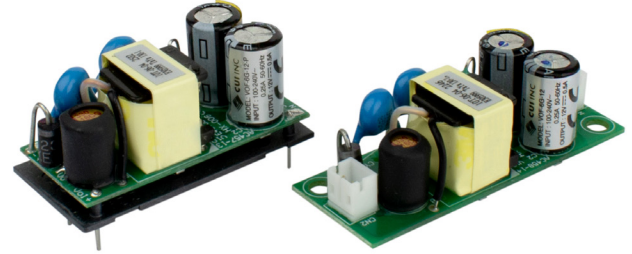


SERIES: VOF-6G | DESCRIPTION: INTERNAL AC-DC POWER SUPPLY

FEATURES

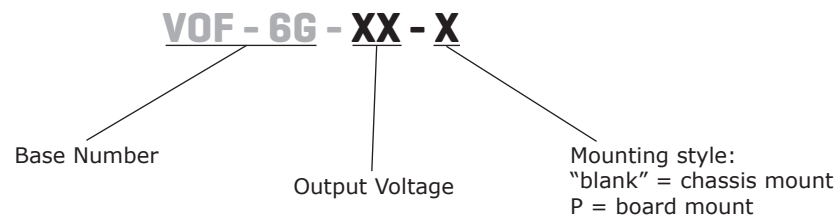
- universal input 90 ~ 264 Vac
- high efficiency up to 83%
- compact size (1.55 x 0.76 inch)
- low no load power consumption (<0.075 W)
- certified to IEC/EN/UL 62368-1
- designed to meet IEC/EN 60335-1
- operating temperature -40 ~ 80°C (with derating)
- class II
- over voltage (OVC II & OVC III) and short-circuit protection
- operating altitude 5,000 m
- CISPR/FCC Class B



MODEL	output voltage	output current	output power	ripple and noise ¹	efficiency ²
	(Vdc)	max (A)	max (W)	max (mVp-p)	typ (%)
VOF-6G-3	3.3	1.50	4.95	100	75
VOF-6G-5	5	1.20	6.0	100	78
VOF-6G-9	9	0.67	6.0	100	81
VOF-6G-12	12	0.50	6.0	120	81
VOF-6G-15	15	0.40	6.0	150	81
VOF-6G-24	24	0.25	6.0	240	83

Notes: 1. Ripple & noise are measured at 20 MHz BW with 0.1 μ F ceramic capacitor and a 10 μ F electrolytic capacitor
 2. Typical efficiency at 230 Vac and full load at 25°C.
 3. Unless otherwise specified, all indicators in this manual are measured at Ta=25 °C, humidity<75% RH, nominal input voltage, and output rated load.

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage ⁴	ac input	90	100~240	264	Vac
	dc input	120		370	Vdc
frequency		47	50~60	63	Hz
current	at full load, 100 Vac			0.25	A
inrush current	at 240 Vac, cold start at 25°C			90	A
leakage current				0.25	mA
no load power consumption				0.075	W

Notes: 4. The safety approvals only apply to the ac input.

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	3.3 Vdc output model			1,500	μF
	5 Vdc output model			1,200	μF
	9 Vdc output model			670	μF
	12 Vdc output model			500	μF
	15 Vdc output model			400	μF
	24 Vdc output model			250	μF
output voltage accuracy	3.3 Vdc output model			±6	%
	5 & 9 Vdc output model			±5	%
	12, 15 & 24 Vdc output model			±3	%
line regulation	low line to high line			±1	%
load regulation	10% ~ 100% load				
	3.3 Vdc output model			±6	%
	5 & 9 Vdc output model			±5	%
	12, 15 & 24 Vdc output model			±3	%
hold-up time	at 115 Vac		12		ms
switching frequency		30		70	kHz

