

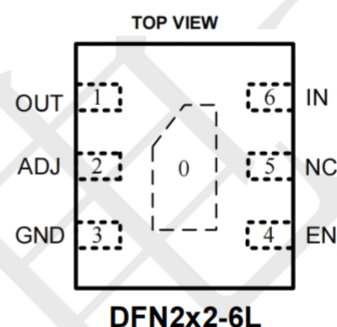
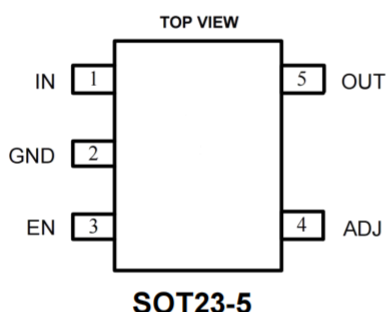
Features

- Wide Input Voltage Range: 1.6V to 5.5V
- 1A Current Rating
- Adjustable Output from 0.8V to 5.0V
- Thermal-Overload Protection
- Green SOT23-5 or DFN2x2-6L Packages

Applications

- PCMCIA Cards
- Portable consumer equipments
- Radio control systems
- Wireless Communication Equipments
- Portable/Battery-Powered Equipment

PIN CONFIGURATION



Pin Number		Pin Name	Pin Function
SOT23-5	DFN2X2-6L		
1	6	IN	Power Input Pin
2	3	GND	Ground
3	4	EN	Enable pin, active high.
4	2	ADJ	Output voltage adjust pin.(NC when fixed output)
5	1	OUT	Output Pin
--	5	NC	No Internal Connection

Ordering Information

TPTLV75712PDBVR

PACKAGE TYPE
PDBVR:SOT23-5
PRDVR:DFN2X2-6

OUTPUT VOLTAGE

08:0.8V; 09:0.9V; 10:1.0V;
11:1.1V; 12:1.2V; 13:1.3V;
15:1.5V; 18:1.8V; 22:2.2V;
25:2.5V; 28:2.8V; 30:3.0V;
33:3.3V; 36:3.6V;

Example: TPTLV75712PDBVR

→ 1.2V Version, in SOT23-5 Package & Tape & Reel Packing Type

Absolute Maximum Ratings

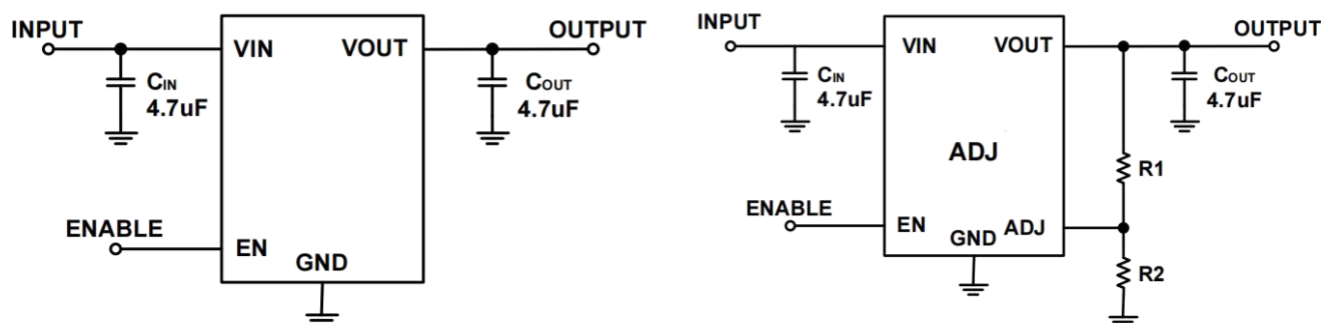
		MIN	MAX	UNIT
IN, EN	Continuous input voltage range	-0.3	6.5	V
OUT	Output voltage range	-0.3	VIN+0.3	
Current	Maximum output current	Internally limited		mA
Temperature	Operating Temperature, Topr	-40	+85	°C
	Storage, Tstg	-40	+150	
	Welding temperature and time, Tsolder		+260, 10s	
θJA	SOT23-5	260		°C/W
	DFN2X2-6	140		
Power Dissipation	Pd SOT23-5	500		mW
	Pd DFN2X2-6	900		

NOTE:

Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

This integrated circuit can be damaged by ESD if you don't pay attention to ESD protection. Broadchip recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

Typical Application Circuit



Electrical Characteristics ($V_{IN} = V_{OUT(NOMINAL)} + 0.5V^{(1)}$, $T_A = -40^{\circ}C$ to $+85^{\circ}C$, unless otherwise specified.)

