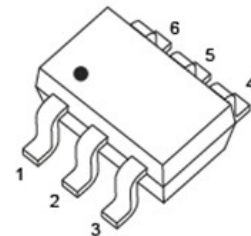


SOT-363 Plastic-Encapsulate MOSFETS

60V N-Channel Enhancement Mode MOSFET

$V_{(BR)DSS}$	$R_{DS(on)Max}$	$I_D MAX$
60V	$2.7\Omega@10V$	0.34A
	$3.0\Omega@4.5V$	

SOT-363



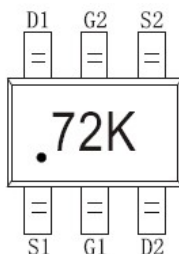
Feature

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected
- Load Switch for Portable Devices.
- DC/DC Converter.

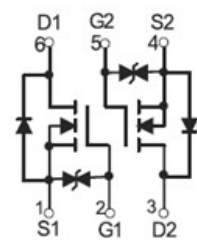
Mechanical Data

- SOT-363 Small Outline Plastic Package.
- Epoxy UL: 94V-0.
- Mounting Position: Any.

Marking



Equivalent circuit



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ 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	0.34	A
Power Dissipation	P_D	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-50 ~ +150	

The above data are for reference only.

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	60	--	--	V
I_{DSS}	Zero Gate Voltage Drain Current($T_A=25^{\circ}\text{C}$)	$V_{DS}=48V, V_{GS}=0V$	--	--	1	μA
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	--	--	± 10	μA
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=1mA$	1.0	1.3	2.5	V
$R_{DS(ON)}$	Drain-Source On-State Resistance ^②	$V_{GS}=10V, I_D=0.5A$	--	0.9	2.7	Ω
$R_{DS(ON)}$	Drain-Source On-State Resistance ^②	$V_{GS}=4.5V, I_D=0.2A$	--	1.1	3	Ω

Dynamic Electrical Characteristics

C_{iss}	Input Capacitance	$V_{DS}=10V, V_{GS}=0V,$ $f=1MHz$	--	--	40	pF
C_{oss}	Output Capacitance		--	--	30	pF
C_{rss}	Reverse Transfer Capacitance		--	--	10	pF
Q_r	Recovered Charge	$V_{DS}=0V, I_D=0.2A,$ $V_R=25V, dI_S/dt=-100A/\mu s$	--	30	--	nC

Switching Characteristics

$t_{d(on)}$	Turn on Delay Time	$V_{DD}=50V, R_L=250\Omega,$ $V_{GS}=10V, R_G=50\Omega$	--	--	10	ns
$t_{d(off)}$	Turn Off Delay Time		--	--	15	ns
t_{rr}	Reverse Recovery Time	$V_{GS}=0V, I_S=300mA,$ $V_R=25V, dI_S/dt=-100A/\mu s$	-	30	--	ns

