

3 Watts

IZ Series



- Regulated Single & Dual Output
- Wide 2:1 Input Range
- SIP Package
- 1600 VDC Isolation
- Optional Metal Case
- Continuous Short Circuit Protection
- MTBF >2.4 MHrs

Specification

Input

Input Voltage Range	<ul style="list-style-type: none"> • 5 V models: 4.5 - 9.0 V • 12 V models: 9.0 - 18.0 V • 24 V models: 18.0 - 36.0 V • 48 V models: 36.0 - 72.0 V
Input Reflected Ripple	<ul style="list-style-type: none"> • 35 mA pk-pk through 12 μH inductor • 5 Hz to 20 MHz
Input Current	<ul style="list-style-type: none"> • See table
Input Filter	<ul style="list-style-type: none"> • Capacitor

Output

Output Voltage	<ul style="list-style-type: none"> • See table
Line Regulation	<ul style="list-style-type: none"> • $\pm 0.5\%$ max
Load Regulation	<ul style="list-style-type: none"> • $\pm 1.0\%$ max from 25-100% load
Setpoint Accuracy	<ul style="list-style-type: none"> • $\pm 1\%$ max
Start Up Rise Time	<ul style="list-style-type: none"> • 20 ms typical
Ripple & Noise	<ul style="list-style-type: none"> • 75 mV pk-pk max 20 MHz BW
Temperature Coefficient	<ul style="list-style-type: none"> • 0.02%/°C
Short Circuit Protection	<ul style="list-style-type: none"> • Continuous with auto recovery
Cross Regulation	<ul style="list-style-type: none"> • $\pm 5\%$ on dual output models
Transient Response	<ul style="list-style-type: none"> • $\pm 3\%$ deviation recovering to <1% within 300 μs for 25% load change
Maximum Capacitive Load	<ul style="list-style-type: none"> • See table
Remote On/Off	<ul style="list-style-type: none"> • Applying 5 V via 1 kΩ current limiting resistor (with respect to -V Input) turns output off

General

Efficiency	<ul style="list-style-type: none"> • See table
Isolation Voltage	<ul style="list-style-type: none"> • 1600 VDC,
Isolation Resistance	<ul style="list-style-type: none"> • $10^9 \Omega$
Isolation Capacitance	<ul style="list-style-type: none"> • 680 pF typical
Switching Frequency	<ul style="list-style-type: none"> • 100-650 kHz
MTBF	<ul style="list-style-type: none"> • >2.4 MHrs to MIL-STD-217F

Physical

Case Material	<ul style="list-style-type: none"> • Non-conductive black plastic (UL94V-0 rated), Optional metal: nickel coated copper (see note 2)
Pin Material	<ul style="list-style-type: none"> • C5191R-H solder coated
Potting Material	<ul style="list-style-type: none"> • Epoxy (UL94V-0 rated)
Lead Soldering Temperature	<ul style="list-style-type: none"> • 260 °C 1.5 mm from case for 10 s

Environmental

Operating Temperature	<ul style="list-style-type: none"> • -40 °C to +70 °C, derate from 100% load at 70 °C to 0% load at 100 °C
Storage Temperature	<ul style="list-style-type: none"> • -40 °C to +125 °C
Case Temperature	<ul style="list-style-type: none"> • 100 °C max
Cooling	<ul style="list-style-type: none"> • Convection-cooled
Humidity	<ul style="list-style-type: none"> • 95% RH, non condensing