PARAMETER	SYM	CONDITIONS		MIN	TYP	MAX	UNITS
Input Voltage	V _{IN}			1.6	--	5.5	V
Output Voltage Accuracy ⁽¹⁾		I _{OUT} =1mA		-2.0	--	2.0	%
Maximum Output Current ⁽¹⁾		V _{IN} =1.6V or (V _{OUT} +0.5V)		1.0	--	--	A
Current Limit ⁽¹⁾	I _{LIM}	V _{IN} =1.6V or (V _{OUT} +0.5V)		--	1.8	--	A
Short-Circuit Current ⁽¹⁾	I _{SHORT}	V _{IN} =1.6V or (V _{OUT} +0.5V)		--	0.6	--	A
Ground Pin Current	I _Q	No load, EN=2V		--	30	100	uA
Dropout Voltage ⁽²⁾		I _{OUT} =600mA	V _{OUT} < 1.2V	--	0.65	--	V
			1.2V ≤V _{OUT} <2.5V	--	0.35	--	
			V _{OUT} ≥ 2.5V	--	0.22	--	
	I _{OUT} =1A	V _{OUT} < 1.2V	--	1.0	--		
		1.2V ≤V _{OUT} <2.5V	--	0.55	--		
		V _{OUT} ≥ 2.5V	--	0.35	--		
Line Regulation ⁽¹⁾	Δ V _{LNR}	V _{IN} =1.6V or (V _{OUT} +0.5V) to 5.5V, I _{OUT} =1mA		--	0.05	--	%/V
Load Regulation	Δ V _{LDR}	I _{OUT} =1mA to 1A, C _{OUT} =4.7uF, V _{OUT} >2V		--	0.002	--	%/mA
		I _{OUT} =1mA to 1A, C _{OUT} =4.7uF, V _{OUT} ≤2V		--	0.004	--	
Power Supply Rejection Ratio	PSRR	I _{LOAD} =50mA,	f=217Hz	--	65	--	dB
		C _{OUT} =4.7uF, V _{IN} =V _{OUT} +1V	f=1kHz	--	60	--	
SHUTDWON ⁽³⁾							
EN Input Threshold	V _{IH}	V _{IN} =1.6V to 5.5V,		1.5	--	--	V
	V _{IL}	V _{EN} =-0.3V to V _{IN}		--	--	0.3	
EN Input Bias Current	I _{B(SHDN)}	EN=0V or EN=V _{IN}		--	0.01	1.0	uA
Shutdown Supply Current	I _{Q(SHDN)}	EN=0.4V		--	0.01	1.0	uA
Shutdown Exit Delay ⁽⁴⁾		C _{OUT} =4.7uF, No Load		--	30	--	us
THERMAL PROTECTION							
Thermal Shutdown Temperature	T _{SHDN}			--	150	--	°C
Thermal Shutdown Hysteresis	Δ T _{SHDN}			--	15	--	°C

