



ACE5012C

0.8uA Low Power Consumption Regulator with Enable

Description

The ACE5012C is a group of positive voltage output, low power consumption, low dropout voltage regulator. The very low power consumption of ACE5012C (0.8uA, Typ) can greatly improve natural life of batteries. The ACE5012C includes high accuracy voltage reference, error amplifier and output driver module with discharge capability. And it also provides foldback short-circuit protection, thermal protection and output current limit function.

The ACE5012C can provide output value of fixed version as 1.2V, 1.8V, 2.5V, 2.8V, 3V, and 3.3V. It also can be customized on command.

Features

- Maximum output current:300mA
- Low power consumption: 0.8uA (Typ.)
- Stand-by current: less than 0.1uA
- Operating input voltage:1.8V~5.5V
- Low dropout voltage: 150mV @100mA @Vout=3.3V (Typ.)
- Low temperature coefficient: $\pm 100\text{ppm}/^\circ\text{C}$
- Build-in chip enable and discharge circuit
- Built-in output current limit circuit

Application

- Mobile phones
- Battery powered equipment
- Cordless phones, wireless communication equipment
- Cameras, video recorders
- Portable AV equipment
- PDAs

Absolute Maximum Ratings

Parameter	Value	
Max input voltage	8V	
operating junction temperature (T_J)	125 $^\circ\text{C}$	
Output current	400mA ¹	
Ambient temperature (T_A)	-40 $^\circ\text{C}$ -85 $^\circ\text{C}$	
Package thermal resistance (θ_{JA})	SOT-23-5	220 $^\circ\text{C}$ / W
	DFN1x1-4	170 $^\circ\text{C}$ / W
Power dissipation	SOT-23-5	400mW
	DFN1x1-4	600mW
Storage temperature (T_S)	-40 $^\circ\text{C}$ -150 $^\circ\text{C}$	
Lead temperature & time	260 $^\circ\text{C}$,10S	

Note:

1. $I_{out} = PD / (V_{in} - V_{out})$
2. Exceed these limits to damage to the device. Exposure to absolute maximum rating conditions may affect device reliability.

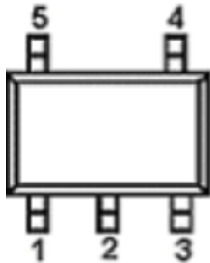


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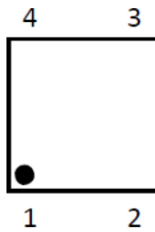
Packaging Type

SOT-23-5

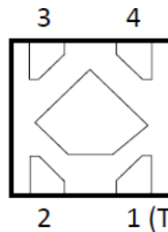


DFN1*1-4

Top View



Bottom View

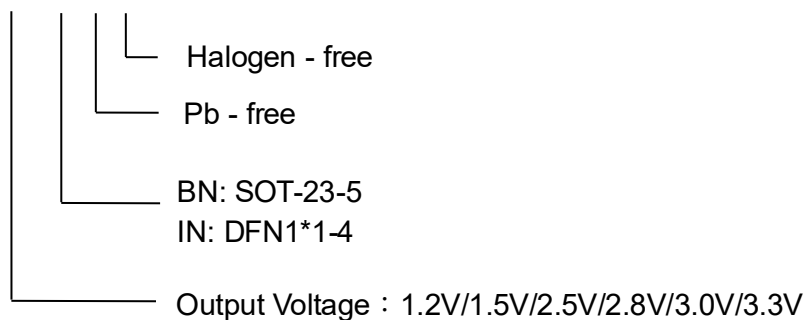


Pin Configuration

SOT-23-5	DFN1*1-4	Description	Function
1	4	VIN	Supply voltage input
2	2	GND	Ground pin
3	3	CE	Chip enable
4		NC	No connection
5	1	VOUT	Output voltage

Ordering information

ACE5012C XX XX + H





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Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.