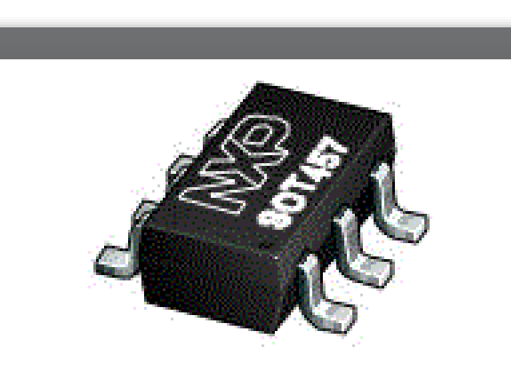

TEA1732TS

GreenChip SMPS control IC

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Overview | Parametrics | Package / Packing | Quality | Documentation | Ordering | Design support | Show all

Feedback

Direct downloads

- Datasheet (pdf)
- All documents (7)

Quick ordering

TEA1732TS/1H
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OR: Order samples

The TEA1732TS is a low cost Switched Mode Power Supply (SMPS) controller IC intended for flyback topologies. The TEA1732TS operates in peak current and frequency control mode. Frequency jitter has been implemented to reduce ElectroMagnetic Interference (EMI). Slope compensation is integrated for Continuous Conduction Mode (CCM) operation.

The TEA1732TS IC features OverPower Protection (OPP). The controller accepts an overpower situation for a limited amount of time.

Mains undervoltage protection (brownout), output OverVoltage Protection (OVP), and OverTemperature Protection (OTP) can be implemented using a minimal number of external components.

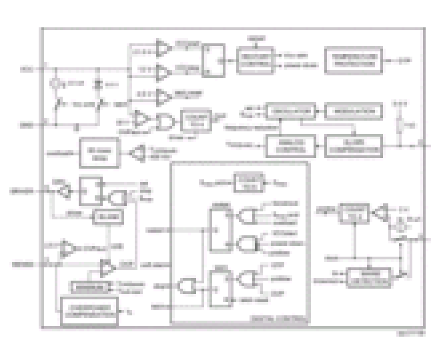
At low-power levels, the primary peak current is set to 25 % of the maximum peak current. The switching frequency is reduced to limit the switching losses. The combination of fixed frequency operation at high output power and frequency reduction at low output power provides high efficiency over the total load range.

The TEA1732TS makes the design of low-cost, highly efficient and reliable supplies for power requirements up to 75 W easier by requiring a minimum number of external components.

	TEA1732TS	TEA1732LTS	TEA1732CTS
OPP	Safe restart	Latched to off	Safe restart
UVLO	Safe restart	Latched to off	Safe restart
Brownout	Safe restart	Safe restart	Safe restart
Max Duty cycle	Safe restart	Safe restart	Safe restart
OVP	Latched to off	Latched to off	Safe restart
Ext. OTP	Latched to off	Latched to off	Safe restart
Int. OTP	Latched to off	Latched to off	Latched to off

Parametric search

Show functional diagram



Features and benefits

- SMPS controller IC enabling low-cost applications
- Large input voltage range (12 V to 30 V)
- Integrated OverVoltage Protection (OVP) on the VCC pin
- Accurate OverVoltage Protection (OVP) via the ISENSE pin
- Very low supply current during start-up and restart (10 µA typical)
- Low supply current during normal operation (0.58 mA typical without load)
- Internal overpower time-out
- Overpower protection or high/low line compensation
- Fixed switching frequency with frequency jitter to reduce EMI
- Frequency reduction with fixed minimum peak current to maintain high efficiency at low output power levels
- Frequency increase at peak power operation
- Slope compensation for CCM operation
- Integrated soft-start
- Low and adjustable OverCurrent Protection (OCP) trip level
- Mains undervoltage protection (brownout)
- External OverTemperature Protection (OTP)
- IC overtemperature protection

Applications

- All applications that require an efficient and cost-effective power supply solution up to 75 W

Series TEA173x
Low voltage start-up flyback controllers suitable for Fixed Frequency/CCM

Parametric search all AC-DC controllers

Parametrics of this product

Symbol	Parameter	Conditions	Min	Typ/Nom	Max	Unit
$V_{startup}$	start-up voltage		19.3	21.5	23.8	V
f_{osc}	oscillator frequency	peak power		80		kHz
f_{osc}	oscillator frequency	high power		65		kHz
$I_{CC(startup)}$	start-up supply current	$V_{CC} < V_{startup}$	5	10	15	µA
T_j	junction temperature		-40		150	°C
V_{CC}	supply voltage	continuous	-0.4		30	V
V_{CC}	supply voltage	t < 100 ms			35	V
$V_{th(UVLO)}$	undervoltage lockout threshold voltage		11.2	12.5	13.8	V