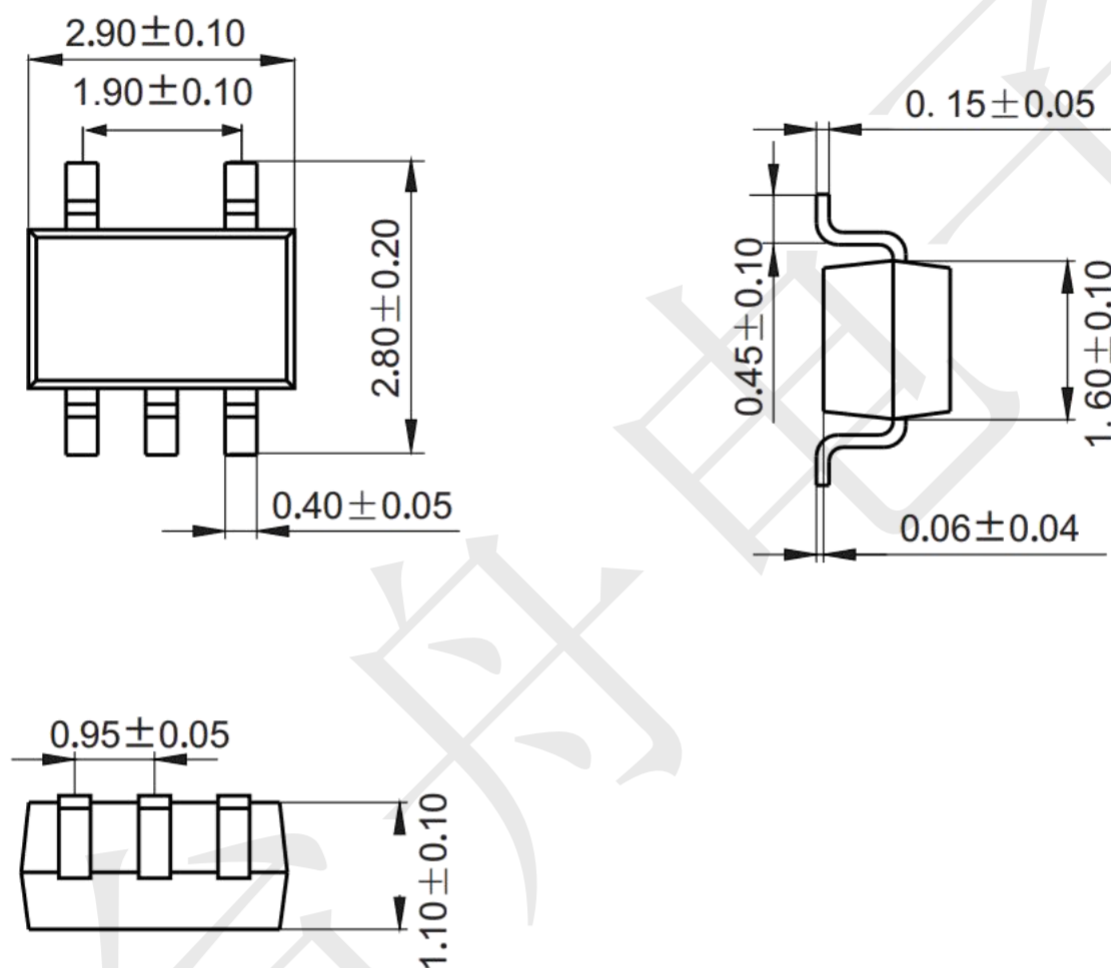
NOTES: 1. $V_{IN} = V_{OUT} (NOMINAL) + 0.5V$ or $1.6V$, whichever is greater.

2. The dropout voltage is defined as $V_{IN} - V_{OUT}$, when V_{OUT} is 100mV below the value of nominal V_{OUT} .

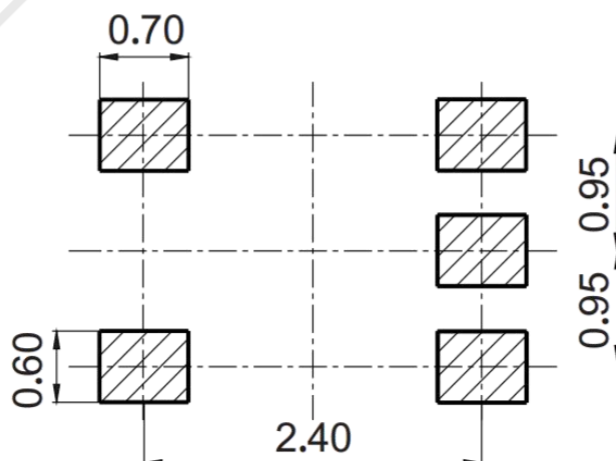
3. $V_{EN} = -0.3V$ to V_{IN} ; 4. Time needed for V_{OUT} to reach 90% of final value.

