



ACE52565T

200mA, Low Consumption, CMOS LDO

Description

The ACE52565T series are low dropout linear regulators and optimized to provide a high-performance solution for battery power system to deliver low quiescent current. The devices offer a new level of cost-effective performance in cellular phones, laptop and notebook computers, and other portable devices.

The ACE52565T series are designed to make use of low-cost ceramic capacitors which ensure the stability of the output current, and enhance the efficiency in order to prolong the battery life of those portable devices.

ACE52565T can provide product selections of output value in the range of 1.2V~3.6V by every 0.1V step.

Features

- Input voltage: 2.5V~6.5V
- Output range: 1.2V~3.6V (customized by every 0.1V step)
- Output current: 200mA @ $V_{OUT} > 2V$, $0.5V \leq V_{IN} - V_{OUT} \leq 1V$
- Dropout voltage: 110mV @ $I_{OUT} = 100mA$ (SOT-23-5)
- Quiescent current: 0.9 μ A Typ.
- Shut-down current: < 0.1 μ A
- Recommend capacitor: 1 μ F

Application

- Reference voltage source
- Toys
- Bluetooth, wireless handsets
- Others portable electronic device

Absolute Maximum Ratings ^(Note)

| Symbol | Items | Value | Unit | |
|-----------------|------------------------------------|-----------------------|-------------|---------------|
| V_{IN} | Input Voltage | -0.3~8 | V | |
| I_{OUT} | Output Current*1 | 400 | mA | |
| P_{DMAX} | Power Dissipation | TSOT-23-3 | 0.4 | W |
| | | SOT-23-5 | 0.45 | |
| $R_{\theta JA}$ | Thermal Resistance | TSOT-23-3 | 300 | $^{\circ}C/W$ |
| | | SOT-23-5 | 270 | |
| T_J | Junction Temperature | -40~125 | $^{\circ}C$ | |
| T_A | Ambient Temperature | -40~85 | $^{\circ}C$ | |
| T_{STG} | Storage Temperature | -55~150 | $^{\circ}C$ | |
| T_{SOLDER} | Package Lead Soldering Temperature | 260 $^{\circ}C$, 10s | | |

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

*1: $V_o=3.3V$, $V_{in}=4.3V$



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Recommended Operation Range

| Symbol | Items | Value | Unit |
|-----------|-------------------------|------------|------|
| V_{IN} | V_{IN} Supply Voltage | 2.5 to 6.5 | V |
| I_{OUT} | Output Current (DC) | <200 | mA |
| T_{OPT} | Operating Temperature | -20 to 55 | °C |

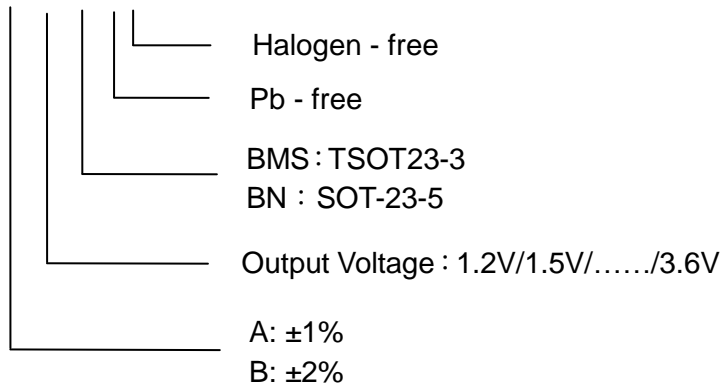


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Ordering information

ACE52565T XX X 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.

ACE Technology Co., LTD.
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