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over current protection	auto recovery, hiccup	110		200	%
over voltage protection	auto recovery, hiccup				
	3.3 & 5 Vdc output model	6.45		7.14	Vdc
	9 Vdc output model	10.5		12.1	Vdc
	12 Vdc output model	14.3		15.8	Vdc
	15 Vdc output model	17.1		19.5	Vdc
	24 Vdc output model	28.5		31.5	Vdc
short circuit protection	auto recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 1 minute			4,300	Vac
safety approvals	certified to 62368-1: IEC, EN, UL designed to meet 60335-1: IEC, EN				
safety class	Class II, IEC/EN/UL 62368-1, IEC 60950-1 Ed.3.0				
EMC emission	EN 55032:2015+A1:2020, EN 55032:2015+A11:2020, CISPR PUB. 22, FCC Part 15 Subpart B, EN 61000-6-3:2021, EN 61000-6-4:2019 EN 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A2:2021, Class B				
conducted disturbance	EN 55032:2015+A1:2020, EN 55032:2015+A11:2020, CISPR PUB. 22, FCC Part 15 Subpart B, EN 61000-6-3:2021, EN 61000-6-4:2019 Class B				
radiated disturbances	EN 55032:2015+A1:2020, EN 55032:2015+A11:2020, CISPR PUB. 22, FCC Part 15 Subpart B, EN 61000-6-3:2021, EN 61000-6-4:2019 Class B				
harmonic current emissions	EN 61000-3-2:2019+A1:2021				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
voltage fluctuations & flicker	EN 61000-3-3:2013+A2:2021				
EMC immunity	EN 55035:2017+A11:2020, EN 61000-6-1:2019, EN 61000-6-2:2019, IEC 61000-4-2,3,4,5,6,11				
ESD	IEC 61000-4-2:2008, Air Discharge: ± 8 kV, Contact Discharge: ± 4 kV, perf. Criteria A				
EFT/burst	IEC 61000-4-4:2012, ± 1.0 kV, ± 2 kV, perf. Criteria A				
surge	IEC 61000-4-5:2014+A1:2017, L-N: ± 0.5 kV, ± 1 kV, perf. Criteria A				
conducted disturbance	IEC 61000-4-6:2013+COR1:2015, perf. Criteria A				
voltage dips	IEC 61000-4-11:2020, Dip: 30% Reduction, Dip >95% Reduction, perf. Criteria A				
voltage interruptions	IEC 61000-4-11:2020, >95% Reduction, perf. Criteria B				
MTBF	MIL-HDBK-217F at 25°C			1,120,000	hours
RoHS	yes				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-40		80	°C
storage temperature		-40		85	°C
storage humidity	non-condensing	0		93	%
operating altitude	IEC/EN/UL 62368-1 OVC II			5,000	m
	IEC 62368-1 OVC III			2,000	m

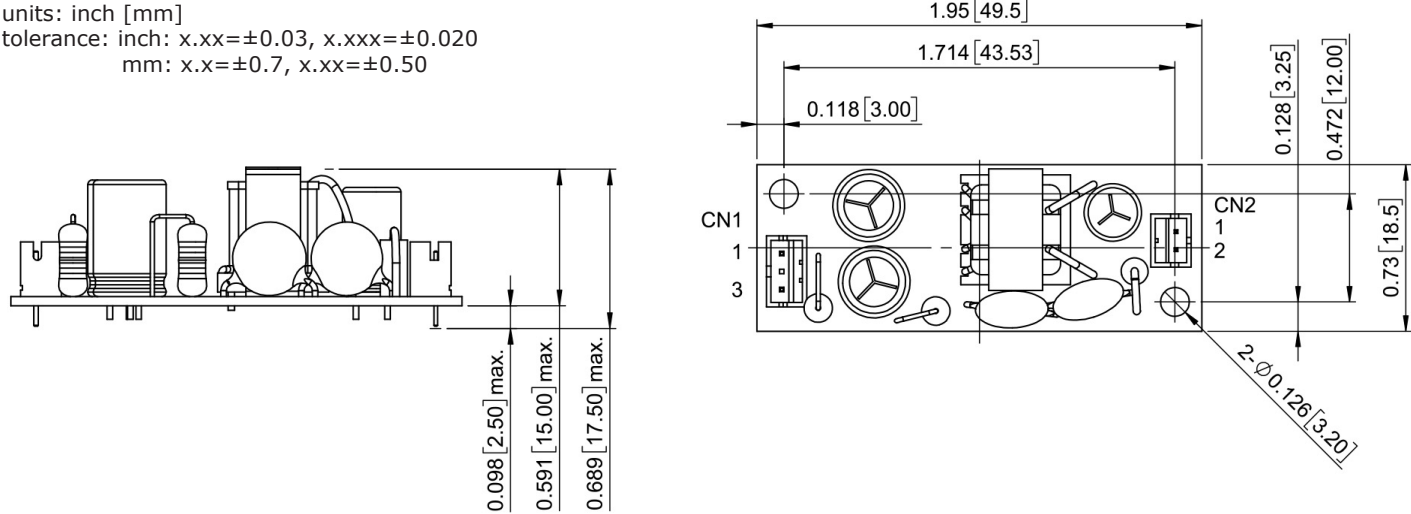
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	chassis mount: 1.56 x 0.76 x 0.72 [39.5 x 19.4 x 18.3 mm]				inch
	board mount: 1.95 x 0.73 x 0.689 [49.5 x 18.5 x 17.50 mm]				inch
weight	chassis mount		11		g
	board mount		12		g

