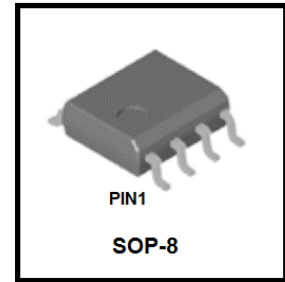


LN4342T1G

N-Channel 30-V (D-S) MOSFET

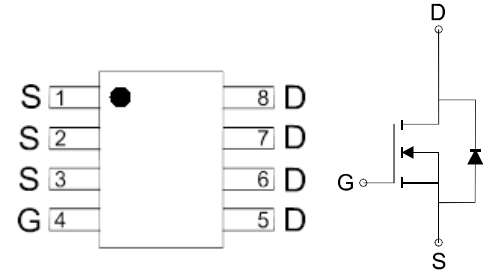
1. FEATURES

- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.



2. APPLICATION

- Power Routing
- DC/DC Conversion
- Motor Drives



3. ORDERING INFORMATION

Device	Marking	Shipping
LN4342T1G	LN4342	4000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C unless otherwise stated)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDSS	30	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current	TA =25°C	ID	23	A
	TA =70°C		17	
	TC =25°C		40	
	TC =70°C		32	
Pulsed Drain Current (Note 2)		IDM	160	
Continuous Source Current (Diode Conduction)(Note 3)		IS	40	A
Power Dissipation	TA =25°C	PD	3.1	W
	TA =70°C		2.2	
Operating Junction Temperature		TJ	-55 ~+150	°C
Storage Temperature Range		Tstg	-55 ~+150	

- 1.Surface Mounted on 1" x 1" FR4 Board.
- 2.Pulse width limited by maximum junction temperature.
- 3.Package limited

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	t ≤10s	RθJA	40	°C/W
	Steady State		80	

6. ELECTRICAL CHARACTERISTICS

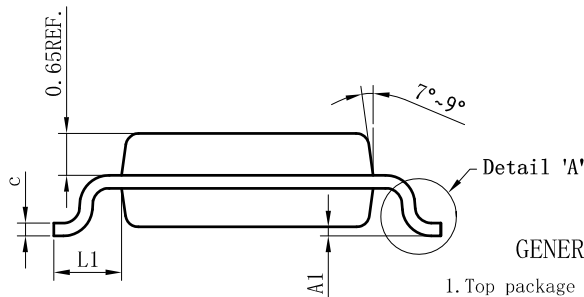
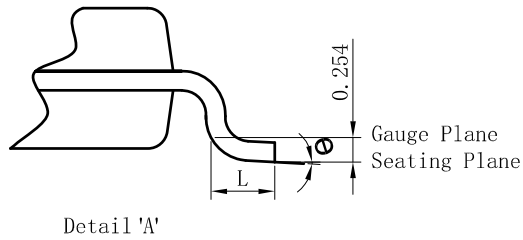
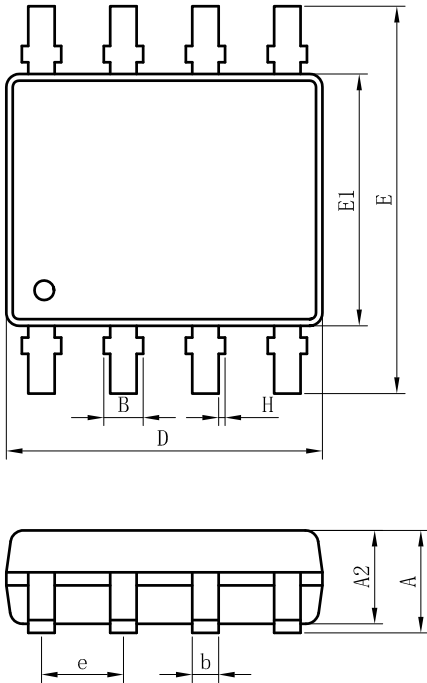
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0V, ID = 250μA)	V(BR)DSS	30	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 μA)	VGS(th)	1	-	-	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±10	μA
Zero Gate Voltage Drain Current (VDS = 24 V, VGS = 0 V) (VDS = 24 V, VGS = 0 V, TJ = 55°C)	IDSS	-	-	1 5	μA
On-State Drain Current(Note 4) (VDS = 5 V, VGS = 10 V)	ID(on)	30	-	-	A
Drain-Source On-Resistance(Note 4) (VGS = 10 V, ID = 20 A) (VGS = 4.5 V, ID = 16 A)	RDS(on)	-	-	4.8 6.8	mΩ
Forward Transconductance(Note 4) (VDS = 15 V, ID = 20 A)	gfs	-	25	-	S
Diode Forward Voltage(Note 4) (IS = 2.5 A, VGS = 0 V)	VSD	-	-	1.1	V
Dynamic					
Total Gate Charge	(VDS = 15 V, VGS = 4.5 V, ID = 20A)	Qg	-	32	nC
Gate-Source Charge		Qgs	-	13	
Gate-Drain Charge		Qgd	-	13	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1MHz)	Ciss	-	5022	pF
Output Capacitance		Coss	-	424	
Reverse Transfer Capacitance		Crss	-	358	
Turn-On Delay Time	(VDS=15 V, RL=0.8 Ω, ID=20 A, VGEN=10 V, RGEN=6 Ω)	td(on)	-	13	ns
Rise Time		tr	-	15	
Turn-Off Delay Time		td(off)	-	75	
Fall Time		tf	-	25	

4. Pulse test: $PW \leq 300\mu s$ duty cycle $\leq 2\%$.

5. Guaranteed by design, not subject to production testing.

OUTLINE AND DIMENSIONS

SOP8

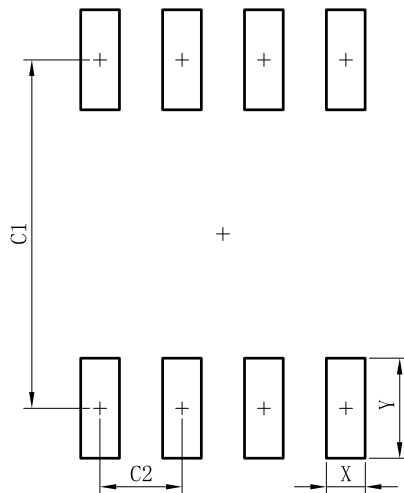


SOP8			
DIM	MIN	NOR	MAX
A	-	-	1.75
A1	0.10	0.15	0.20
A2	1.35	1.45	1.55
b	0.33	0.42	0.51
c	0.15	0.22	0.29
D	4.77	4.90	5.03
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.46	0.66	0.86
L1	0.85	1.05	1.25
θ	0°	5°	8°
B	-	-	0.55
H	0	0.05	0.10
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um
4. Package Body Sizes Exclude Mold Flash, Protrusion Or Gate Burrs. Mold Flash, Protrusion Or Gate Burrs Shall Not Exceed 0.10 mm Per Side.
5. Dimension "b" Does Not Include Dambar Protrusion.

SOLDERING FOOTPRINT



SOP8	
DIM	(mm)
X	0.60
Y	1.55
C1	5.40
C2	1.27