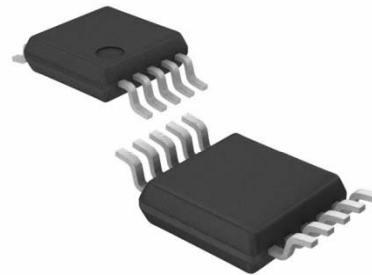
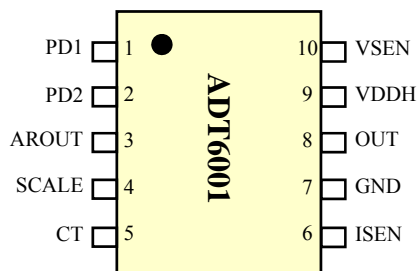


PIN DESCRIPTION

Pin No.	Pin Name	Description
1	PD1	Peak detector for sense input
2	PD2	Peak detector for auto range output
3	AROUT	Auto range signal output
4	SCALE	Auto range signal scale voltage input
5	CT	Sets the Toff length and the nominal switching frequency
6	ISEN	Current sense voltage input
7	GND	Ground
8	OUT	Gate driver output for external MOSFET
9	VDDH	Chip supply voltage
10	VSEN	Voltage sense input

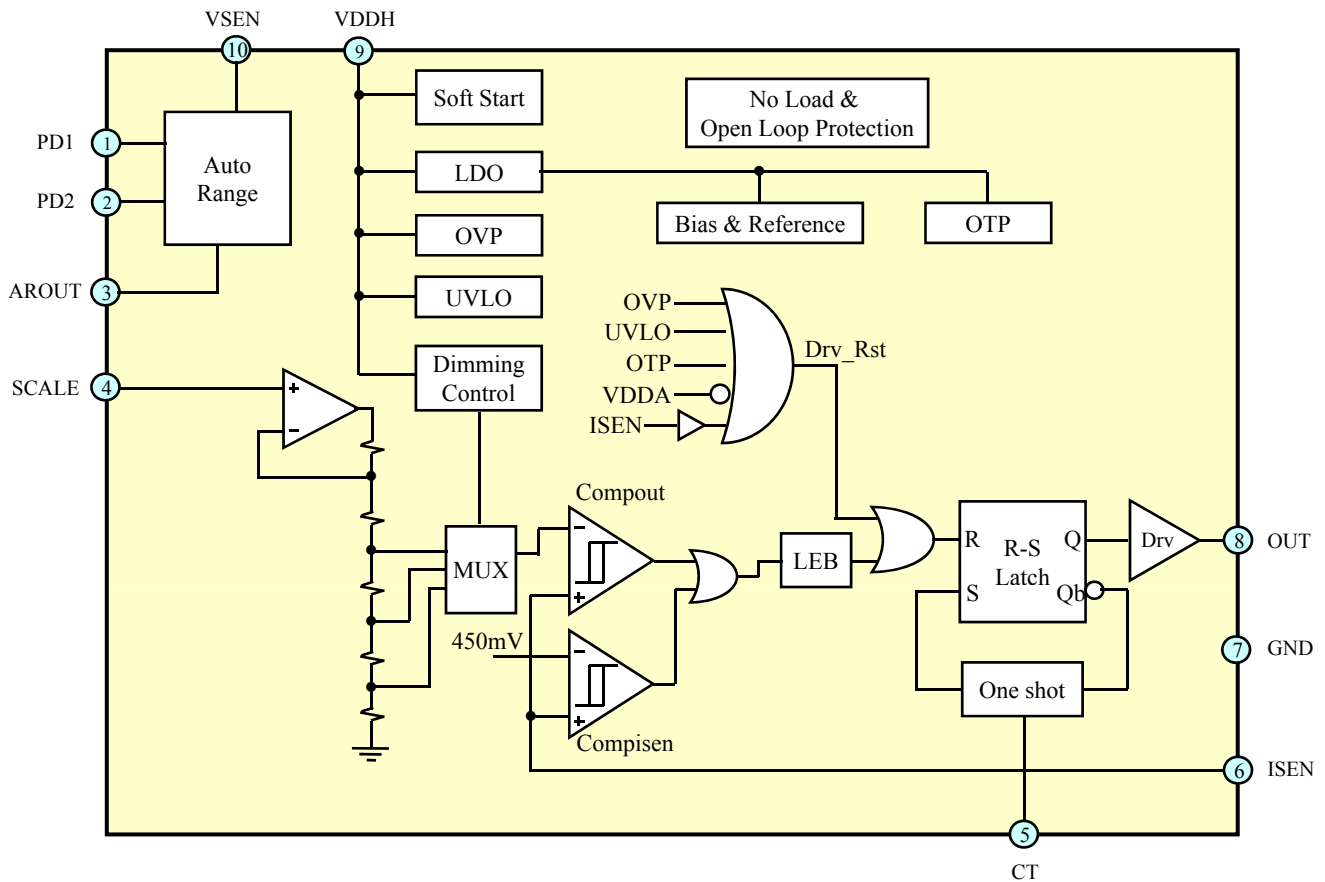
PIN CONFIGURATION



Package outline

** This specifications are subject to be changed without notice*

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS (Ta = 25°C, Note1)

PARAMETER	SYMBOL	RATING	UNIT
Ground Voltage	GND	-0.3	V
Power Voltage	VDDH	20	V
Gate Driver Output	OUT	20	V
Power Outputs and Controls	PD1, PD2, AROUT SCALE, CT, ISEN	6	V
Power Dissipation (Note2)	P _D	0.64	W
Storage Temperature	T _{stg}	-65 ~ 150	°C
Thermal Resistance (Note3)	θ _{JA}	193.3	°C/W

Note1. Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device.

