MicroPower , Ultra-Sensitive CMOS Hall IC

■ General Description

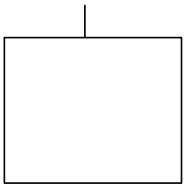
LN4918 is with proprietary Hall effect plate and single CMOS output driver, mainly designed for battery powered, hand-held equipment (such as Cellular and Cordless Phone, PDA).

When north-pole of sufficient strength on chip or south-pole of sufficient strength under chip, the LN4918 will turn on the OUT output. When south-pole of sufficient strength on chip or north-pole of sufficient strength under chip, the LN4918 will turn on the OUT output.

LN4918 series have above two kinds Hall effect output, please select appropriate model for different application.

While the magnetic flux density (B) is larger than operate point BOP, the OUT will be turned on (low), the output is held until B is lower than release point BRP, then turned off (high).

■ Typical Application Circuit



■ Features

2.5V to 4.5V battery operation
Operation with North or South Pole
Chopper stabilized
Superior temperature stability
Extremely Low Switch-Point Drift
Insensitive to Physical Stress
Good RF noise immunity
ESD HBM bigger than 4kV
Lead Free Finish/RoHS Compliant

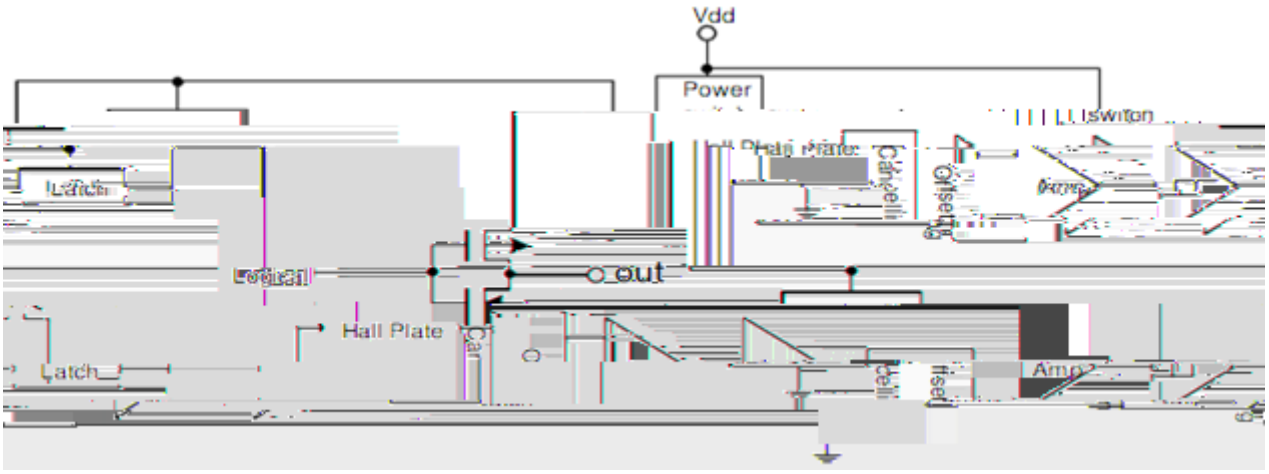
■ Application

Mobile phones and Portable electronic devices
Notebook

■ Package

SOT-23-3L
DFN1216-4L
DF2020-3L

■ Function Block Diagram



■ Absolute Maximum Ratings

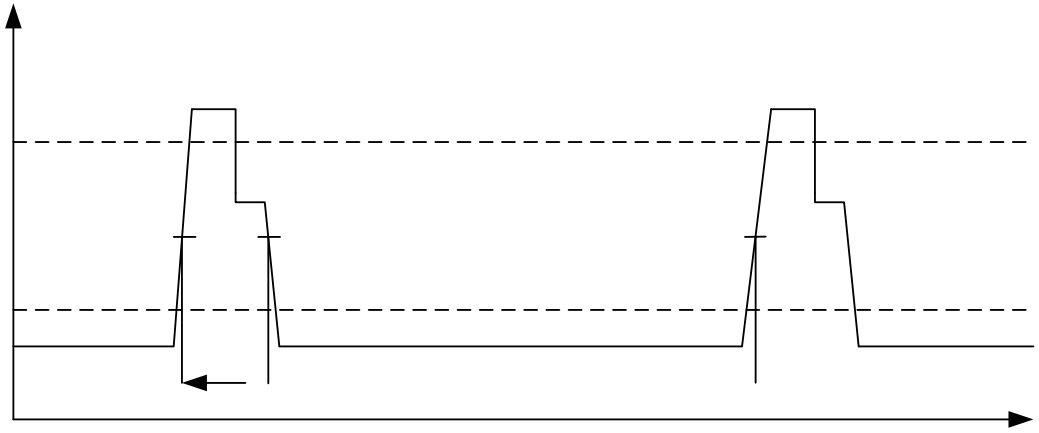
Symbol	Characteristics	Values	Unit
Vdd	Supply voltage	1.65~5	V
I_{DD}	Operating current	-1-4.5	mA
V_{OUT}	Output		

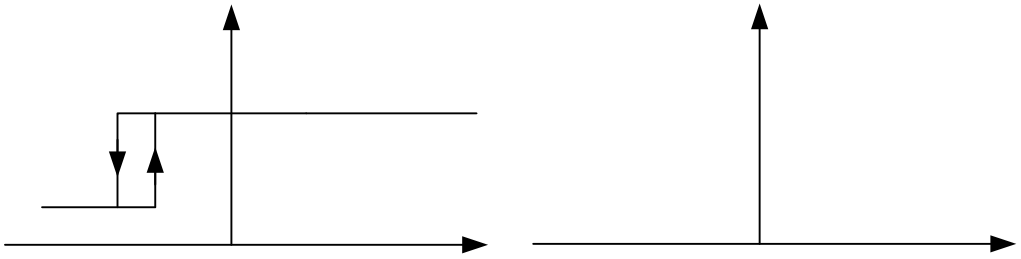
t_{stu}	Start-up time of IC			7	13	us

■ Mangentic Characteristics

(T_A=+25 ,V_{DD}=3.0V, Unless otherwise specified)

Symbol	Min	Typ	Max	Unit
BOPS	4	6	9	mT
BRPS	2	4.5	7.5	mT
BOPN	-9	-6	-4	mT
BRPN	-7.5	-4.5	-2	mT





Nout function

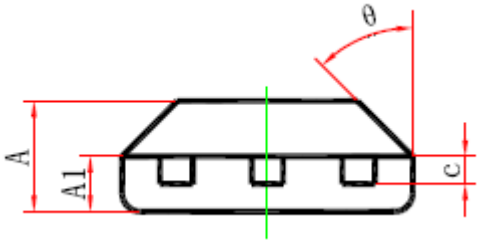
■ Package

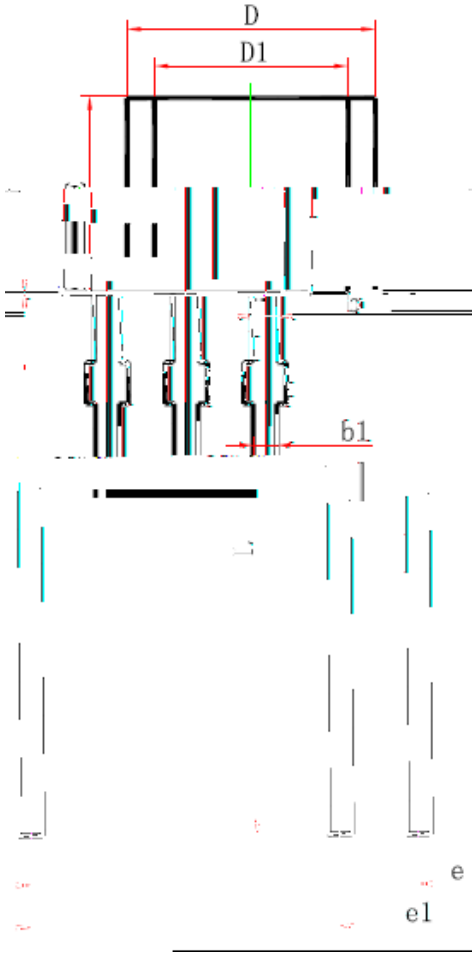
SOT-23-3L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

