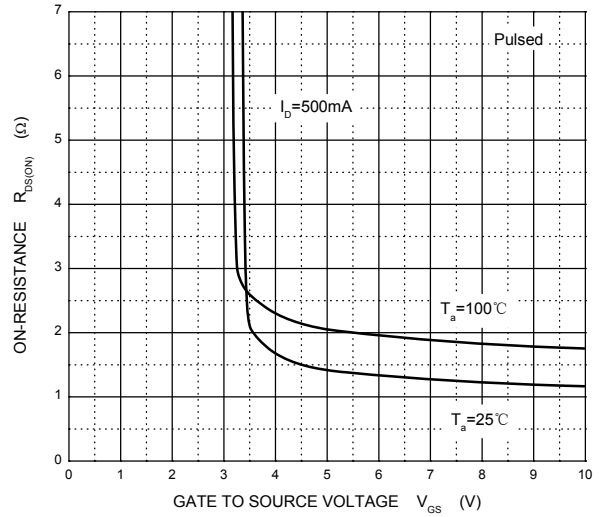** These parameters have no way to verify.

Output Characteristics
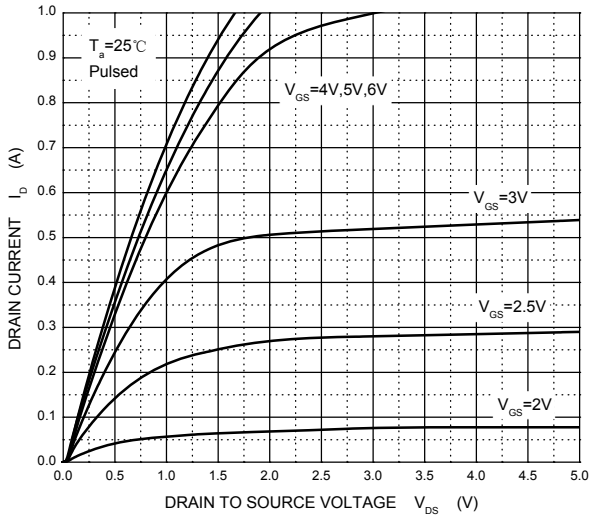
Transfer Characteristics
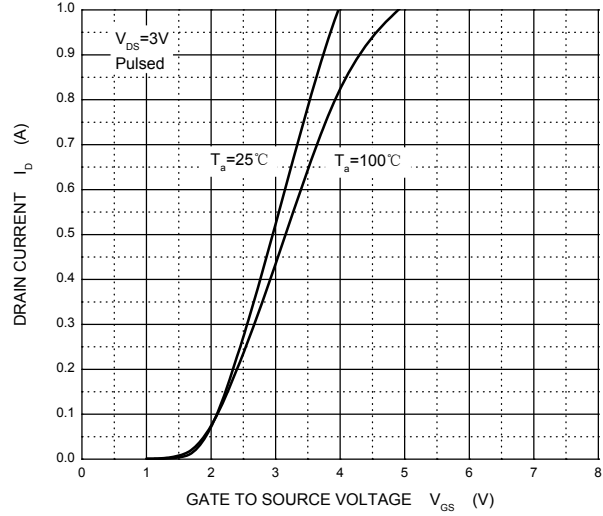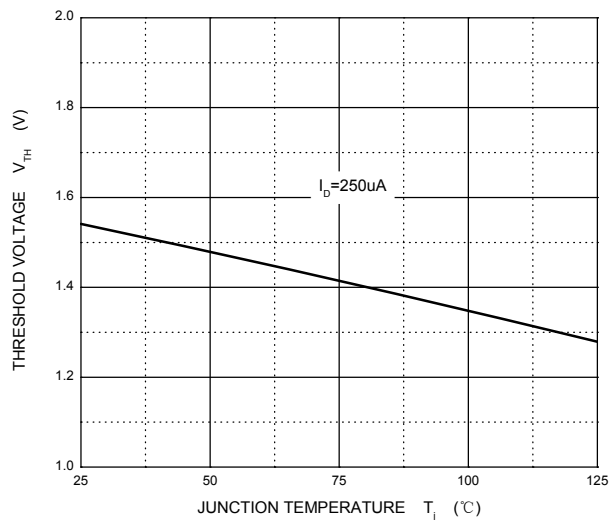

