



ACE56750T

Low Noise, High PSRR, High Speed, CMOS LDO

Description

The ACE56750T is a high accuracy, low noise, high speed, low dropout CMOS Linear regulator with high ripple rejection and fast discharge function. The device offers a new level of cost-effective performance in cellular phones, surveillance system, Bluetooth, wireless and other portable electronic devices.

ACE56750T can provide product selections of output value in the range of 1.2V~3.6V by every 0.1V step. ACE56750T offer over temperature protection to ensure the device working in safe conditions.

The ACE56750T regulators are available in standard SOT-23-3, SOT-23-5, SOT-89-3 and DFN1*1-4 packages. Standard products are Pb-free and Halogen-free.

Features

- Input voltage: 2.5V~6.5V
- Output range: 1.2V~3.6V (customized by every 0.1V step)
- Maximum output current: 600mA @ $V_{IN}-V_{OUT}=0.5V$
- PSRR: 75dB @1KHz, 50dB@100KHz
- Dropout voltage: 100mV @ $I_{OUT}=200mA$
- Quiescent current: 50 μ A Typ. @ $V_{IN}=5V$
- Shut-down current: < 1 μ A
- Recommend input capacitor: 1 μ F
- Ultra-low output noise: 25 μ V_{RMS}

Applications

- Digital cameras
- Cellphones
- Bluetooth and wireless handsets
- Other portable electronic devices



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Absolute Maximum Ratings (Note)

Symbol	Items	Value	Unit
V_{IN}	Input Voltage	-0.3~8	V
I_{OUT}	Output Current	600	mA
P_{DMAX}	Power Dissipation	SOT-23-3	0.2
		SOT-23-5	0.5
		SOT-89-3	0.7
		DFN1*1-4	0.5
$R_{\theta JA}$	Thermal resistance	SOT-23-3	400
		SOT-23-5	270
		SOT-89-3	160
		DFN1*1-4	220
T_J	Junction Temperature	-40 to 150	°C
T_A	Ambient Temperature	-40 to 85	°C
T_{STG}	Storage Temperature	-55 to 150	°C
T_{SOLDER}	Package Lead Soldering Temperature	260°C, 10s	
ESD	HBM	±5.5	KV
LU	Latch up	±500	mA

Note: Exceed these limits could damage the device. Exposure to absolute maximum rating conditions may affect device reliability.

Recommended Operating Range

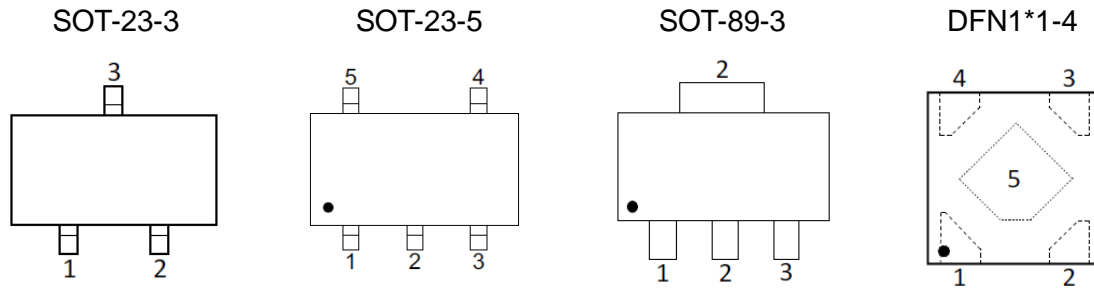
Symbol	Items	Value	Unit
V_{IN}	Supply Voltage	2.5~6.5	V
C_{IN}	Input capacitor	4.7~10	μF
C_O	Output capacitor	1~10	μF
I_{OUT}	Output Current	<500	mA



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Packaging Type

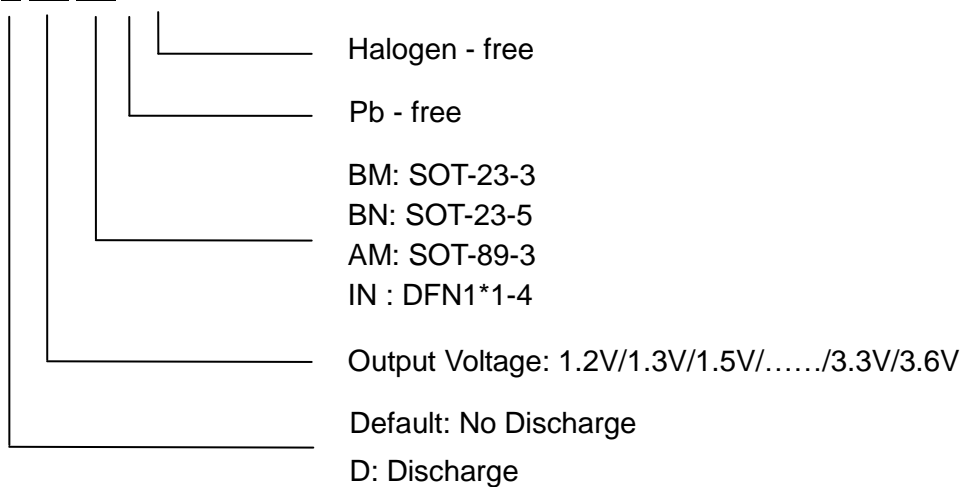


Pin Description

Pin No				Symbol	I/O	Description
SOT-23-3	SOT-23-5	SOT-89-3	DFN1*1-4			
3	1	2	4	VIN	P	Input power supply
1	2	1	2	GND	G	Ground
	3		3	EN	I	Chip Enable, active high, floating is not allowed
	4			NC	/	No-connect pin
2	5	3	1	VOUT	O	Output
			5			Thermal Pad: GND

Ordering Information

ACE56750T X 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 sued 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.

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