Source Drain Diode Characteristics

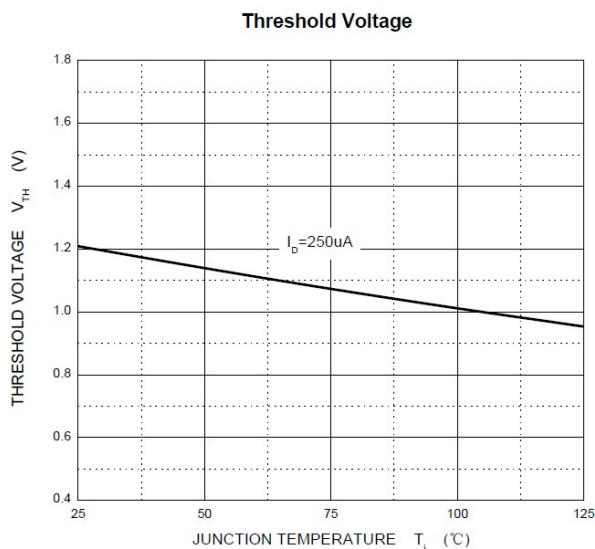
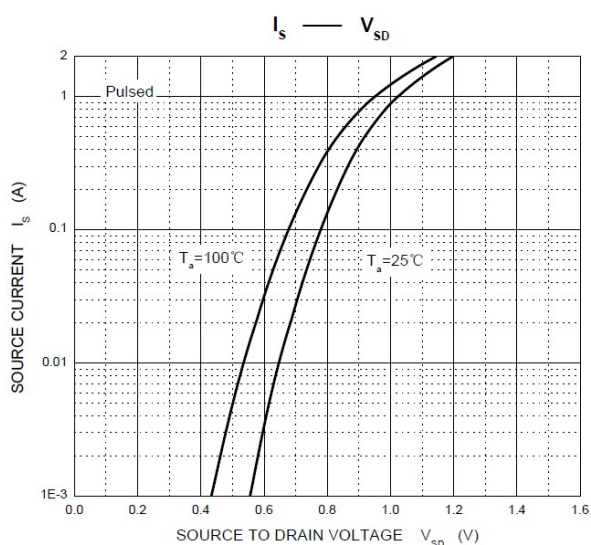
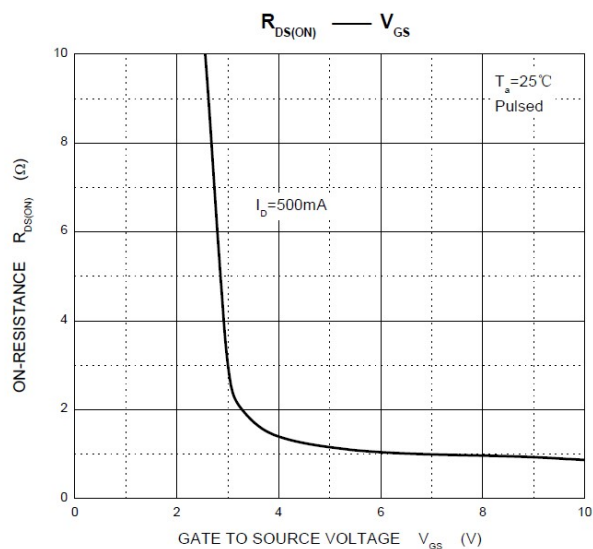
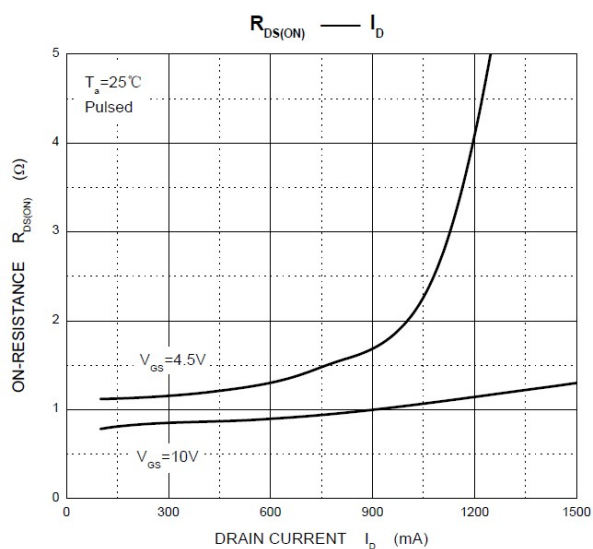
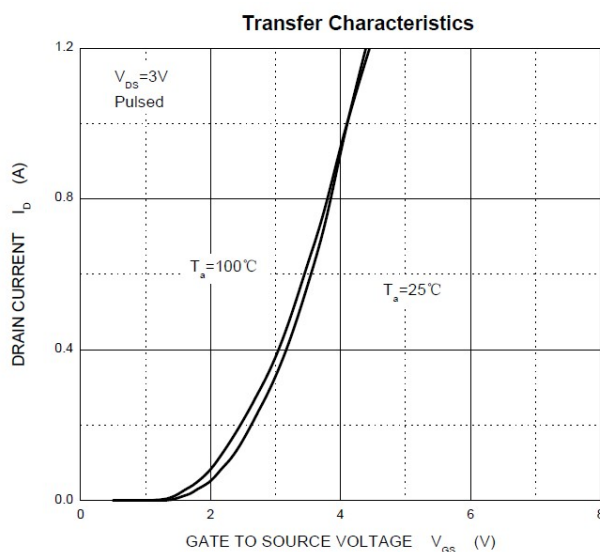
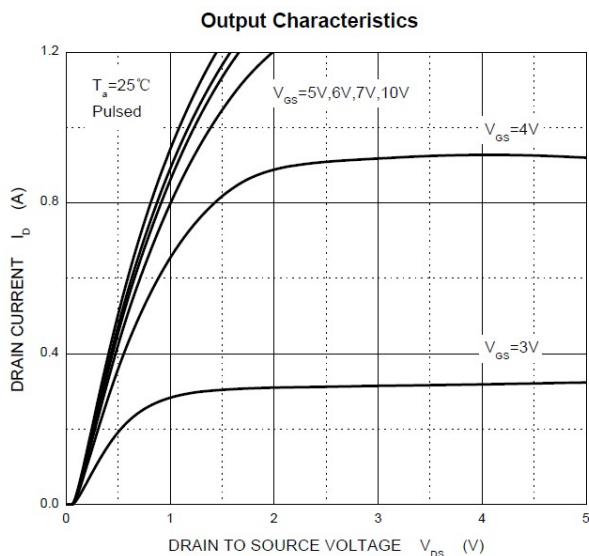
BV_{GSO}	Gate-Source Breakdown Voltage	$I_{GS}=\pm 1mA(\text{Open Drain})$	± 21.5	--	± 32	V
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Notes:

