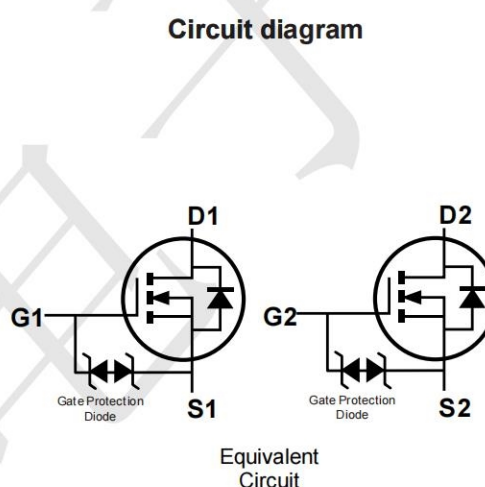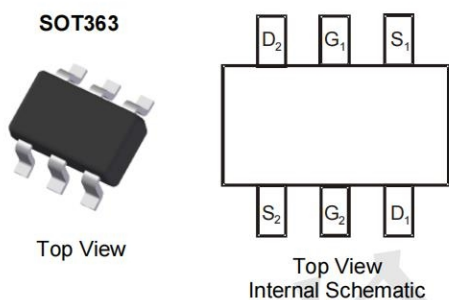## Features

- Fast switching
- Green Device Available
- Suit for 1.5V Gate Drive Applications

Application

- Notebook
- Load Switch
- Networking
- Hand-held Instruments

Package and Pin Configuration

SOT363

Top View

D2 G1 S1

S2 G2 D1

Top View
Internal Schematic

Circuit diagram

Equivalent
Circuit

Marking: ZT t

Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current (T_J=150℃)	T_A=25℃	I_D	0.3	A
	T_A=100℃		0.19	
Drain Current-Pulsed [Note 1]		I_{DM}	0.8	A
Maximum Power Dissipation		P_D	0.35	W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 To 150	℃

Thermal Characteristic

Parameter	Symbol	Limit	Unit
Thermal Resistance,Junction-to-Ambient [Note 2]	$R_{\theta JA}$	350	℃/W

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250µA	60		-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V,V_{GS}=0V	-	-	1	µA
Gate-Body Leakage Current	I_{GSS}	V_{GS}=±10V,V_{DS}=0V	-	-	±1	uA
		V_{GS}=±20V,V_{DS}=0V	-		±10	uA
On Characteristics [Note 3]						
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250µA	1	1.6	2.5	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS}=4.5V, I_D=0.2A	-	1.9	2.5	Ω
		V_{GS}=10V, I_D=0.3A	-	1.8	2.2	Ω
Forward Transconductance	g_{FS}	V_{DS}=10V,I_D=0.2A	0.1	-	-	S
Dynamic Characteristics [Note4]						
Input Capacitance	C_{Iss}	V_{DS}=30V,V_{GS}=0V, F=1.0MHz		27		PF
Output Capacitance	C_{oss}			18		PF
Reverse Transfer Capacitance	C_{rss}			2		PF
Switching Characteristics [Note 4]						
Turn-on Delay Time	$t_{d(on)}$	V_{DD}=30V,I_D=0.2A V_{GS}=10V,R_{GEN}=10Ω	-	10	-	nS
Turn-on Rise Time	t_r		-	50	-	nS
Turn-Off Delay Time	$t_{d(off)}$		-	17	-	nS
Turn-Off Fall Time	t_f		-	10	-	nS
Total Gate Charge	Q_g	V_{DS}=10V,I_D=0.3A, V_{GS}=4.5V	-	1.7	3	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage [Note 3]	V_{SD}	V_{GS}=0V,I_S=0.2A	-	-	1.2	V
Diode Forward Current [Note 2]	I_S		-	-	0.3	A

Outline Drawing - SOT-363(2.0X2.1)
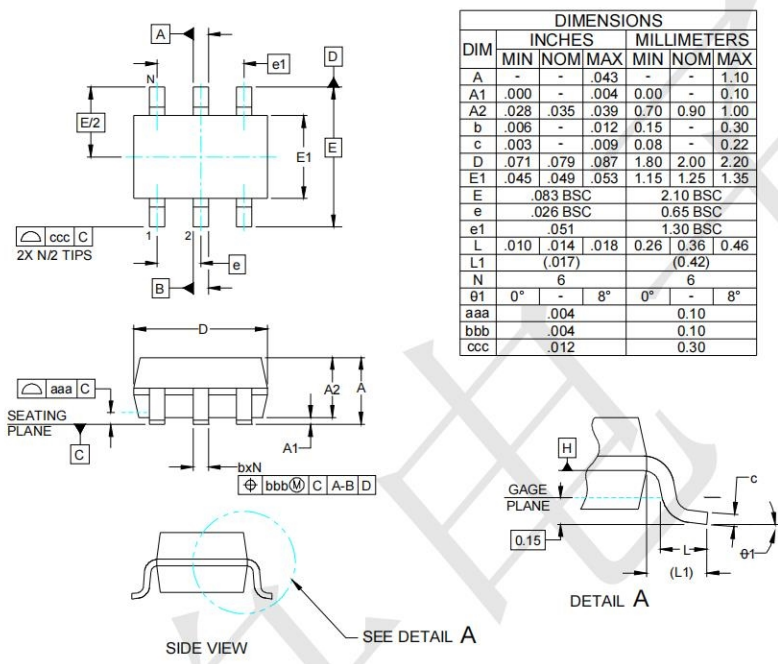
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	-	-	.043	-	-	1.10
A1	.000	-	.004	0.00	-	0.10
A2	.028	.035	.039	0.70	0.90	1.00
b	.006	-	.012	0.15	-	0.30
c	.003	-	.009	0.08	-	0.22
D	.071	.079	.087	1.80	2.00	2.20
E1	.045	.049	.053	1.15	1.25	1.35
E	.083 BSC			2.10 BSC		
e	.026 BSC			0.65 BSC		
e1	.051			1.30 BSC		
L	.010	.014	.018	0.26	0.36	0.46
L1	(.017)			(0.42)		
N	6			6		
θ1	0°	-	8°	0°	-	8°
aaa	.004			0.10		
bbb	.004			0.10		
ccc	.012			0.30		

2X N/2 TIPS

SEATING PLANE

SIDE VIEW

SEE DETAIL A

GAGE PLANE

DETAIL A

Land Pattern - SOT-363
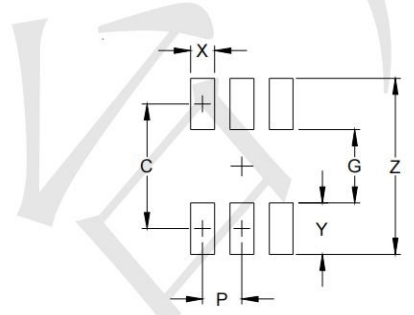
DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.073)	(1.85)
G	.039	1.00
P	.026	0.65
X	.016	0.40
Y	.033	0.85
Z	.106	2.70

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