



# ACE70125R

## PWM/PFM Switching Control step-up Switching Regulator

### Description

The ACE70125R series is a CMOS step-up switching regulator which mainly consists of a reference voltage source, an oscillation circuit, an error amplifier, a phase compensation circuit, a PWM/PFM switching control circuit. With an internal low-ON-resistance Nch Power MOS, this product is applicable to applications requiring high efficiency and high output current. The ACE70125R series switches its operation to the PFM control circuit whose duty ratio is 15 % with to the PWM/PFM switching control circuit under a light load and to prevent decline in the efficiency by IC operation current.

### Features

- Duty ratio: Built-in PWM/PFM switching control circuit 15 to 78%.
- Oscillator frequency: 1.0MHz
- Output voltage range: <20V
- Low voltage operation: Start-up is guaranteed from 0.9V ( $I_{OUT} = 1 \text{ mA}$ )
- Feedback voltage accuracy:  $\pm 2\%$
- Soft start function: 2 mS

### Application

- Digital cameras, GPS, wireless transceiver
- Portable devices
- Digital audio players

### Absolute Maximum Ratings

Symbol	Items	Value	Unit
VDD	VDD Pin Voltage	-0.3 ~ 6.5	V
LX	LX Pin Voltage	-0.3 ~ 20	V
VCE	CE Pin Voltage	-0.3 ~ VDD+0.3	V
ILX	LX Pin Current	$\pm 4000$	mA
Pd	Power Dissipation	0.92	W
$\theta_{JA}$	Thermal Resistance	136	$^{\circ}\text{C}/\text{W}$
T <sub>Opr</sub>	Operating Temperature Range	-40 to 85	$^{\circ}\text{C}$
T <sub>stg</sub>	Storage Temperature Range	-55 to 150	$^{\circ}\text{C}$

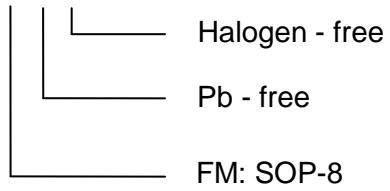


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### Ordering Information

ACE70125R 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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