Descriptions

Double N-CHANNEL MOSFET in a SOT-363 Plastic Package.

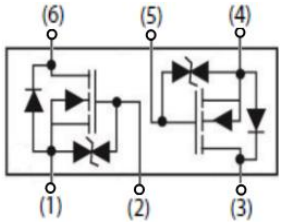
Features

Sensitive gate trigger current and Low Holding current.ESD protected diode,Halogen free product.

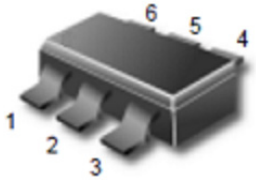
Applications

Intended for use in general purpose switching and phase control applications.

Equivalent Circuit



Pinning



PIN1、4：S　　PIN 2、5：G　　PIN 3、6：D

Marking

See Marking Instructions.

Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	60	V
Drain-Gate Voltage	V_{DGR}	60	V
Maximum Drain Current - Continuous	I_D	250	mA
Maximum Drain Current - Pulsed	I_{DM}	800	mA
Gate-Source Voltage - Continuous	V_{GSS}	±20	V
Maximum Power Dissipation	P_D	350	mW
Storage Temperature Range	T_{stg}	-55～150	℃
Maximum Junction-to-Ambient(Note 1)	$R_{\theta JA}$(Steady State)	417	℃/W
	$R_{\theta JA}$(t≤5s)	300	

Note 1)Surface－mounted on FR4 board using 1 sq in pad size with 1 oz Cu

Electrical Characte ristics(Ta=25℃)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	V_{DSS}	V_{GS}=0 I_D=250μA	60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS}=0 V_{DS}=60V			1.0	μA
Gate-Source Leakage	I_{GSS}	V_{DS}=0V V_{GS}=±20V			±10	μA
Static Drain-Source On-Resistance	$R_{DS(on)(1)}$	V_{GS}=10V I_D=0.5A			2.3	Ω
	$R_{DS(on)(2)}$	V_{GS}=5V I_D=0.05A		1.7	2.7	Ω
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=250mA			1.5	V
Drain-Source Diode Forward Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250uA	1.0	1.6	2.5	V
Forward Transconductance	Y_{fs}	V_{DS}=10V I_D=0.2A	80			mS
Input Capacitance	Ciss	V_{GS}=0V, f=1MHz, V_{DS}=20V		25	50	pF
Output Capacitance	Coss			11	25	
Reverse Transfer Capacitance	Crss			2.5	5	
Total Gate Charge	$Q_{G(TOT)}$	V_{GS}=4.5V, V_{DS}=10V; ID=200 mA		0.7		nC
Threshold Gate Charge	$Q_{G(TH)}$			0.1		
Gate－to－Source Charge	Q_{GS}			0.3		
Gate－to－Drain Charge	Q_{GD}			0.1		