Note2. Derate 17mW/°C above +25°C. This is recommended to operate under this power dissipation specification.

Note3. Measured on JESD51-7, 4-layer PCB

RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	MIN	MAX	UNIT
VDDH supply voltage range	VDDH	7	15	V
Operating Temperature	T _{OPR}	-40	85	°C

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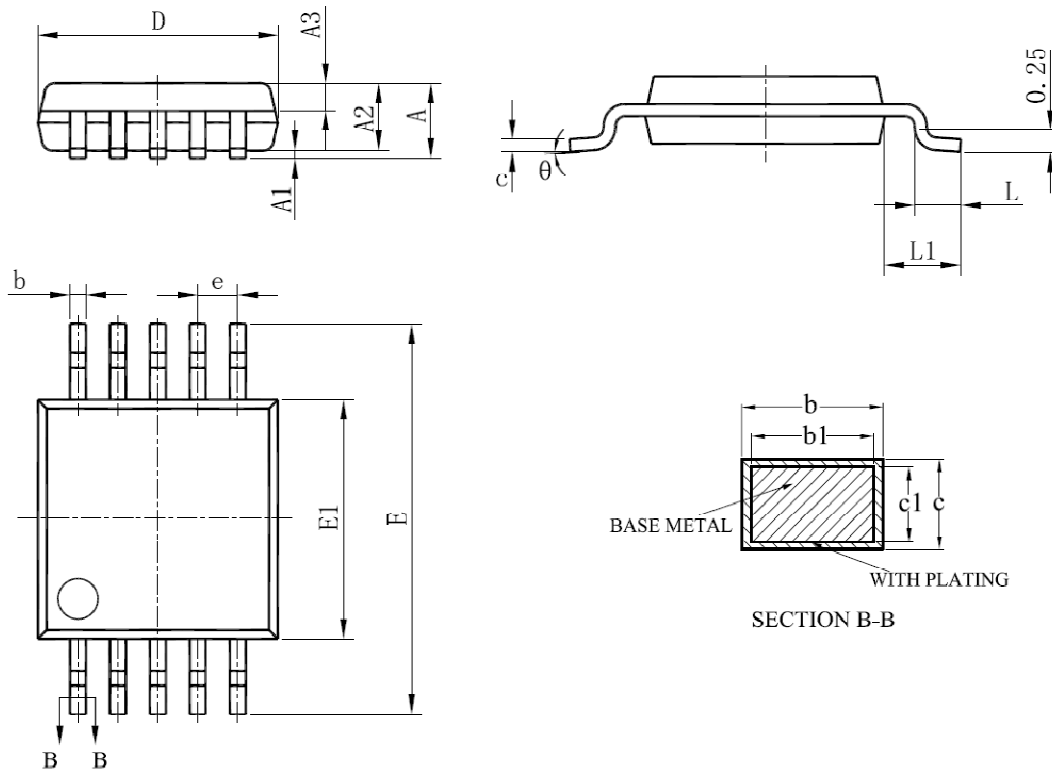
ELECTRICAL CHARACTERISTICS (VDDH=12V, Typical values are at T_A=25°C)

CHARATERISTICS	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Operating current	F _{sw} =100kHz, C _{iss} =1nF	-	2.0	3.0	mA
OVP trip point		17.0	18.0	19.0	V
OVP hysteresis		-	1	-	V
UVLO Turn-on threshold voltage		10.0	12.0	16.0	V
UVLO Turn-off threshold voltage		5.0	6.0	7.0	V
Internal OTP shutdown threshold	Switching is turned off. (Note 1)	-	150	-	°C
Internal OTP shutdown reset	Switching is resumed. (Note 1)	-	100	-	°C
Gate Driver source current	F _{sw} =100kHz	100	200	-	mA
Gate Driver sink current	F _{sw} =100kHz	100	300	-	mA
Current limit reference voltage		400	450	550	mV
Leading edge blanking time		-	350	-	ns
Propagation delay	From OCP to V _{OUT} drops to 0.9*VDDH (Note 1)	-	100	-	ns
Toff length	CT=680pF (Note 2)	7.03	7.6	8.24	us

Note 1 : The parameter is guaranteed by design. It is not tested in production.

Note 2 : The CT capacitance required for a target Toff is, CT=Toff/11.2k .

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PACKAGE DIMENSTION
MSOP-10


Symbol	Dimensions In Millimeters		
	Min	Nom	Max
A	–	–	1.10
A1	0.05	–	0.15
A2	0.75	0.85	0.95
A3	0.30	0.35	0.40
b	0.19	–	0.28
b1	0.18	0.20	0.23
c	0.15	–	0.20
c1	0.14	0.152	0.16
D	2.90	3.00	3.10
E	4.70	4.90	5.10
E1	2.90	3.00	3.10
e	0.50BSC		
L	0.40	–	0.70
L1	0.95BSC		
θ	0°	–	8°

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