① Pulse width limited by maximum allowable junction temperature

② Pulse test ; Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

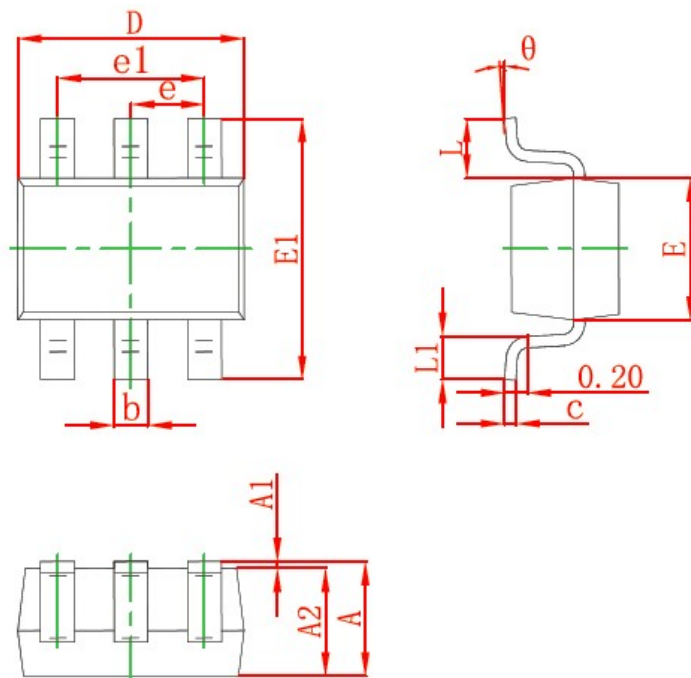
Typical Characteristics



The curve above is for reference only.

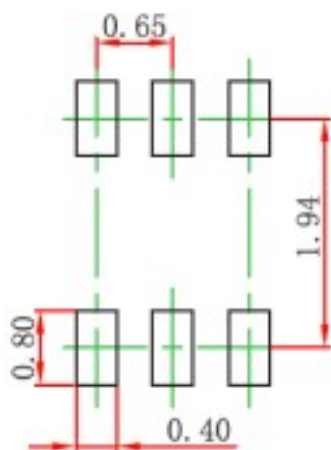
Outlitne Drawing

SOT-363Package Outline Dimensions



Symbol	Dimensions 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	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.