



ACE5200RT

Low Dropout Linear Regulator

Description

The ACE5200RT is a low dropout linear regulator that operates from 2.7V to 24V and deliver 200mA output current. The ACE5200RT features high power supply rejection, low noise, and achieves excellent line and load transient response with a small 2.2 μ F ceramic output capacitor. The output noise is 8 μ VRMS, independent of the output voltage for the fixed options of 5V or less. A programmable soft start with an external capacitor is available in the ACE5200RT.

Features

- Low Noise: 8 μ VRMS
- Maximum Output Current: 200mA
- Input Voltage Range: 2.7V to 24V
- Adjustable Output from 1.2V to 20V
- High Output Voltage Accuracy: $\pm 1\%$
- Low Dropout Voltage: 80mV at IO_{UT}=100mA (Typ.)
- Low Quiescent Current: 66 μ A (Typ.)
- Low Shutdown Current: 4 μ A at VIN=5V
- Stable with a 2.2 μ F ceramic output capacitor
- High PSRR:
 - 90dB @1kHz
 - 70dB @100kHz
 - 63dB @1MHz
- User-programmable soft start
- Available in SOT-23-5 and SOT-23-6 package

Application

- Communications and infrastructure
- Regulation to noise sensitive applications
- Industrial and instrumentation
- Medical and healthcare



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Absolute Maximum Ratings ^(Note)

Items	Description	Min	Max	Unit
Input Voltage	VIN to GND	-0.3	26	V
	VOUT to GND	-0.3	26	V
Current	Peak output current	Internally Limited		
Temperature	Junction temperature range	-40	150	°C
	Storage temperature	-40	150	°C
θ_{JA}		240		°C/W
Power Dissipation		500		W

Note:

Exceeding the range specified by the rated parameters will cause damage to the chip, and the working state of the chip beyond the range of rated parameters cannot be guaranteed. Exposure outside the rated parameter range will affect the reliability of the chip.

ESD Ratings

Items	Description	Value	Unit
VESD	Human body model (HBM)	8	KV
	Charged device model (CDM)	2	KV

Note:

JEDEC document JEP155 states that 500-V HBM allows safe manufacturing with a standard ESD control process.
JEDEC document JEP157 states that 200-V CDM allows safe manufacturing with a standard ESD control process.

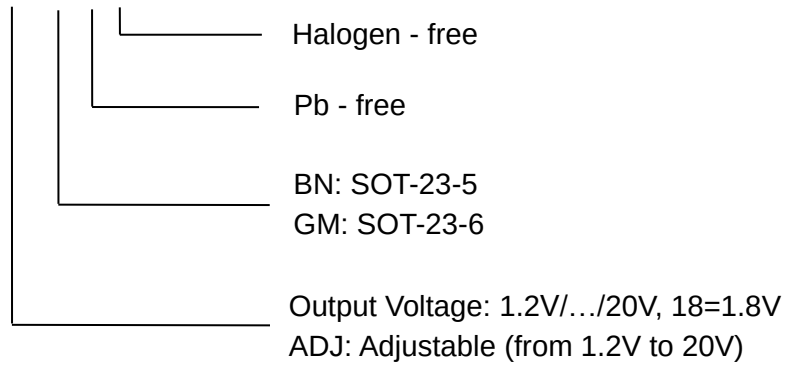


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Ordering Information

ACE5200RT 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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