



# THE DATASHEET OF MP3394SGS





### mEZ Product Options:

1. Ready-to-Use products
  2. Do-It-Yourself.
- Manufacture assistance is provided

### FEATURES

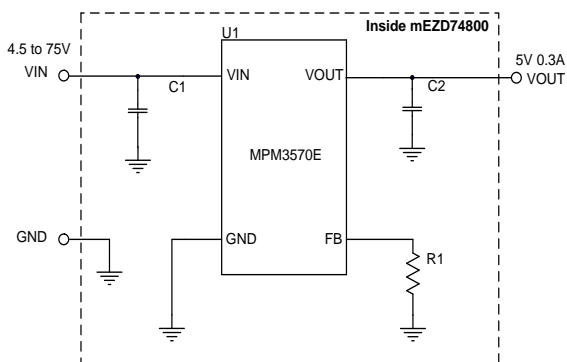
- 4.5V to 75V Wide Operating Input
- 0.3A Load Current
- Hiccup Short-Circuit Protection
- Over-/Under-Voltage Protection
- Over-Current Protection
- Over-Temperature Protection
- Open Design Files and BOM
- Meets EN55022 Class B Emissions

### ORDERING INFORMATION

Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)
MEZD74800A-A	6 - 75	3.3	0.3
MEZD74800A-B	6 - 75	5	0.3

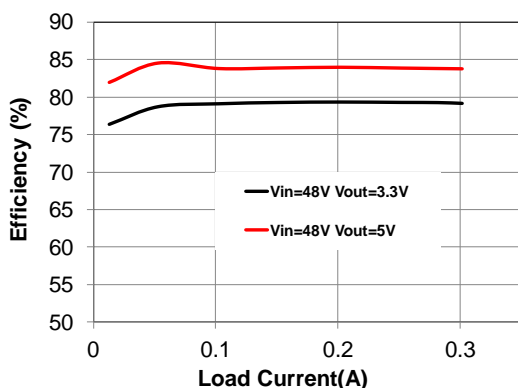
### ELECTRICAL CHARACTERISTICS

Input Voltage Range	$V_{IN\_MIN}$ higher than $V_{OUT}$ by 1V	4.5 to 75V
Output Voltage Set Accuracy		$\pm 1.7\%$ (Typ.)
Output Voltage Ripple	$V_{IN} = 48V, V_{OUT} = 3.3V, \text{ Full Load}$	44mV
Line Regulation	$V_{IN}$ from MIN to MAX, $V_{OUT} = 3.3V$	$\pm 0.5\%$ (Typ.)
Load Regulation	$I_{OUT}$ from MIN to MAX, $V_{OUT} = 3.3V$	$\pm 1\%$ (Typ.)
Switching Frequency	$V_{OUT} = 3.3V$	140kHz
	$V_{OUT} = 5V$	165kHz
Short-Circuit Protection	Short Output to Ground	Hiccup Mode
Operating Temperature Range		-40 to 85°C
Over-Temperature Protection	OTP	175°C
Rise Time	$V_{OUT}$ from 0% to 90%	1.54ms (Typ.)
Calculated MTBF	MIL-HDBK-217F	$4185 \times 10^3$ hrs



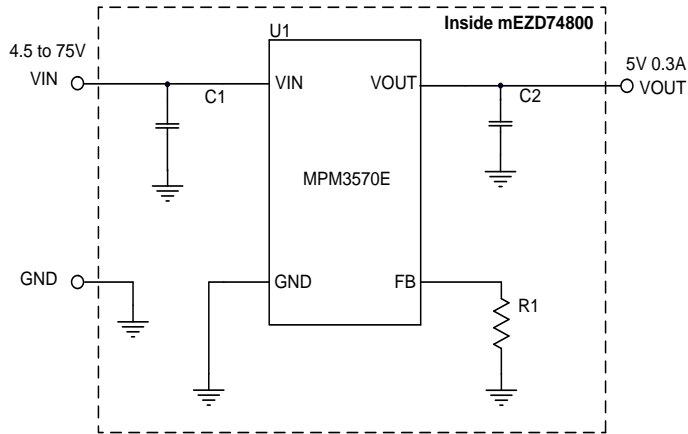
Block Diagram

Efficiency vs. Load Current  
 $V_{IN} = 48V, V_{OUT} = 3.3V$  and  $5V$



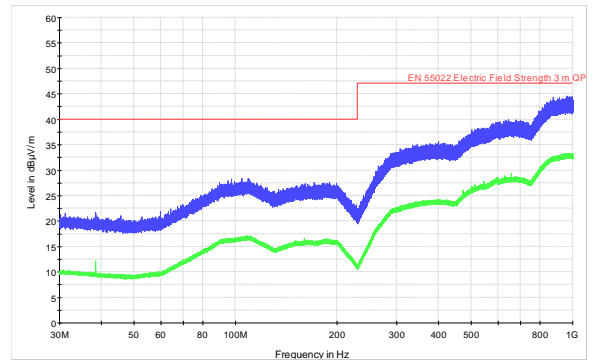
NOTE: All electrical characteristics are tested under 25°C ambient temperature,  $V_{IN} = 48V$  unless otherwise noted.

#### DO-IT-YOURSELF SCHEMATIC



#### RADIATED EMISSIONS

(EN55022 Class B)  
24V<sub>IN</sub>, 5V<sub>OUT</sub> @ 0.3A

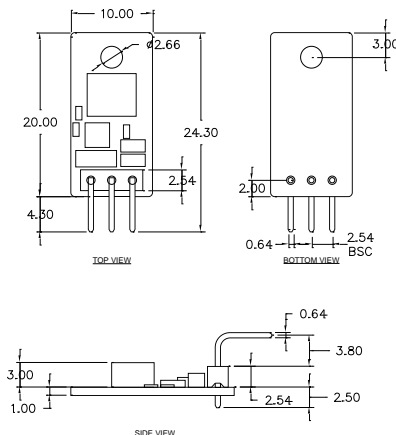


#### BILL OF MATERIALS

Item	Qty	RefDes	Value	Description	Package	Manufacturer	Manufacturer P/N
1	1	C1	4.7μF	Ceramic Cap., 100V, X7S	1210	muRata	GRM32DC72A475K
2	1	C2	22μF	Ceramic Cap., 10V, X7T	0805	muRata	GRM21BD71A226ME44L
3	1	R1	698kΩ*	Film Resistor, 0.5%	0402	Yageo	RC0402DR-07698KL
4	1	U1	MPM3570E	Synchronous Step-Down Module	LGA-10	MPS	MPM3570EGLD
5	1	P1	3-Pin	3-Pin Male Connector, Right Angle	Bulk	TE-Connectivity	571-3-644457-3

\*R1 = 698kΩ is for 5V output only, R1 = NS in 3V3 output version.

#### PRODUCT PACKAGE AND DIMENSIONS



Pin	Designation	Function
1	VIN	Input Voltage
2	GND	Power Ground
3	VOUT	Output Voltage

#### NOTE:

Contact factory for different sizes of the boards (Quantity >2k).

For more information, Gerber files, and PCB layout, please contact [mEZsupport@monolithicpower.com](mailto:mEZsupport@monolithicpower.com)

## Looking for pricing, stock, or lifecycle information?

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- ⊖ [View MP3394SGS on WIN SOURCE](#)
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- ✓ Shortage Management
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- ✓ Excess Inventory Management