



ACE7340R

3 A/40 V, Sync DC-DC BUCK Converter

Description

ACE7340R is a sync BUCK DC-DC converter IC, which integrates two NMOSFET power switches with low on-resistance. And RDSON of high side and low side switches are 110mΩ and 45mΩ respectively. This product is capable of delivering 3A load current. In light load condition, ACE7340R works in the PFM mode which has good efficiency performance. When load current goes heavy, ACE7340R works in a quasi PWM mode. At this time, it has a constant switching frequency of 500kHz. ACE7340R incorporates OTP, input UVLO, cycle by cycle current limit protection and output short circuit protection to improve reliability.

Features

- Input Voltage Range: 4.7V ~ 40V
- Shutdown Current: 10uA
- Quiescent Current: 120uA
- RDSON(LSD/HSD): 110mΩ/45mΩ
- Switching Frequency: 500kHz
- Reference Voltage: 0.6V ± 2%
- Cycle by Cycle Peak Current Limit: 6.5A
- Short Circuit Protection: Hiccup Mode
- Overtemperature Protection: 160°C
- Available ESOP-8 Package

Applications

- Set Top Box
- LCD TV
- Digital TV
- DSL Modem



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Absolute Maximum Ratings ^(Note)

Parameter	Symbol	Value	Unit
VIN Pin Voltage Range	V _{IN}	-0.3 ~ 40	V
LX Pin Voltage Range	V _{LX}	-0.3 ~ 40	V
Voltage Between BOOT Pin and SW Pin	V _{BOOT_SW}	-0.3 ~ 6	V
EN Pin Voltage Range	V _{EN}	-0.3 ~ 40	V
FB Pin Voltage Range	V _{FB}	-0.3 ~ 40	V
Internal Power Dissipation	P _D	1.98	W
Thermal Resistance (Junction to Air)	θ _{JA}	63	°C/W
Operating Temperature Range	T _A	-40 to 85	°C
Storage Temperature Range	T _{STG}	-55 to 150	°C
Maximum Junction Temperature	T _J	-40 to 160	°C

Note: Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device.

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit
Input Voltage	V _{IN}	4.7	12	40	V
Output Voltage	V _{OUT}	0.6	3.3	12	V
Inductor Value	L	1.2	3.3	10	uH
Output Capacitor	C _{OUT}	20	30		uF
Operating Ambient Temperature	T _A	-40		85	°C

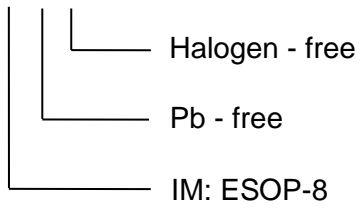


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Ordering Information

ACE7340R 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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