Package Outline Dimensions (unit: mm)

SOT23-5

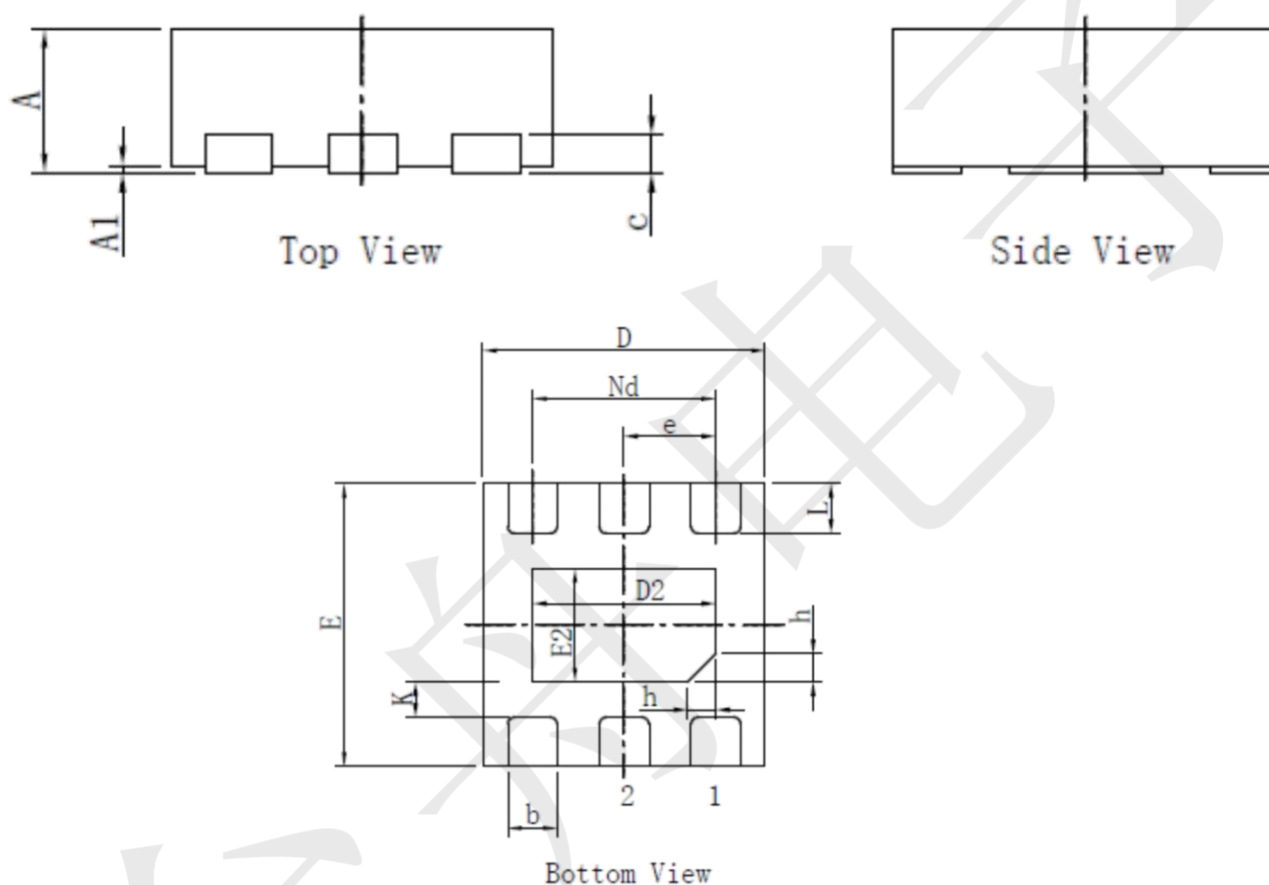


Mounting Pad Layout (unit: mm)



Package Outline Dimensions (unit: mm)

DFN2X2-6L



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.70	0.75	0.80
A1	0.00	0.02	0.05
b	0.30	0.35	0.40
c	0.18	0.20	0.25
D	1.95	2.00	2.05
D2	1.25	1.30	1.35
E	1.95	2.00	2.05
E2	0.75	0.80	0.85
e	0.650BSC		
Nd	1.300BSC		
K	0.20	-	-
L	0.28	0.33	0.38
h	0.15	0.20	0.25