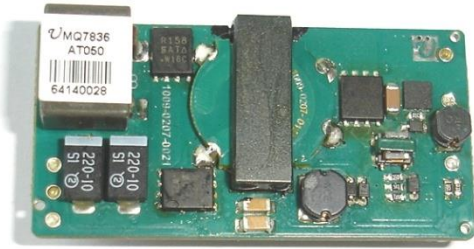


Isolated 18~36V input, single output 75W DC-DC Converter



FEATURES

- Wide operating voltage: 18~36V
- Single output:
 - 3V3/21 A
 - 5V/15 A
 - 12V/6.5 A
- Output power up to 75W
- Output current up to 6.25A
- High Efficiency TBD(12V/6.25A output)
- Synchronous Rectifiers Technology
- Frequency dithering for EMI friendly
- Over-current / Short-circuit protection
- Input under-voltage Protection
- Monotonic start-up
- Minimal space on PCB:
 - 50.8mm x 25.4mm x 10mm or
 - 2.0in x 1.0 in x 0.39in
- Wide Operating Temperature: -40°C~+85°C
- RoHS Compliant available

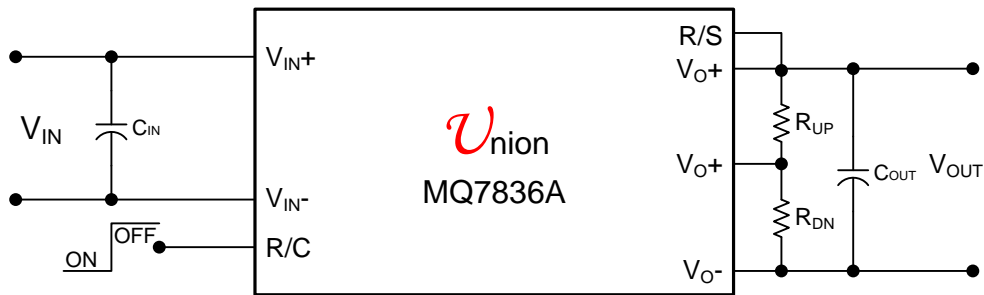
APPLICATIONS

- Telecommunication
- Data communication
- Distribute Power Architecture

Description

The MQ7836A Power Modules are isolated single dc-dc converter that operate over a wide input voltage range of 18Vdc to 36Vdc and provide a precisely (1%) regulated dc output in 1”*2” size. Such a module is suitable to application with 24V application. The modules of 12V output have a maximum output power 75W with typical efficiency to **TBD** at full load.

***** **Typical Application Circuit** *****

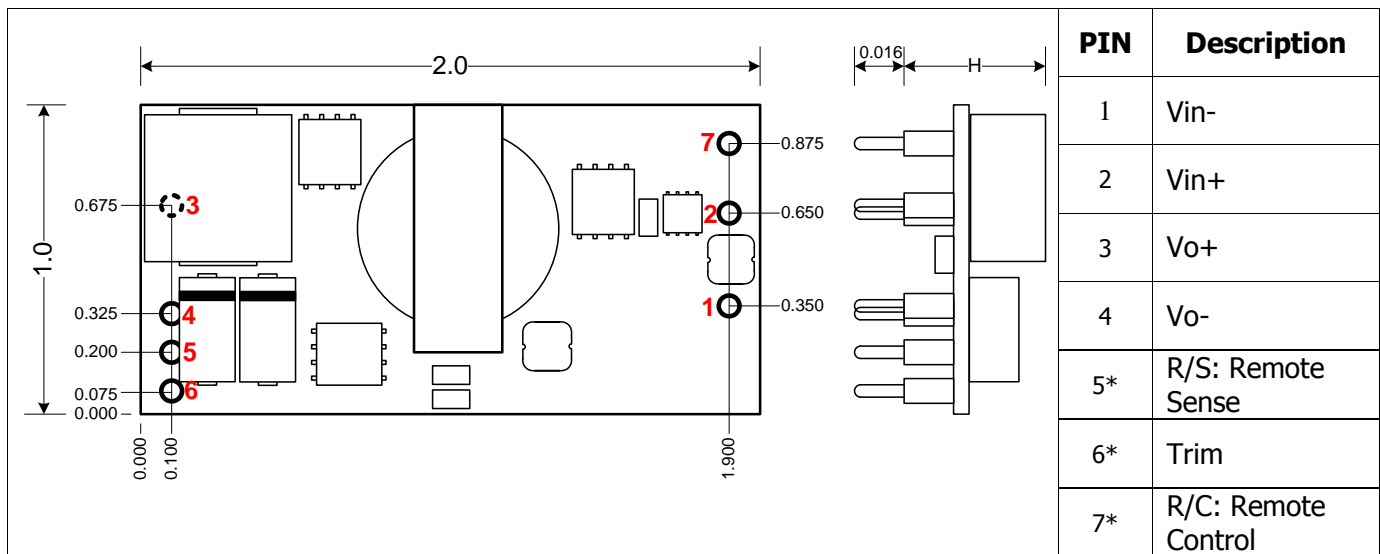


Performance Specifications (at TA=+25°C)