MECHANICAL DRAWING

Chassis mount

units: inch [mm]
tolerance: inch: x.xx=±0.03, x.xxx=±0.020
mm: x.x=±0.7, x.xx=±0.50



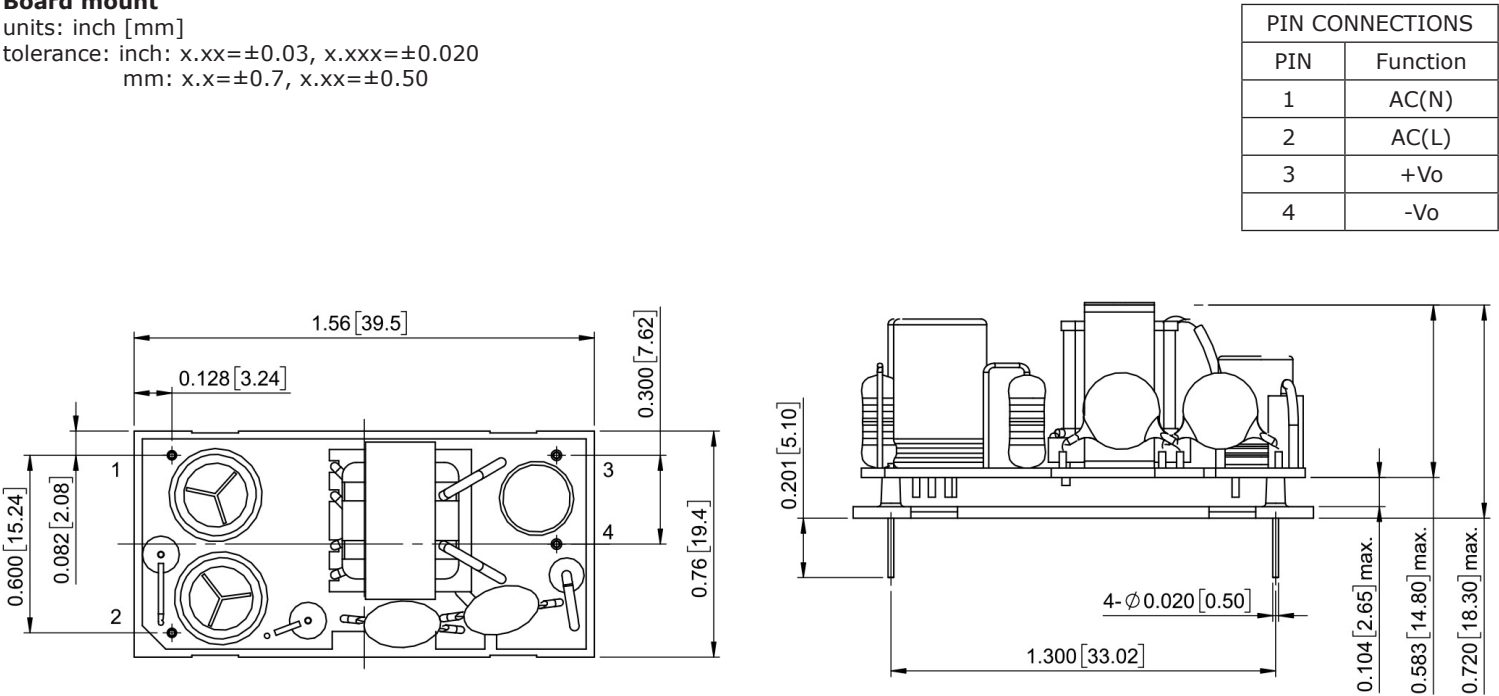
AC Input Connector (CN1): JST B3B-PH-K-S(LF)(SN) or equivalent			
PIN CONNECTIONS		Mating Housing	Terminal
PIN	Function		
1	AC(N)	TKP PHR-3 or equivalent	TKP SPH-002T-P0.5L or equivalent
2	-		
3	AC(L)		

