LM73606QRNPRQ1

Conv DC-DC 3.5V to 36V Synchronous Step Down Single-Out 1V to 34.2V 6A Automotive 30-Pin WQFN EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	WQFN30
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

LM73606QRNPRQ1 Image

Images are for reference only

Inquiry

General Description

The LM73605-Q1/LM73606-Q1family of devices are easy-to-use synchronous step-down DC/DC converters capable of driving up to 5 A (LM73605-Q1)or 6 A (LM73606-Q1) of load current from a supply voltage ranging from 3.5 V to 36 V. The LM73605-Q1/LM73606-Q1 provide exceptional efficiency and output accuracy in a very small solution size. Peak current-mode control is employed. Additional features such as adjustable switching frequency, synchronization to an external clock, power-good flag, precision enable, adjustable soft start, and tracking provide both flexible and easy-to-use solutions for a wide range of applications. Automatic frequency foldback at light load and optional external bias improve efficiency over the entire load range. The family requires few external components and has a pinout designed for simple PCB layout with optimal EMI and thermal performance. Protection features include thermal shutdown, input undervoltage lookout, cycle-cy-cycle current limiting, and hiccup short-citcuit protection. The LM73605-Q1 and LM73606-Q1 devices are pin-to-pin compatible for easy current scaling.

Key Features

AEC-Q100-qualified for automotive applications
Device temperature grade 1: –40°C to +125°C ambient operating temperature

Device HBM ESD classification level 2 kV

Device CDM ESD classification level C5

Wettable flanks QFN package (WQFN)

Low EMI and low switching noise

Low quiescent current
0.8 µA in shutdown (typical)

15 µA in active mode with no load (typical)

Wide voltage conversion range:
t_{ON-MIN} = 60 ns (typical)

$t_{OFF-MIN}$ = 70 ns (typical)

Low MOSFET ON-resistance:
$R_{DS\_ON\_HS}$ = 53 m (typical)

$R_{DS\_ON\_LS}$ = 31 m (typical)

Adjustable frequency range: 350 kHz to 2.2 MHz

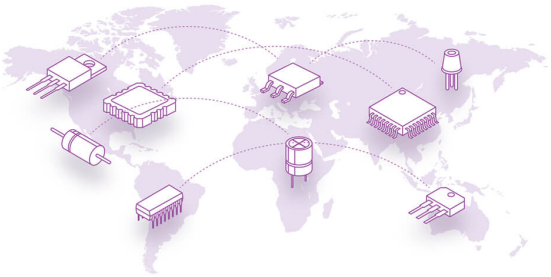
Pin-selectable auto mode or forced PWM mode

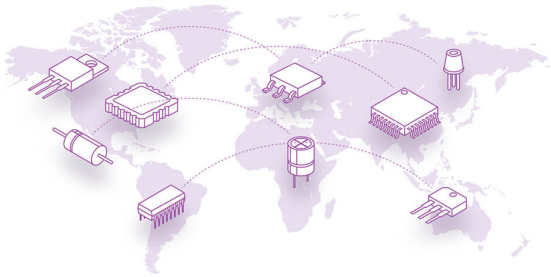
Start-up into pre-biased load, fixed or adjustable soft-start time, and tracking

Synchronizable to external clock, internal compensation, power-good flag, and precision enable

Cycle-by-cycle current limiting, hiccup, UVLO, and thermal shutdown protections

Create a custom design with the WEBENCH power designer using LM73605-Q1 or LM73606-Q1





Recommended For You

LM2637M

Texas Instruments, Inc

SOP24

LM5116MH

Texas Instruments, Inc

TSSOP20

LM234Z-3

Texas Instruments, Inc

TO-92

LM27761DSGR

Texas Instruments, Inc

WSON8

LM74700QDBVRQ1

Texas Instruments, Inc

SOT23-6

LM2991S

Texas Instruments, Inc

TO-263

LM74800QDRRRQ1

Texas Instruments, Inc

WSON-12

LMR14030SDDAR

Texas Instruments, Inc

SOP8

LM2940CT-12

Texas Instruments, Inc

TO-220

LM536035QPWPTQ1

Texas Instruments, Inc

HTSSOP-16

LM5575MH

Texas Instruments, Inc

TSSOP16

LM536013QDSXTQ1

Texas Instruments, Inc

WSON-10

LM5160QPWPRQ1

Texas Instruments, Inc

HTSSOP14

LM5576MH

Texas Instruments, Inc

TSSOP20

LMQ61460AFSQRJRRQ1

Texas Instruments, Inc

VQFN-14