

# CXA3810M

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### Description

The CXA3810M has optimum configuration to realize various power supply circuits easily and compactly by including Power-factor correction, resonant controller and various protection function in one package.  
(Applications: Power supply circuit, etc.)

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### Features

- ◆ Power-factor correction
  - ◆ Critical conduction mode PFC control
  - ◆ Supports W/W input
  - ◆ Start timer
  - ◆ Maximum frequency limit (During overcurrent detection)
  - ◆ Continuous overcurrent detection protection function
- ◆ Resonant controller
  - ◆ Timer-latch over current protection
  - ◆ Soft start function
  - ◆ Adjustment minimum frequency limit
  - ◆ Pulse over current load detection
- ◆ Common
  - ◆ Adjacent 2-pin short protection
  - ◆ Various protection functions including overvoltage and overcurrent
  - ◆ AC off detection
  - ◆ PFC-OK signal output

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### Structure

BiCMOS silicon monolithic IC

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### Package

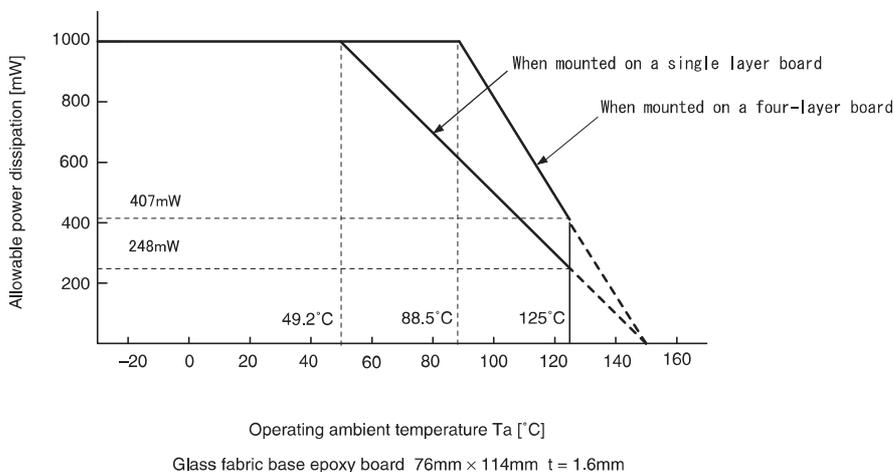
24-pin SOP

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**Absolute Maximum Ratings**

Item	Symbol	Rating	Unit	Remarks
Maximum supply voltage	VCC	24.0	V	VCC
Pin voltage which operates with VCC as power supply	VCCIN	-0.3 to VCC + 0.3	V	AC_DETIN, AC_DETOUT, AC_VRMS, B_OK, MODE1, MODE2
Driver output pin voltage	VOUT	-0.3 to VCC + 0.3	V	PFC_OUT, RM_OUTP, RM_OUTN
Power supply pin voltage for internal circuit	VREF	-0.3 to +7.0	V	VREF
Pin voltage which operates with VREF as power supply	VREFIN	-0.3 to +7.0	V	PFC_OVP, PFC_CS, PFC_VAO, PFC_TONMAX, PFC_VSENSE, RM_OFFADJ, RM_RT, RM_SS, RM_CS1, RM_CS2, RM_FMIN
ZCD current	Izcd	±7	mA	PFC_ZCD
Allowable power dissipation	P <sub>D</sub>	*1	mW	(See the thermal derating curve.)
Operating ambient temperature range	T <sub>opt</sub>	-30 to +125	°C	
Junction temperature	T <sub>jmax</sub>	+150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	

