



ACE5211R

High Speed LDO Regulators, High PSRR, Low noise

Description

The ACE5211R series are highly accurate, low noise, CMOS LDO Voltage Regulators. Offering low output noise, high ripple rejection ratio, low dropout, and very fast turn-on times, the ACE5211R series is ideal for today's cutting-edge mobile phone. Internally the ACE5211R includes a reference voltage source, error amplifiers, driver transistors, current limiters, and phase compensators. The ACE5211R's current limiters' foldback circuit also operates as a short protect for the output current limiter and the output pin. The ACE5211R series is also fully compatible with low ESR ceramic capacitors, reducing cost and improving output stability. This high level of output stability is maintained even during frequent load fluctuations, due to the excellent transient response performance and high PSRR achieved across a broad range of frequencies. The CE function allows the output of regulator to be turned off, resulting in greatly reduced power consumption.

Features

- Maximum Output Current: 500mA ($V_{IN}=4.3V, V_{OUT}=3.3V$)
- Dropout Voltage: 100mV@ $I_{OUT}=100mA$
- Operating Voltage Range: 1.2V~6.0V
- Highly Accuracy: $\pm 1\%$
- Low Power Consumption: 30uA (TYP.)
- Standby Current: 0.1uA (TYP.)
- High Ripple Rejection: 70dB@1KHz (ACE5211R33)
- Low output noise: 50uVrms
- Line Regulation: 0.05% (TYP.)

Application

- Mobile phones
- Cordless phones, radio communication equipment
- Portable games
- Cameras, Video cameras
- Reference voltage sources
- Battery powered equipment



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Absolute Maximum Rating

Parameter	Symbol	Ratings	Units
Input Voltage	V_{IN}	6.5	V
Output Current	I_{OUT}	500	mA
Output Voltage	V_{OUT}	$V_{SS}-0.3 \sim V_{IN} +0.3$	V
CE Pin Voltage	V_{CE}	$V_{SS}-0.3 \sim V_{IN} +0.3$	V
Power Dissipation	P_D	0.5	W
Thermal resistance (Junction to air)	θ_{JA}	250	$^{\circ}C/W$
Operating Ambient Temperature Range	T_{OPR}	-40~85	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55~150	$^{\circ}C$

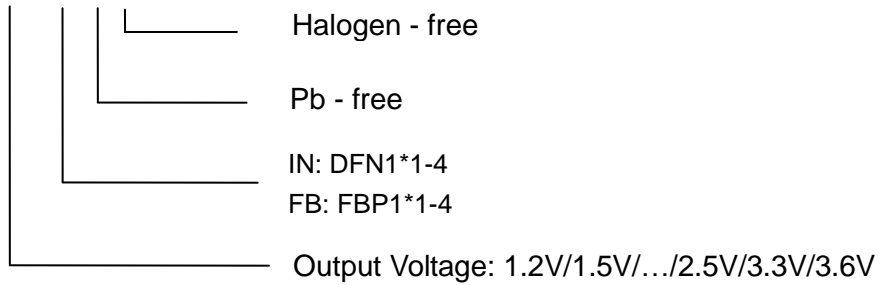


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Ordering information

ACE5211R 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.