Electrical Characteristic Curve

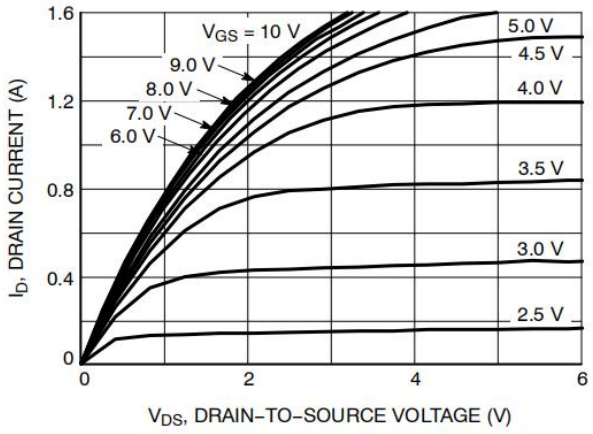


Figure 1. On–Region Characteristics

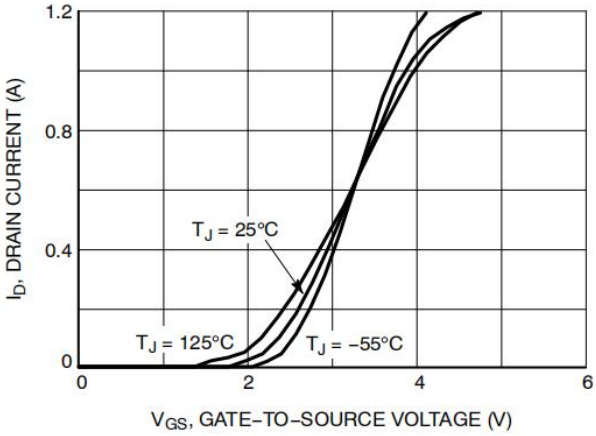


Figure 2. Transfer Characteristics

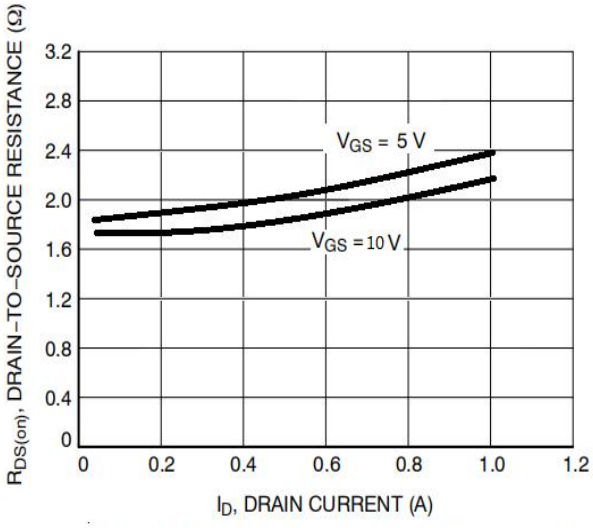


Figure 3. On–Resistance vs. Drain Current and Temperature

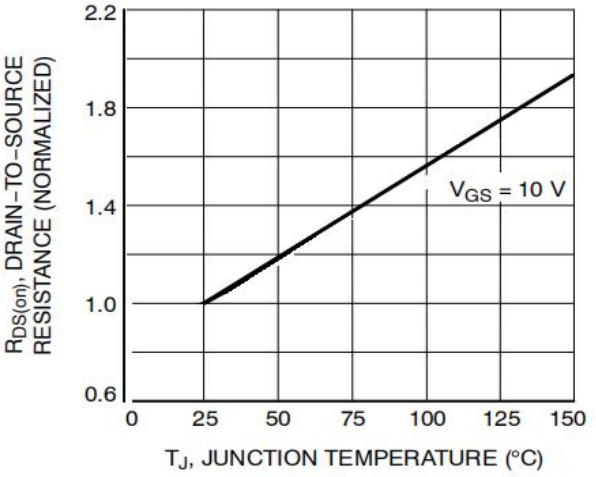