\*1 Allowable power dissipation reduction characteristics

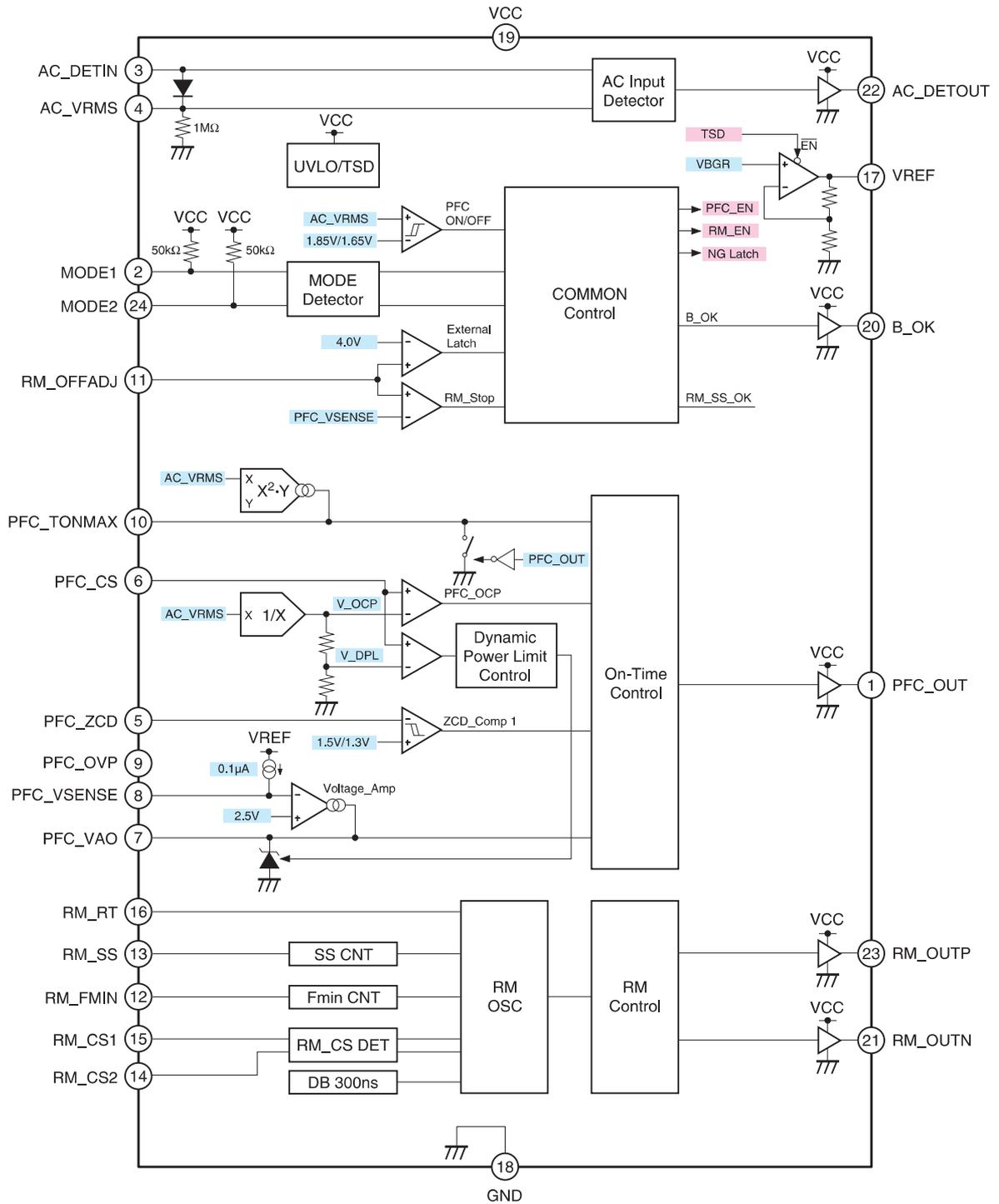


Glass fabric base epoxy board 76mm × 114mm t = 1.6mm

**Recommended Operating Conditions**

Item	Symbol	Rating	Unit	Remarks
Supply voltage (VCC system)	VCC	12.0 to 18.0	V	
Operating ambient temperature range	T <sub>opt</sub>	-25 to +85	°C	
Junction temperature	T <sub>j</sub>	-25 to +125	°C	

Block Diagram



Pin Configuration

