

MAX17498B Evaluation Kit

Evaluates: MAX17498B

General Description

The MAX17498B evaluation kit (EV kit) is a fully assembled and tested circuit board that contains an isolated 7W flyback DC-DC converter. The circuit uses the MAX17498B current-mode, fixed-frequency flyback converter in a 16-pin TQFN package with an exposed pad. The EV kit demonstrates the IC's cycle-by-cycle current limit, soft-start, and UVLO features.

The EV kit circuit output is configured for an isolated +5V and provides up to 1.5A of current. Low cost and high efficiency up to 88% are achieved using a flyback DC-DC converter topology operating at a fixed 500kHz switching frequency. The surface-mount transformer provides up to +1500V galvanic isolation at the output.

The EV kit operates from a +18V to +36V power supply capable of providing up to 1A.

Features

- ◆ +18V to +36 DC Voltage Input Range
- ◆ Isolated 5V, 1.5A Output
- ◆ Fixed 500kHz Switching Frequency
- ◆ 88% Efficiency
- ◆ Cycle-by-Cycle Current Limit
- ◆ High-Accuracy UVLO
- ◆ PGOOD Open-Drain Output
- ◆ Low-Cost Flyback Design
- ◆ Configurable for Primary-Side Regulation
- ◆ Proven PCB Layout
- ◆ Fully Assembled and Tested

[Ordering Information](#) appears at end of data sheet.

Component List

DESIGNATION	QTY	DESCRIPTION
C1	1	47 μ F \pm 20%, 63V electrolytic capacitor (8mm x 10.2mm) Panasonic EEE-FK1J470P
C2, C4	2	4.7 μ F \pm 10%, 50V X7R ceramic capacitors (1210) Murata GRM32ER71H475KA88L
C3	1	33nF \pm 10%, 50V X7R ceramic capacitor (0805) Murata GRM219R71H333K
C5	1	0.22 μ F \pm 10%, 50V X7R ceramic capacitor (0603) Murata GCM188R71H224KA64D
C6	1	2.2 μ F \pm 10%, 16V X7R ceramic capacitor (0805) Murata GRM21BR71C225KA12L
C7	1	47pF \pm 5%, 50V C0G ceramic capacitor (0603) Murata GRM1885C1H470J
C8, C18	0	Not installed, capacitors (0603) C8 is short (PC trace) and C18 is open
C9	1	68nF \pm 10%, 16V X7R ceramic capacitor (0603) Murata GRM188R71C683K

DESIGNATION	QTY	DESCRIPTION
C10	1	100pF \pm 5%, 50V C0G ceramic capacitor (0603) Murata GRM1885C1H101JA01D
C11	1	2.2 μ F \pm 10%, 10V X7R ceramic capacitor (0805) Murata GRM21BR71A225KA01L
C12, C13, C14	3	22 μ F \pm 10%, 16V X7R ceramic capacitors (1210) TDK C3225X7R1C226K
C15	1	4.7nF \pm 10%, 50V X7R ceramic capacitor (0603) Murata GRM188R71H472KA01D
C16	1	33pF \pm 5%, 50V X7R ceramic capacitor (0603) Murata GRM1885C1H330JA01D
C17	0	Not installed, capacitor (0805)
D1	1	150V, 1A rectifier (SMA) Diodes Inc. ES1C-13-F
D2	1	40V, 300mA rectifier (SOD123) Diodes Inc. SD103AW-13-F
D3	1	50V, 5A rectifier (SMC) Diodes Inc. B550C-13-F
D4	0	Not installed, diode (SOT323)

