

N-Channel Small Signal MOSFET

60V
SOT363

Features

- Voltage Controlled Small Signal Switch
- High Saturation Current Capability
- ESD Protected 2KV HBM
- High Density Cell Design for Low $R_{DS(ON)}$
- Load Switch for Portable Devices

Mechanical Data

- Case: SOT363 Package
- Case Material: "Green" Molding Compound
UL Flammability Classification Rating 94V-0
- Halogen Free

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

Ordering Information

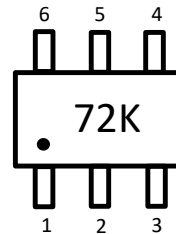
- Package :SOT363
- Reel Size :7 (inches)
- Quantity Per Reel :3,000 pcs
- Quantity One Box :45,000 pcs
- Quantity One Carton :180,000 pcs

Package Outline



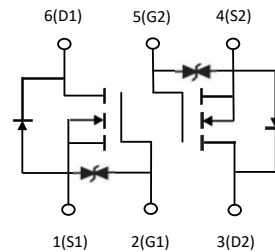
SOT363 Top View

Marking Information



"72K" = Product Type Marking Code

Device Schematic & PIN Configuration



Pin Assignment		
1	S1	Source 1
2	G1	Gate 1
3	D2	Drain 2
4	S2	Source 2
5	G2	Gate 2
6	D1	Drain 1

Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	340	mA
Collector Power Dissipation	P_D	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Characteristics(@TA = +25°C, unless otherwise specified.)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	V_{DS}	60	-	-	V
Gate-Threshold Voltage (Note1.)	$V_{DS}=V_{GS}, I_D=250\mu A$	$V_{th(GS)}$	1	1.3	2.5	V
Gate-Body Leakage	$V_{DS}=0V, V_{GS}=\pm 20V$	I_{GSS1}	-	-	± 10	μA
Zero Gate Voltage Drain Current	$V_{DS}=60V, V_{GS}=0V$	I_{DSS}	-	-	1	μA
Drain-Source On-Resistance (Note1.)	$V_{GS}=10V, I_D=500mA$	$R_{DS(ON)}$	-	0.9	5	Ω
	$V_{GS}=4.5V, I_D=200mA$		-	1.1	5.3	
Diode Forward Voltage	$I_S=300mA, V_{GS}=0V$	V_{SD}	-	-	1.5	V

Dynamic Parameter

Parameter (Note2.)	Test Conditions	Symbol	Min	Typ	Max	Unit
Input Capacitance (Note2.)	$V_{DS}=10V, V_{GS}=0V, F=1MHz$	C_{iss}	-	-	40	pF
Output Capacitance (Note2.)		C_{oss}	-	-	30	pF
Reverse Transfer Capacitance (Note2.)		C_{rss}	-	-	10	pF

Switching Parameter

Parameter (Note2.)	Test Conditions	Symbol	Min	Typ	Max	Unit
Turn-on Time (Note2.)	$V_{DD}=50V, R_L=250\Omega, V_{GS}=10V, R_{GS}=50\Omega, R_G=50\Omega$	$t_{d(on)}$	-	-	10	ns
Turn-off Time (Note2.)		$t_{d(off)}$	-	-	15	ns
Reverse Recovery Time	$V_{GS}=0V, I_S=300mA, V_R=25V, D_{is}/dt=-100a/\mu s$	t_{rr}	-	30	-	ns