$R_{DS(ON)}$ —— I_D

$R_{DS(ON)}$ —— V_{GS}

I_S —— V_{SD}

Threshold Voltage

REV.08
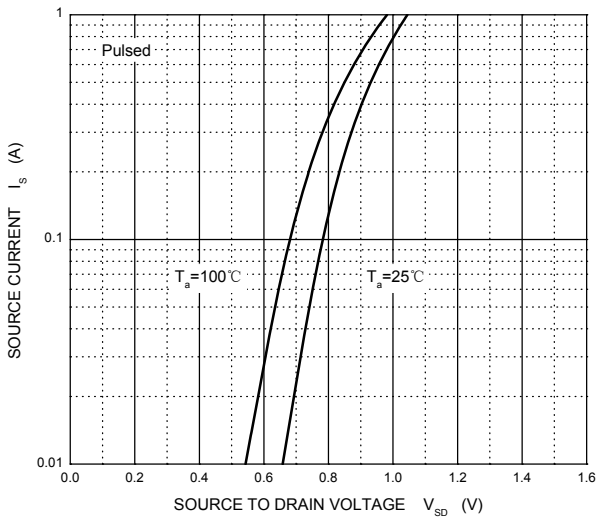
Package outline dimensions   SOT-363
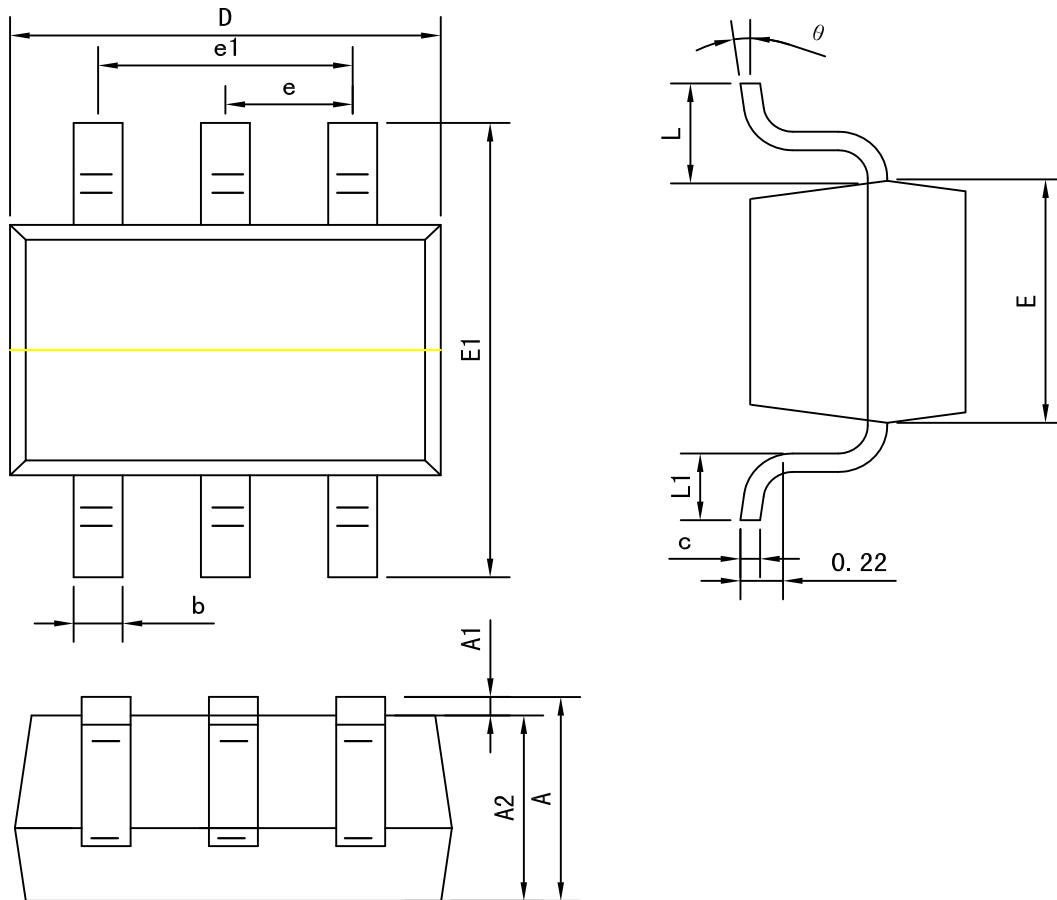
Symbol	Dimension in Millimeters	
	Min	**Max**
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°