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LM2575 Product Folder

SIMPLE SWITCHER 1A Step-Down Voltage Regulator

See Also: [LM2595](#) - low cost & more efficient
[LM2598](#) - improved switching frequency, efficiency
[LM2672](#) - has sync pin, improved switching frequency and efficiency
[LM2675](#) - improved input and output voltage, switching frequency.

Generic P/N 2575

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WEBENCH Live Simulation!

LM2575 Webench™ Custom Design/Analyze/Build It

V in Lower V V V
 4.8 <= V <= V <= 40.0
 V out V <= V <= 37.0
 I out A <= 1.00
 Ambient Temperature °C <= 100

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Parametric Table

Multiple Output Capability	No
On/Off Pin	Yes
Error Flag	No
Input Voltage Min (Volt)	4
Input Voltage Max (Volt)	40
Output Current Max (mA)	1000
Output Voltage (Volt)	12, 15,
Adjustable Output Voltage	No, Yes
Switching Frequency (Hz)	52000
Adjustable Switching Frequency	No
Sync Pin	No
Efficiency (%)	88, 75,
Inverting	Yes
Step-Down	Yes

Datasheet

Title	Size in Kbytes	Date	 View Online	 Download	Re
LM1575 LM2575 LM2575HV SIMPLE SWITCHER 1A Step-Down Voltage Regulator	643 Kbytes	20-Nov-01	View Online	Download	Rec Ema
LM1575 LM2575 LM2575HV SIMPLE SWITCHER 1A Step-Down Voltage Regulator (JAPANESE) 本サイトの日本語版データシートは最新版ではない場合があります。ご検討およびご採用にあたっては、最新の英語版データシートを必ずご確認ください。	819 Kbytes		オンラインで見る	ダウンロード	Eメ

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Package Availability, Models, Samples & Pricing

Part Number	Package			Status	Models		Samples & Electronic Orders	Budgetary Pricing		Std Pack Size
	Type	Pins	MSL		SPICE	IBIS		Qty	\$US each	
LM2575M-12	SOIC WIDE	24	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 30
LM2575M-15	SOIC WIDE	24	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 30
LM2575M-3.3	SOIC WIDE	24	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 30
LM2575M-5.0	SOIC WIDE	24	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 30
LM2575M-ADJ	SOIC WIDE	24	MSL	Full production	N/A	N/A	Samples Buy Now	1K+	\$0.9800	rail of 30
LM2575MX-12	SOIC WIDE	24	MSL	Full production	N/A	N/A	Buy Now	1K+	\$0.9800	reel of 1000
LM2575MX-15	SOIC WIDE	24	MSL	Full production	N/A	N/A		1K+	\$0.9800	reel of 1000
LM2575MX-3.3	SOIC WIDE	24	MSL	Full production	N/A	N/A		1K+	\$0.9800	reel of 1000
LM2575MX-5.0	SOIC WIDE	24	MSL	Full production	N/A	N/A		1K+	\$0.9800	reel of 1000
LM2575MX-ADJ	SOIC WIDE	24	MSL	Full production	N/A	N/A	Buy Now	1K+	\$0.9800	reel of 1000
LM2575N-12	MDIP	16	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 20
LM2575N-15	MDIP	16	MSL	Full production	N/A	N/A	Samples Buy Now	1K+	\$0.9800	rail of 20
LM2575N-5.0	MDIP	16	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 20
LM2575N-ADJ	MDIP	16	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 20

LM2575T-12	TO 220	48	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575T-15	TO 220	48	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575T-3.3	TO 220	48	MSL	Full production	N/A	N/A	Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575T-5.0	TO 220	48	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575T-ADJ	TO 220	48	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575S-12	TO 263	5	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575S-15	TO 263	5	MSL	Full production	N/A	N/A	Buy Now	1K+	\$0.9800	rail of 45
LM2575S-3.3	TO 263	5	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575S-5.0	TO 263	5	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575S-ADJ	TO 263	5	MSL	Full production	N/A	N/A	24hr Samples Buy Now	1K+	\$0.9800	rail of 45
LM2575SX-12	TO 263	5	MSL	Full production	N/A	N/A		1K+	\$0.9800	reel of 500
LM2575SX-15	TO 263	5	MSL	Full production	N/A	N/A		1K+	\$0.9800	reel of 500
LM2575SX-3.3	TO 263	5	MSL	Full production	N/A	N/A	Buy Now	1K+	\$0.9800	reel of 500
LM2575SX-5.0	TO 263	5	MSL	Full production	N/A	N/A	Buy Now	1K+	\$0.9800	reel of 500
LM2575SX-ADJ	TO 263	5	MSL	Full production	N/A	N/A	Buy Now	1K+	\$0.9800	reel of 500