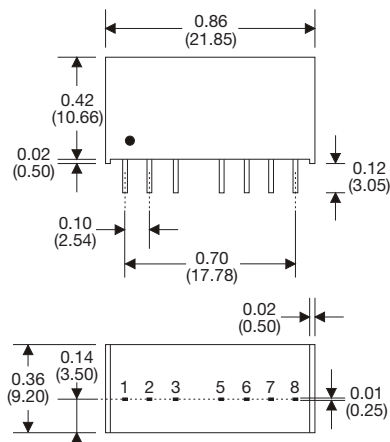
Input Voltage	No Load Input Current ⁽¹⁾	Full Load Input Current ⁽¹⁾	Output Voltage	Output Current	Efficiency	Max Capacitive Load	Model Number ⁽²⁾
4.5-9.0 V	65 mA	640 mA	3.3 V	700 mA	74%	2000 µF	IZ0503SA
	70 mA	800 mA	5.0 V	600 mA	76%	1000 µF	IZ0505SA
	75 mA	750 mA	12.0 V	250 mA	82%	470 µF	IZ0512SA
	75 mA	750 mA	15.0 V	200 mA	82%	220 µF	IZ0515SA
	90 mA	800 mA	±5.0 V	±300 mA	77%	±470 µF	IZ0505S
	90 mA	760 mA	±12.0 V	±125 mA	81%	±220 µF	IZ0512S
	90 mA	750 mA	±15.0 V	±100 mA	82%	±100 µF	IZ0515S
9.0-18.0 V	25 mA	260 mA	3.3 V	700 mA	76%	2000 µF	IZ1203SA
	15 mA	320 mA	5.0 V	600 mA	81%	1000 µF	IZ1205SA
	35 mA	305 mA	12.0 V	250 mA	84%	470 µF	IZ1212SA
	35 mA	305 mA	15.0 V	200 mA	84%	220 µF	IZ1215SA
	45 mA	320 mA	±5.0 V	±300 mA	80%	±470 µF	IZ1205S
	45 mA	308 mA	±12.0 V	±125 mA	83%	±220 µF	IZ1212S
	45 mA	312 mA	±15.0 V	±100 mA	82%	±100 µF	IZ1215S
18.0-36.0 V	15 mA	133 mA	3.3 V	700 mA	74%	2000 µF	IZ2403SA
	15 mA	160 mA	5.0 V	600 mA	79%	1000 µF	IZ2405SA
	20 mA	156 mA	12.0 V	250 mA	82%	470 µF	IZ2412SA
	20 mA	152 mA	15.0 V	200 mA	84%	220 µF	IZ2415SA
	20 mA	160 mA	±5.0 V	±300 mA	80%	±470 µF	IZ2405S
	20 mA	154 mA	±12.0 V	±125 mA	83%	±220 µF	IZ2412S
	20 mA	154 mA	±15.0 V	±100 mA	83%	±100 µF	IZ2415S
36.0-72.0 V	10 mA	66 mA	3.3 V	700 mA	75%	2000 µF	IZ4803SA
	10 mA	82 mA	5.0 V	600 mA	78%	1000 µF	IZ4805SA
	15 mA	78 mA	12.0 V	250 mA	81%	470 µF	IZ4812SA
	15 mA	78 mA	15.0 V	200 mA	81%	220 µF	IZ4815SA
	15 mA	82 mA	±5.0 V	±300 mA	78%	±470 µF	IZ4805S
	20 mA	80 mA	±12.0 V	±125 mA	80%	±220 µF	IZ4812S
	15 mA	78 mA	±15.0 V	±100 mA	81%	±100 µF	IZ4815S

Notes

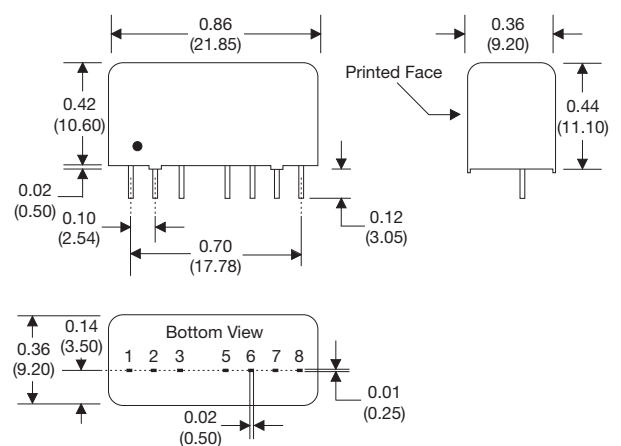
1. Measured at nominal input voltage.
2. For optional metal case, add suffix '-M' to model number.
3. Minimum load of 25% required to meet quoted specifications.

Mechanical Details

SIP Package - Non-conductive Plastic Case



SIP Package - Nickel Coated Copper Case



Dimensions are in inches (mm)
 Weight: Plastic case = 4.5 g
 Metal case = 6.5 g

PIN CONNECTIONS		
Pin	Single	Dual
1	-V Input	-V Input
2	+V Input	+V Input
3	Remote On/Off	Remote On/Off
5	N.C.	N.C.
6	+V Output	+V Output
7	-V Output	Common
8	NC	-V Output