Model	Input V _{IN} Range (V)	Output				Efficiency (%)
		P _{OUT} (W)	V _{O1} (V)	Regulation		
				Line (%)	Load (%)	
MQ7836AT033	18~36	75	3V3	1	1	TBD
MQ7836AT050	18~36	75	5V	1	1	TBD
MQ7836AT120	18~36	75	12V	1	1	TBD
MQ7836AET033	18~36	75	3V3	1	1	TBD
MQ7836AET050	18~36	75	5V	1	1	TBD
MQ7836AET120	18~36	75	12V	1	1	TBD

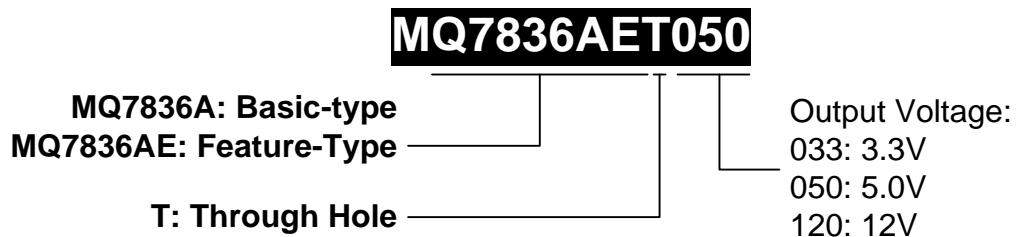
Mechanical Outline Diagram

Unit: millimeters (inches) Tolerances: x.x ± 0.5 mm (0.02 in.), x.xx ± 0.25 mm (0.010 in.), unless otherwise noted.



***Note: Available for MQ7836AE**

Ordering Information



Absolute Maximum Ratings

Note: These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability. Proper operation under conditions other than those listed in the Performance Specifications Table is not implied.

Parameter	Symbol	Min	Max	Unit
Input Voltage	V_{IN}	-0.3	80	V
Storage Temperature	T_{STG}	-40	125	°C

MQ7836A-050 Electrical Specifications: ($T_A=+25^{\circ}\text{C}$)

Parameter	Condition	Symbol	Min	Typ	Max	Unit
Input Voltage Range		V_{IN}	18	24	36	V
Operating range		$V_{IN, oip}$	18	24	36	V
Output Current		I_o	0		15	A
Output Voltage Set point	100% load	ΔV_o	-2		+2	%
Temperature Regulation	$T_A = T_{A, MIN}$ To $T_{A, MAX}$	-				% $V_{O, SET}$
Overcurrent Protection						A
Output Ripple and Noise Voltage	$I_o=6\text{A}$, 0~20MHz, refer to corresponding character figure					mVpp
Line Regulation	See each output's corresponding character figure					%
Load Regulation	See each output's corresponding character figure					%
Transient Response	Load step from 50%~100%~50% I_o, max $C_o=1000\mu\text{F}$ Al-cap					mVpp
						mS

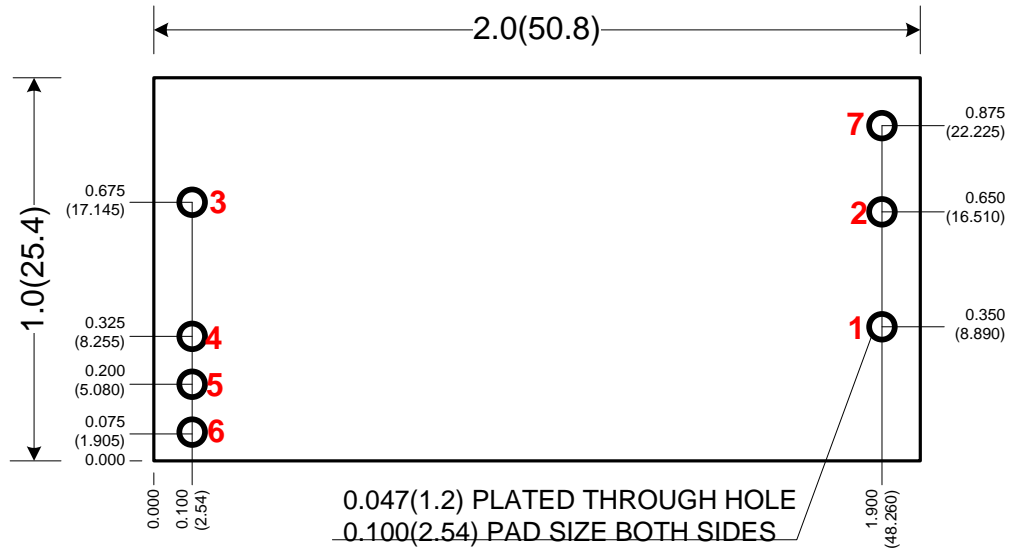
General Specifications

Parameter	Condition	Symbol	Min	Typ	Max	Unit
Under Voltage Lockout Trip Level	Rising			29.829		V
	Falling			29.533		
Start-up Delay			50		300	mS
Start-up Time	15A resistive load, no external output capacitors			50	100	mS
Switching Frequency		F_o		250		kHz
Operating Temperature	Natural convection		-40	25	85	°C
Vibration	3 Axes, 5 Min Each	10~55Hz, 0.35mm, 5g				
	3 Axes, 6 Times Each	Peak Deviation 300g, Settling Time 6mS				
MTBF			500,000			Hour

Recommended Hole Pattern

Unit: millimeters (inches)

Tolerances: x.x ± 0.5 mm (0.02 in.), x.xx ± 0.25 mm (0.010 in.), unless otherwise noted.



Component side footprint

Application Notes