Figure 4 On–Resistance Variation with Temperature Temperature

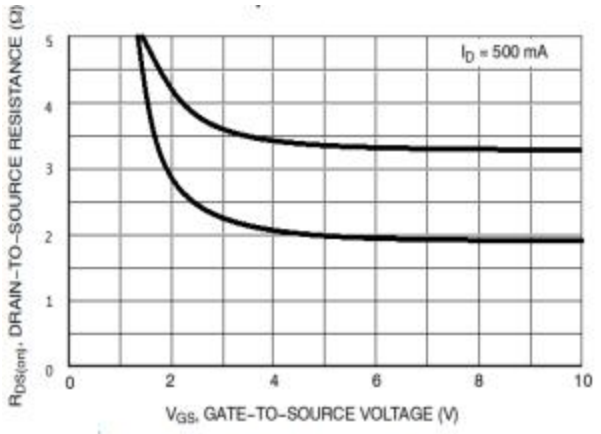


Figure 5. On–Resistance vs. Gate–to–Source Voltage

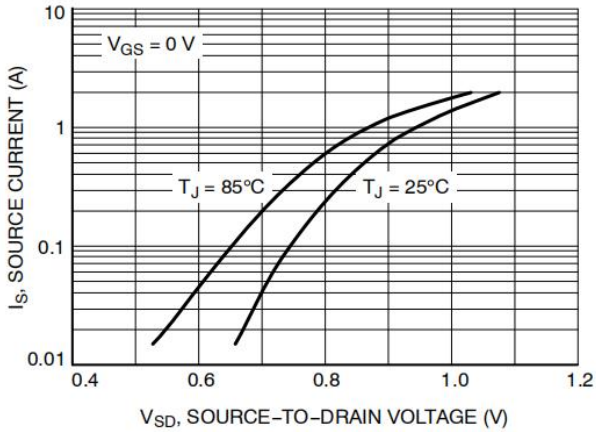


Figure 6 Diode Forward Voltage vs. Current

Electrical Characteristic Curve

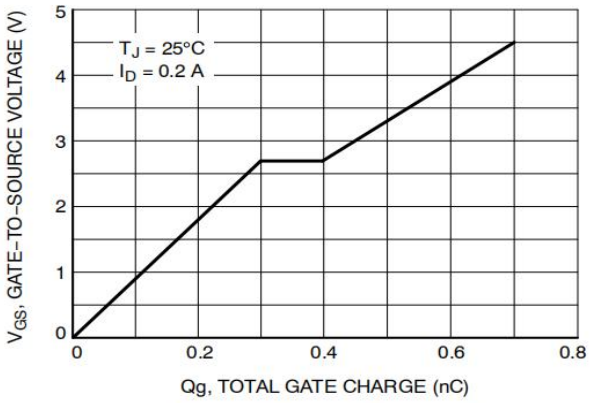


Figure 7. Gate-to-Source and Drain-to-Source Voltage vs. Total Charge

