



ACE52720RT

High PSRR, High Speed, Low Noise LDO

Description

The ACE52720RT series are the low noise LDO with enable function, and capable of delivering up to 1A load current. The characteristics are low noise and high PSRR and low dropout voltage, making this device ideal for portable consumer applications. The ACE52720RT series can operate in a wide input voltage from 2.7V to 18V. The devices are available with fixed and adjustable output voltages ranging from 0.8V to 5.5V. The ACE52720RT series are available in DFN2*2-6L, SOT-89-3 and ESOP-8 packages.

Features

- Input Voltage Range: 2.7V~18V
- Maximum Output Current: 1A
- Adjustable Output: VFB=0.6V
- Output Voltage Range: 0.8V~5.5V
- High Ripple Rejection: 80dB at 1kHz
- Standby Current: 100uA (Typ.)
- Quiescent Current: 160μA
- Low Dropout: 450mV (Typ.) @1A, when VOUT=5V

Application

- Battery Chargers
- Switching Power Supply Post Regulation
- Hard Drive Controllers
- Consumer and Industrial Equipment Point of Regulation

Absolute Maximum Ratings ^(Note)

Item	Symbol	Value	Unit
Input Voltage ^(Note)	V _{IN}	0~20	V
Output Voltage	V _{OUT}	0.8~6	V
Chip Enable Input	V _{CE}	-0.3~18	V
Maximum Junction Temperature	T _{J(MAX)}	150	°C
Storage Temperature	T _{STG}	-65~150	°C

Note: Stresses exceeding "Absolute Maximum Ratings" may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



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ESD RATINGS ^(Note)

Item	Symbol	Value	Unit
Human Body Model	ESD _{HBM}	±2000	V
ESD Capability	ESD _{CDM}	±1500	V
Latch up Current Maximum Rating	L _U	±200	mA

Note: This device series incorporates ESD protection and is tested by the following methods:

ESD Human Body Model tested per EIA/JESD22-A114.

CDM tested per JESD22-C101 ; Latch up Current Maximum Rating tested per JEDEC78.

Thermal Characteristics

Item	Symbol	Ratings	Value	Unit
DFN2*2-6L	R _{θJA}	Thermal Characteristics, Thermal Resistance, Junction-to-Air	100	°C/W
SOT-89-3	R _{θJA}		125	°C/W
ESOP-8	R _{θJA}		50	°C/W

Recommended Operating

Item	Symbol	Value	Unit
Input Voltage	V _{IN}	2.7~20	V
Output Current	I _{OUT}	0~1.0	A
Operating Ambient Temperature	T _A	-40~85	°C
Effective Input Ceramic Capacitor Value ^(Note)	C _{IN}	1~10	μF
Effective Output Ceramic Capacitor Value ^(Note)	C _{OUT}	1~10	μF
Input and Output Capacitor Equivalent Series Resistance (ESR)	ESR	5~100	mΩ

Note: The capacitor refers to a chip capacitor, and larger capacitance value is required if electrolytic capacitor is used.

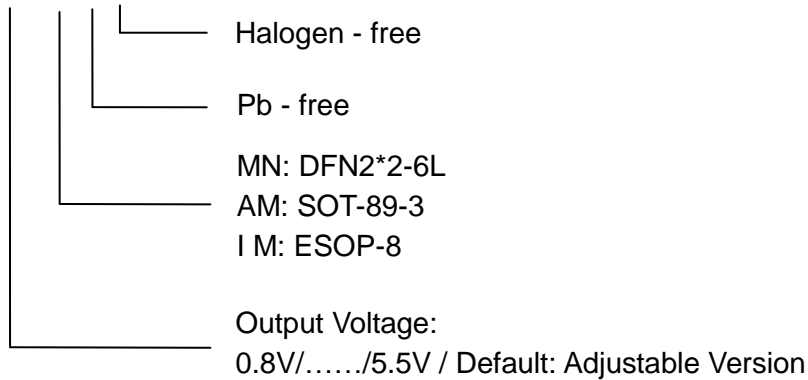


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Ordering Information

ACE52720RT XX XX + H



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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