DC Output Connector (CN2): JST B2B-PH-K-S(LF)(SN) or equivalent			
PIN CONNECTIONS		Mating Housing	Terminal
PIN	Function		
1	+Vo	TKP PHR-2 or equivalent	TKP SPH-002T-P0.5L or equivalent
2	-Vo		

MECHANICAL DRAWING

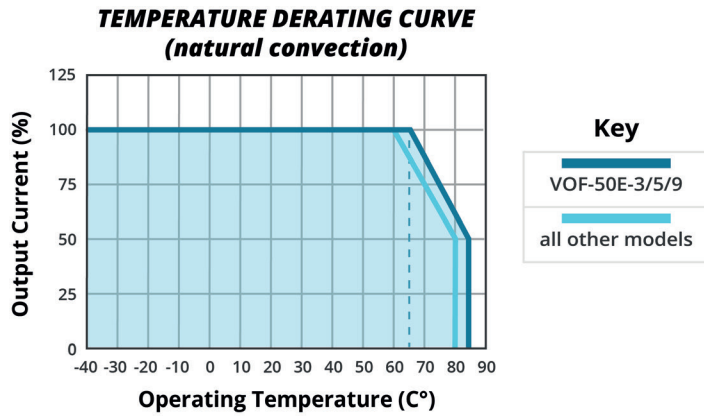
Board mount

units: inch [mm]
tolerance: inch: x.xx=±0.03, x.xxx=±0.020
mm: x.x=±0.7, x.xx=±0.50

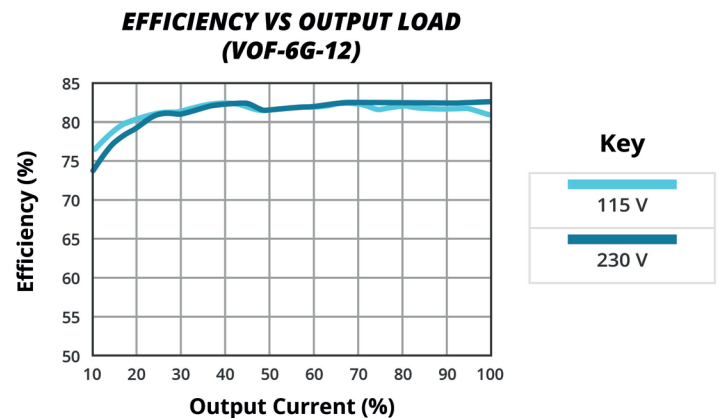
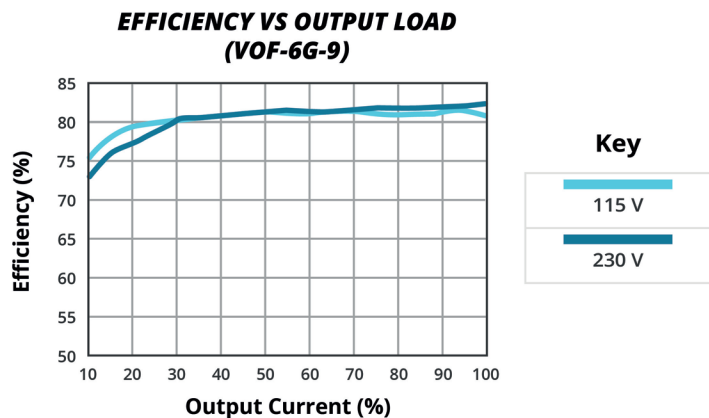
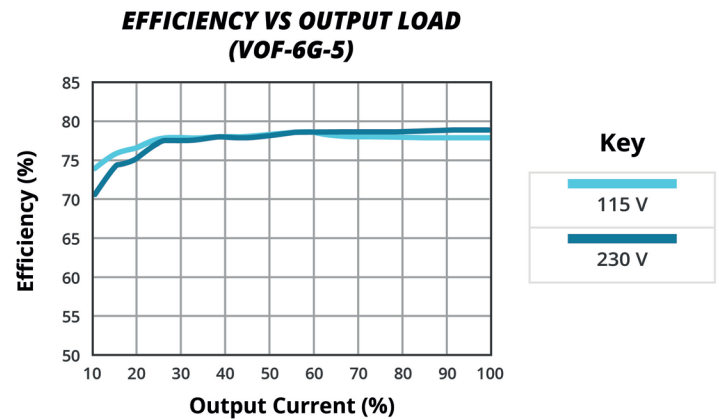
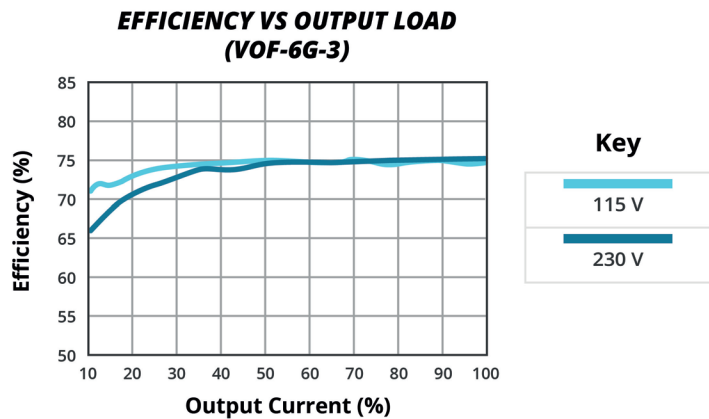