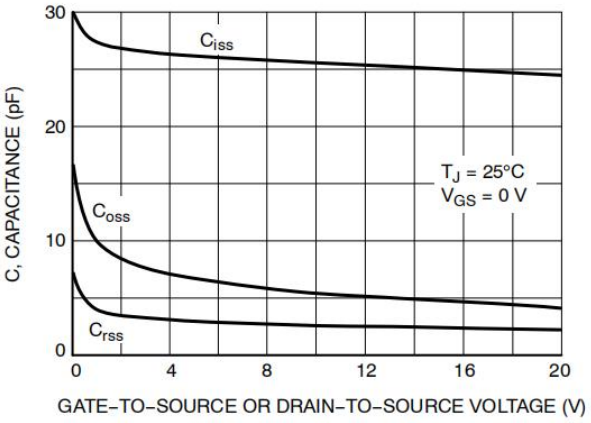


Figure 8. Capacitance Variation

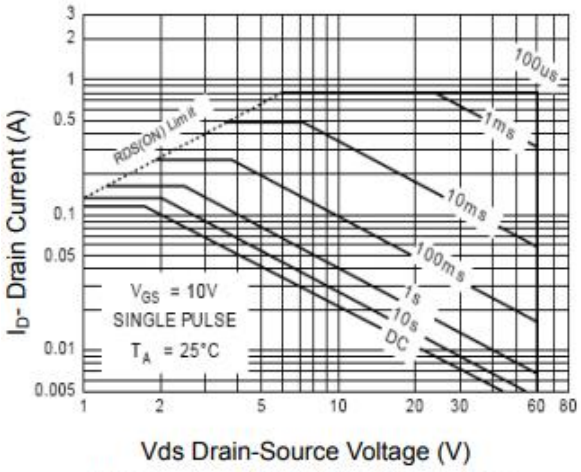


Figure 9 : Safe Operation Area

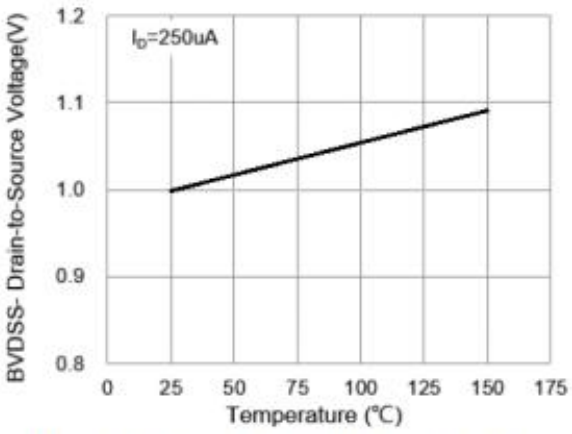


Figure 10 : Breakdown Voltage vs. Temperture

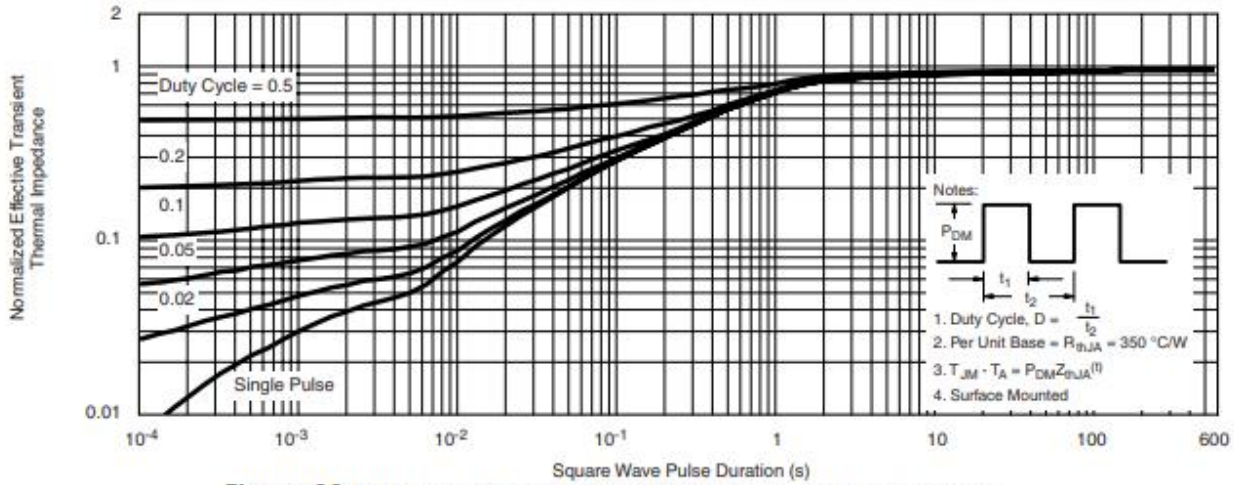
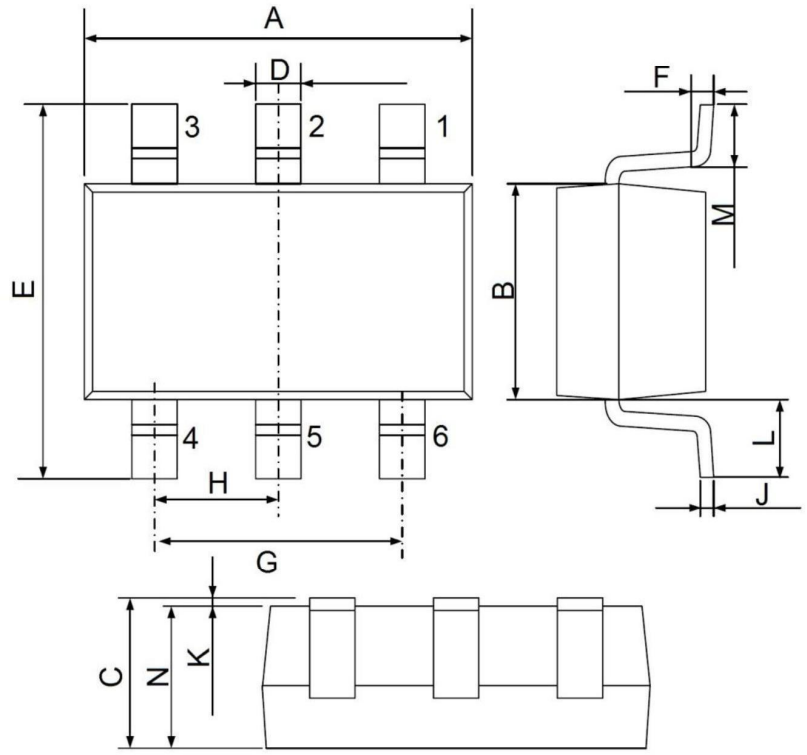