LM2575-12 MDC	Unpackaged Die	Full production	N/A	N/A	Samples			tray of N/A
LM2575-15 MDC	Unpackaged Die	Full production	N/A	N/A	Samples			tray of N/A
LM2575-3.3 MDC	Unpackaged Die	Full production	N/A	N/A	Samples			tray of N/A
LM2575-5.0 MDC	Unpackaged Die	Full production	N/A	N/A	Samples			tray of N/A
LM2575-ADJ MDC	Unpackaged Die	Full production	N/A	N/A	Samples			tray of N/A
LM2575-12 MWC	Wafer	Full production	N/A	N/A				wafer jar of N/A
LM2575-15 MWC	Wafer	Full production	N/A	N/A				wafer jar of N/A
LM2575-3.3 MWC	Wafer	Full production	N/A	N/A				wafer jar of N/A
LM2575-5.0 MWC	Wafer	Full production	N/A	N/A				wafer jar of N/A
LM2575-ADJ MWC	Wafer	Full production	N/A	N/A				wafer jar of N/A

General Description

The LM2575 series of regulators are monolithic integrated circuits that provide all the active functions for a step-down (buck) switching regulator, capable of driving a 1A load with excellent line and load regulation. These devices are available in fixed output voltages of 3.3V, 5V, 12V, 15V, and an adjustable output versic

Requiring a minimum number of external components, these regulators are simple to use and include internal frequency compensation and a fixed-frequency oscillator.

The LM2575 series offers a high-efficiency replacement for popular three-terminal linear regulators. It substantially reduces the size of the heat sink, and in many cases no heat sink is required.

A standard series of inductors optimized for use with the LM2575 are available from several different manufacturers. This feature greatly simplifies the design of switch-mode power supplies.

Other features include a guaranteed $\pm 4\%$ tolerance on output voltage within specified input voltages and output load conditions, and $\pm 10\%$ on the oscillator frequency. External shutdown is included, featuring 50 (typical) standby current. The output switch includes cycle-by-cycle current limiting, as well as thermal shutdown for full protection under fault conditions.

Features

- 3.3V, 5V, 12V, 15V, and adjustable output versions

- Adjustable version output voltage range, 1.23V to 37V (57V for HV version) $\pm 4\%$ max over line and load conditions
- Guaranteed 1A output current
- Wide input voltage range, 40V up to 60V for HV version
- Requires only 4 external components
- 52 kHz fixed frequency internal oscillator
- TTL shutdown capability, low power standby mode
- High efficiency
- Uses readily available standard inductors
- Thermal shutdown and current limit protection
- P⁺ Product Enhancement tested

Applications

- Simple high-efficiency step-down (buck) regulator
- Efficient pre-regulator for linear regulators
- On-card switching regulators
- Positive to negative converter (Buck-Boost)

Design Tools

Title	Size in Kbytes	Date	 View Online	 Download	 Receive via Email
SimpleSwitcher® DC-DC Converters Design Software	11 Kbytes	30-Sep-2002	View		

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Application Notes

Title	Size in Kbytes	Date	 View Online	 Download	 Receive via Email
AN-1061: Application Note 1061 Power Conversion in Line-Powered Equipment	188 Kbytes	1-Oct-02	View Online	Download	Receive via Email
AN-1149: Application Note 1149 Layout Guidelines for Switching Power Supplies	113 Kbytes	26-Sep-02	View Online	Download	Receive via Email
AN-556: Application Note 556 Introduction to Power Supplies	159 Kbytes	25-Sep-02	View Online	Download	Receive via Email
AN-776: Application Note 776 20 Watt Simple Switcher Forward Converter	459 Kbytes	26-Sep-02	View Online	Download	Receive via Email

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