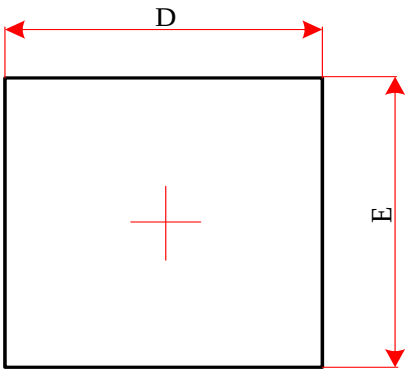
TO-92S



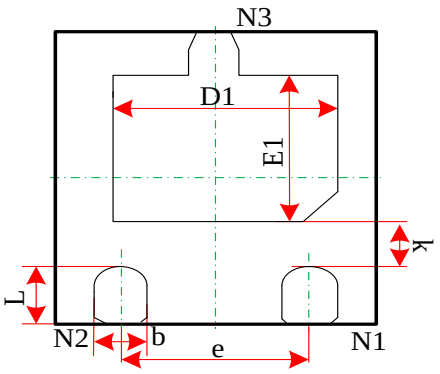


Dimensions In Millimeters			Dimensions In Inches		
Sym					

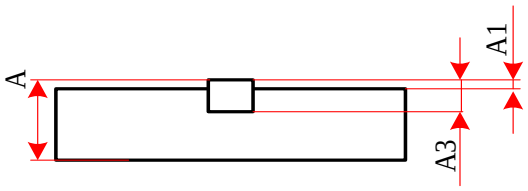
DFN2020-3L



Top View



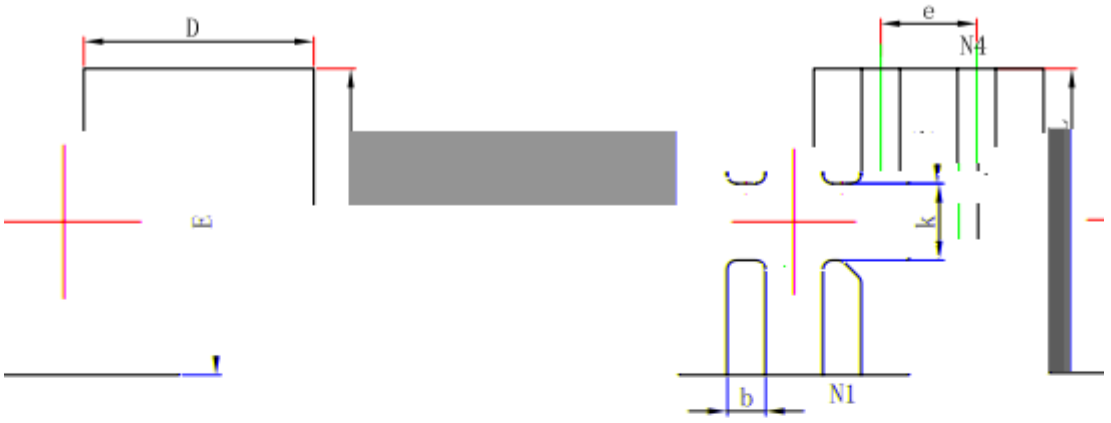
Bottom View



Side View

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.500	0.600	0.020	0.024

DFN1216-4L



OP VIEW BOTTOM VIEW T(



DE VIEW SI

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.500	0.600	0.020	0.024
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.150	1.250	0.045	0.049
E	1.550	1.650	0.061	0.065
b	0.150	0.250	0.006	0.010
e	0.500TYP.		0.020TYP.	
L	0.350	0.450	0.014	0.018
k	0.300MIN.		0.012MIN.	