Notes: 1. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

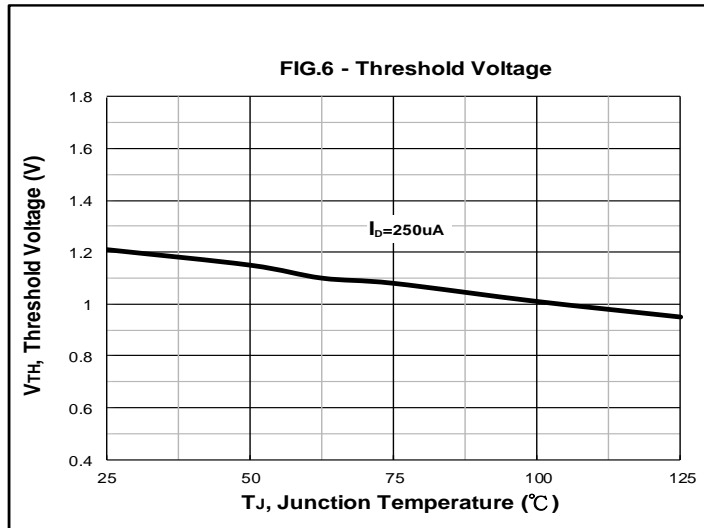
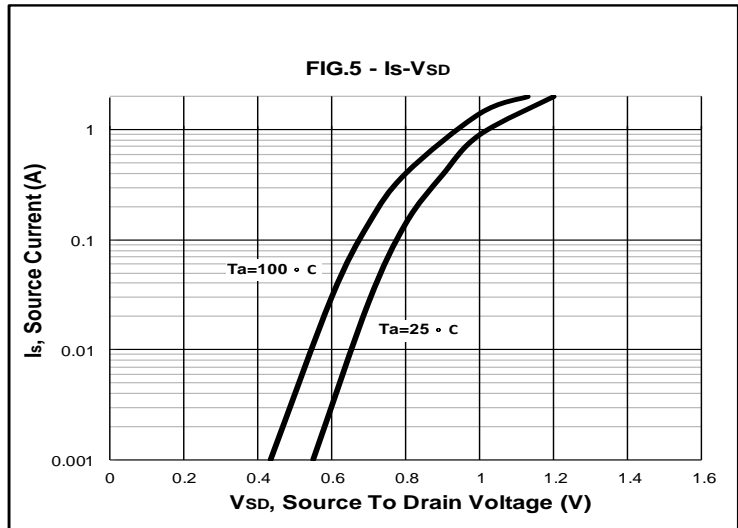
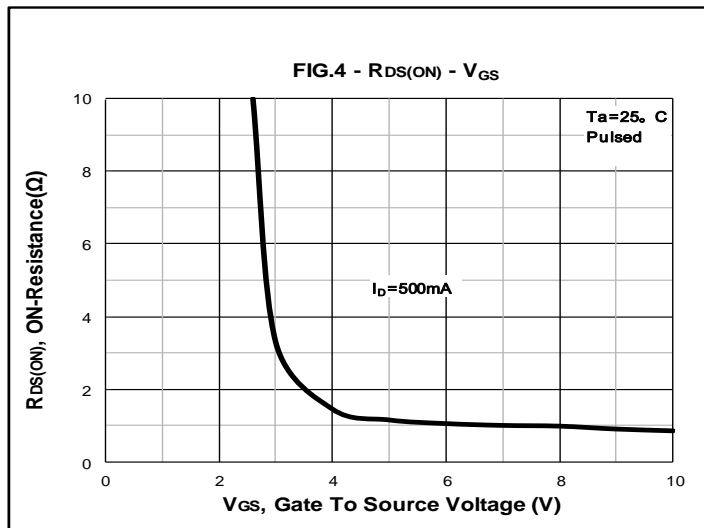
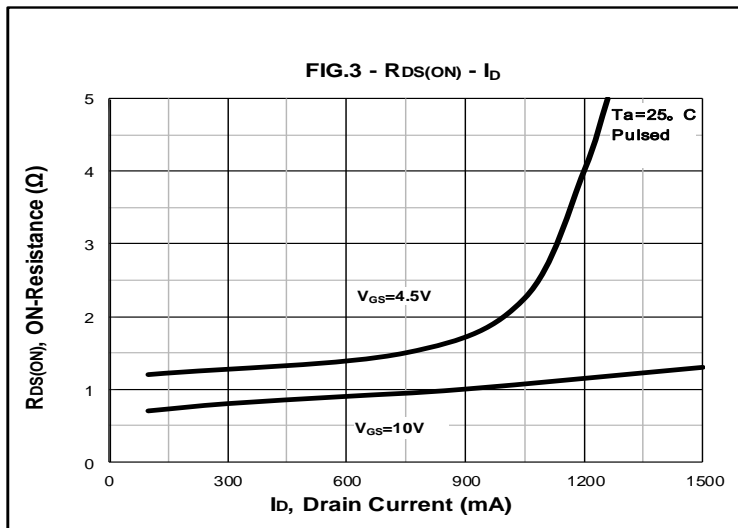
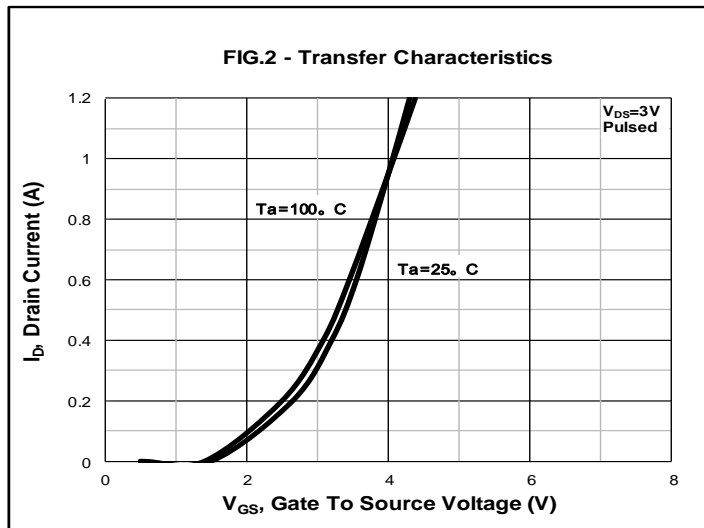
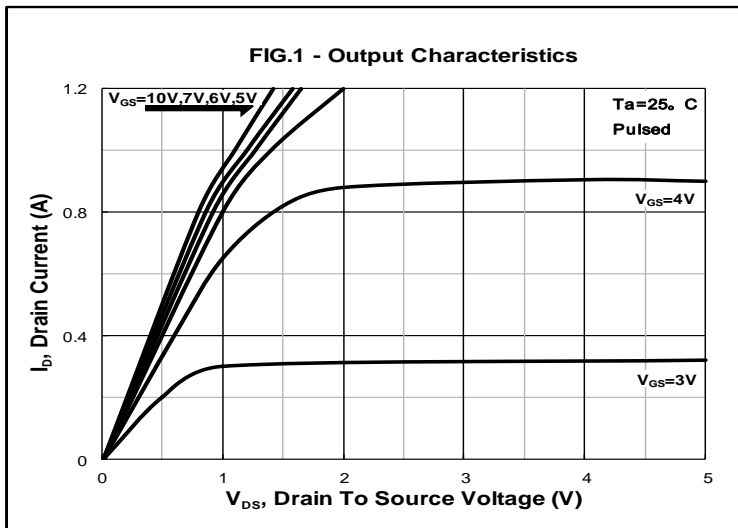
2. These parameters have on way to verify.