Similar products

- **Series** TEA173x
- **Parametric search** all AC-DC controllers
- Parametrics series

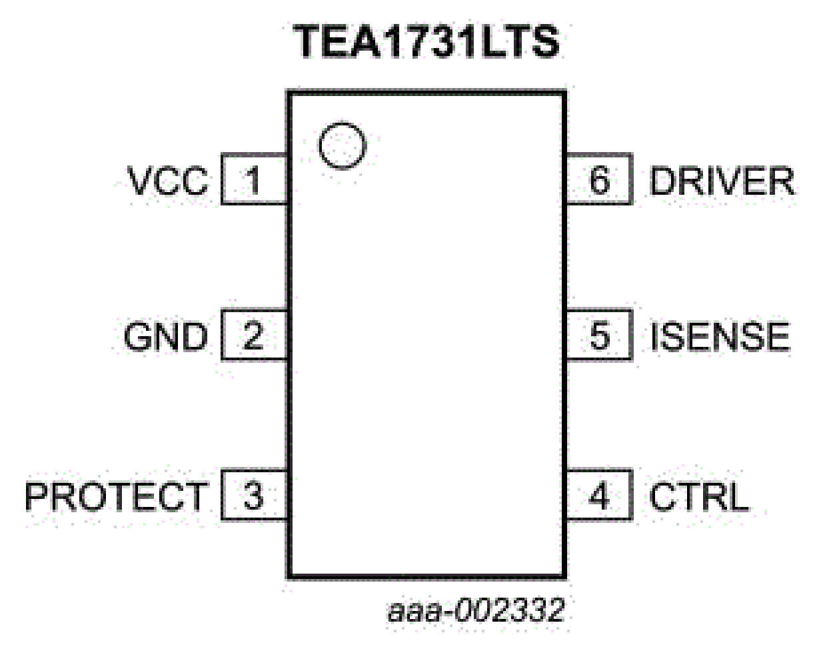
Package

Type number	Package	Outline version	Reflow-/Wave soldering	Packing	Product status	Marking	Orderable part number, (Ordering code (12NC))
TEA1732TS/1	 TSOP6 (SOT457)	sot457_po	sot457_fr sot457_fw	Reel 7" Q3/T4, Reverse	Active	Standard Marking	TEA1732TS/1H (9353 035 44125)

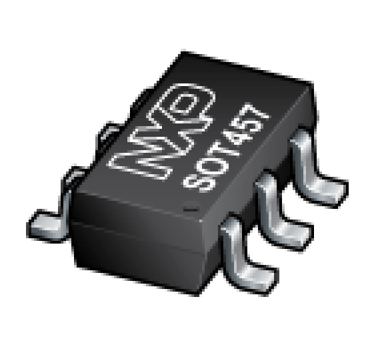
Pinning information

Pin	Symbol	Description
1	VCC	supply voltage
2	GND	ground
3	PROTECT	protection and mains detect input
4	CTRL	control input
5	ISENSE	current sense and accurate OVP input
6	DRIVER	gate driver output

Simplified outline



Graphic symbol



Quality, reliability & chemical content

Type number	Orderable part number	Chemical content	RoHS / RHF	Leadfree conversion date	MSL	MSL LF
TEA1732TS/1	TEA1732TS/1H	TEA1732TS/1	EU/CN RoHS COMPLIANT Pb D	Always Pb-free	1	1

- Quality and reliability disclaimer

Documentation for this product

Download all documentation (zip)

File name	Title	Type	Format	Date
TEA1732TS	GreenChip SMPS control IC	Data sheet	pdf	2015-03-31
sot457_fr	Footprint for reflow soldering SOT457	Reflow soldering	pdf	2010-07-13
sot457_fw	Footprint for wave soldering SOT457	Wave soldering	pdf	2009-10-08
sot457_po	plastic surface-mounted package (TSOP6); 6 leads	Outline drawing	pdf	2009-10-08
SOT457_125	Tape reel SMD; reversed product orientation 12NC ending 125	Packing	pdf	2012-11-30
MAR_SOT457	MAR_SOT457 Topmark	Top Marking	pdf	2013-06-03
Reflow_Soldering_Profile	Reflow Soldering Profile	Reflow soldering	pdf	2013-09-30
Wave_Soldering_Profile	Wave Soldering Profile	Wave soldering	pdf	2013-09-30

Ordering & availability

Type number	Ordering code (12NC)	Orderable part number	Region	Distributor	In stock	Order quantity	Inventory date	Buy online	Samples
TEA1732TS/1	9353 035 44125	TEA1732TS/1H							Order samples

Sample
Sample orders normally take 2-4 days for delivery.
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Frequently asked questions and Community discussions

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24-10-2014	what defines the power output limit for tea1752
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