Figure 11 : Normalized Thermal Transient Impedance, Junction-to-Ambient

Package Dimensions

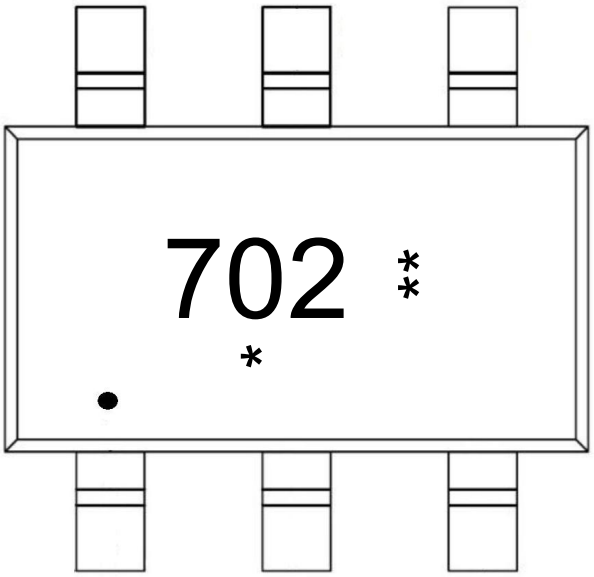
SOT-363-6L



UNIT: mm

DIM	MIN	MAX
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	2.15	2.45
F	0.20 Typ.	
G	1.20	1.40
H	0.65 Typ.	
J	0.08	0.15
K	0.00	0.10
L	0.525 Ref.	
M	0.26	0.46
N	0.90	1.00

Marking Instructions



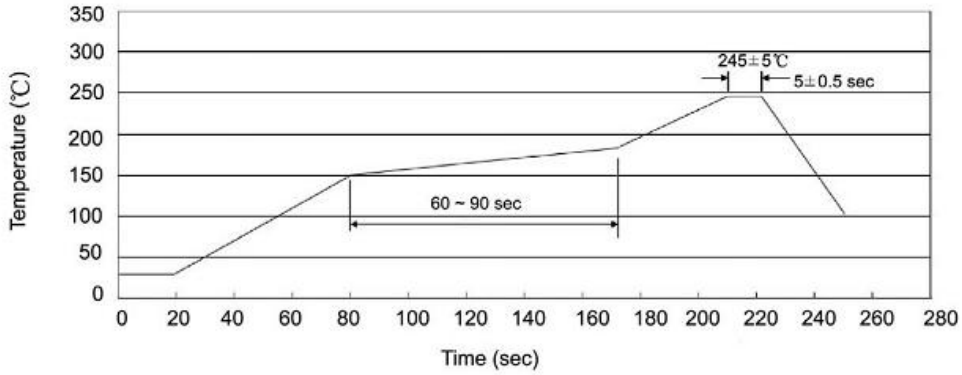
Note:

● : "1" Pin

702 : Product Type Code

***: Lot No. Code, code change with Lot No.

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1.Preheating:150~180℃, Time:60~90sec.

2.Peak Temp.:245±5℃, Duration:5±0.5sec.

3. Cooling Speed: 2~10℃/sec.

Resistance to Soldering Heat Test Conditions

Temp.:260±5℃ Time:10±1 sec

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