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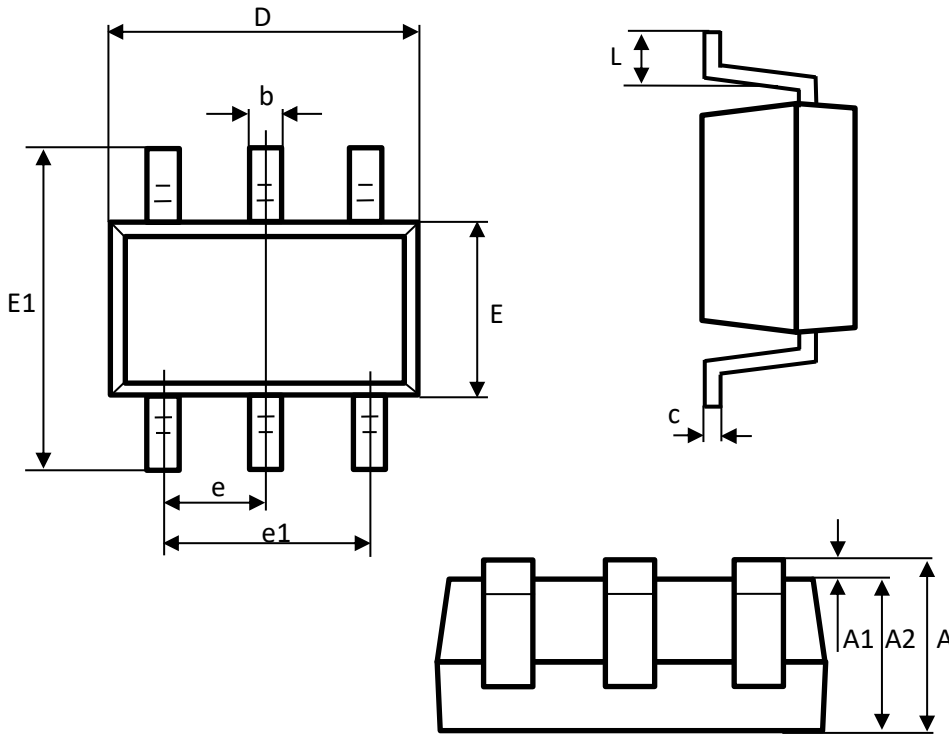


Rating and Characteristic Curves



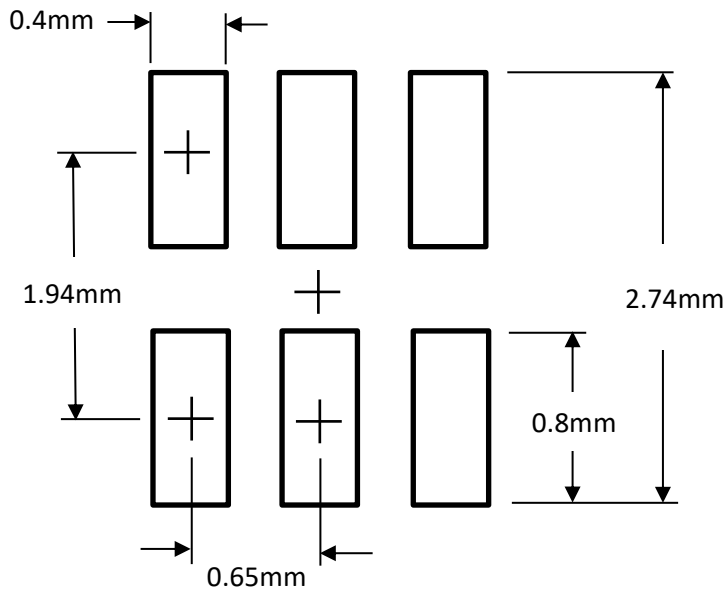


Package Outline Dimensions



SOT363 Package		
Dim	Min	Max
A	0.90	1.10
A1	0.00	0.10
A2	0.90	1.00
b	0.15	0.35
c	0.08	0.15
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.45
e	0.65 typ	
e1	1.20	1.40
L	0.52 typ	
All Dimensions in mm		

Suggested Soldering Pad Layout



Note:

- 1.The pad layout is for reference purposes only.
- 2.General tolerance $\pm 0.05\text{mm}$



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