PIN CONNECTIONS	
PIN	Function
1	AC(N)
2	AC(L)
3	+Vo
4	-Vo

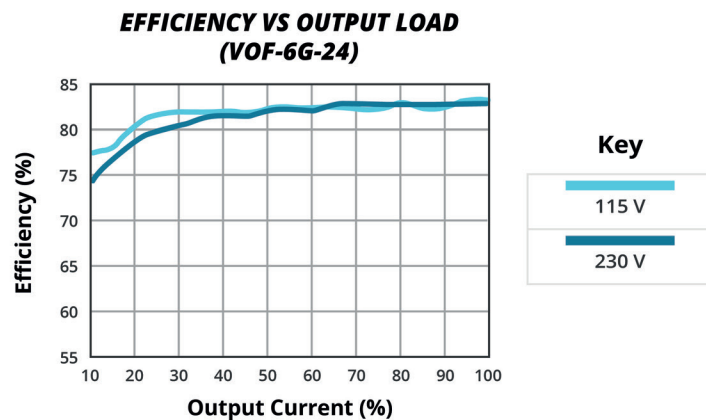
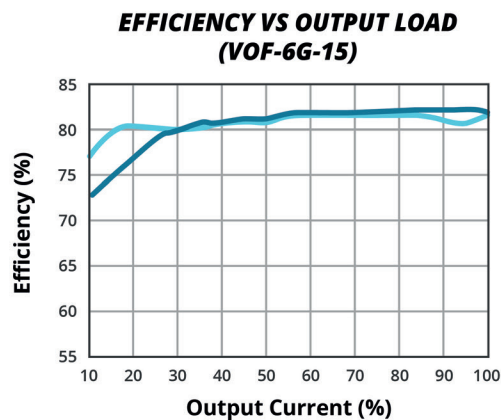
DERATING CURVE



EFFICIENCY CURVES

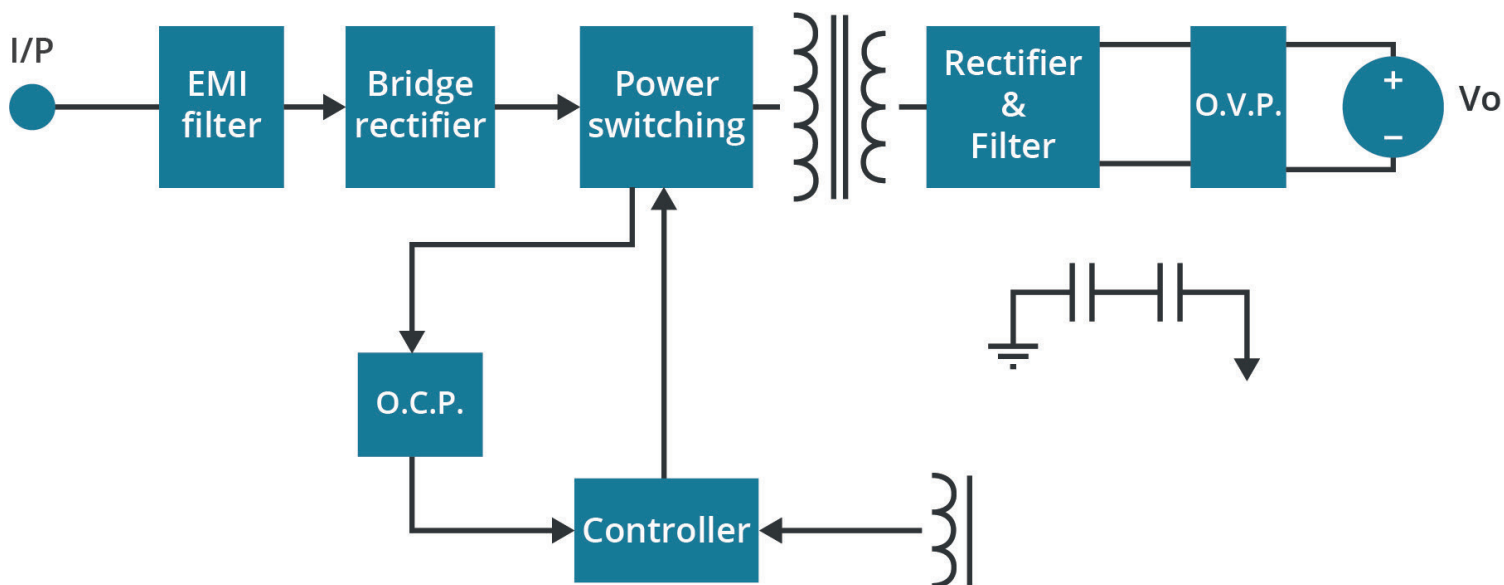


EFFICIENCY CURVES (CONTINUED)



ELECTRICAL BLOCK DIAGRAM

Figure 1



REVISION HISTORY

rev.	description	date
1.0	initial release	07/10/2025

The revision history provided is for informational purposes only and is believed to be accurate.



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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
voltage fluctuations & flicker	EN 61000-3-3:2013+A2:2021				
EMC immunity	EN 55035:2017+A11:2020, EN 61000-6-1:2019, EN 61000-6-2:2019, IEC 61000-4-2,3,4,5,6,11				
ESD	IEC 61000-4-2:2008, Air Discharge: ±8 kV, Contact Discharge: ±4 kV, perf. Criteria A				
EFT/burst	IEC 61000-4-4:2012, ±1.0 kV, ±2 kV, perf. Criteria A				
surge	IEC 61000-4-5:2014+A1:2017, L-N: ±0.5 kV, ±1 kV, perf. Criteria A				
conducted disturbance	IEC 61000-4-6:2013+COR1:2015, perf. Criteria A				
voltage dips	IEC 61000-4-11:2020, Dip: 30% Reduction, Dip >95% Reduction, perf. Criteria A				
voltage interruptions	IEC 61000-4-11:2020, >95% Reduction, perf. Criteria B				
MTBF	MIL-HDBK-217F at 25°C			1,120,000	hours
RoHS	yes				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-40		80	°C
storage temperature		-40		85	°C
storage humidity	non-condensing	0		93	%
operating altitude	IEC/EN/UL 62368-1 OVC II			5,000	m

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	1.620 x 0.830 x 0.787 [41.1x21.0x20.00 mm]				inch
weight			30		g

MECHANICAL DRAWING

units: inch [mm]
tolerance: inch: x.xx=±0.03, x.xxx=±0.020
mm: x.x=±0.7, x.xx=±0.50

