



DC/DC Regulator ERL 06-10W Series



- * DC/DC regulator module none isolated
- * LC-filter at input
- * High efficiency
- * No derating up to 71°C
- * Low output ripple and noise
- * Low silhouette

- * DC/DC Regler ohne galvanischer Trennung
- * LC-Filter am Eingang
- * Hoher Wirkungsgrad
- * Keine Lastminderung bis zu 71°C
- * Gute Werte von Ripple und Noise
- * Geringe Bauhöhe

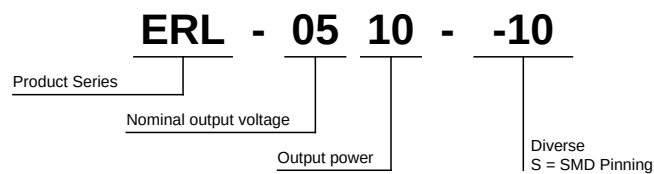
- * Régulateur sans séparation galvanique
- * Filtre en LC à l'entrée
- * Rendement élevé
- * Pas de derating jusqu' à 71°C
- * Ondulation résiduelle de sortie très faible

Product Range

Typenübersicht

Sommaire des types

Model	Input		Input current @ Uin nom.		Uout	Output lout max.	power	Efficiency typ.
	nominal	range	full load	no load				
Single								
ERL3V306-10	5Vdc	4.7...6Vdc	1550mA	15mA	3.3Vdc	2000mA	6.6W	85%
ERL3V307-10	24Vdc	9...32Vdc	655mA	15mA	3.3Vdc	2000mA	6.6W	84%
ERL0510-10	24Vdc	9...32Vdc	950mA	15mA	5.0Vdc	2000mA	10W	88%
ERL1210-10	24Vdc	9...32Vdc	1000mA	15mA	12Vdc	830mA	10W	87%
ERL1510-10	24Vdc	9...32Vdc	1000mA	15mA	15Vdc	667mA	10W	87%



Specifications

Spezifikationen

Specifications

All values refer to an ambient temperature of 25°C and nominal rated values where nothing else is specified.

Input Specifications

Characteristic	Conditions	min	typ	max	unit
U_{IN} Input voltage		see	product	range	V
U_{UVLO} Under voltage lockout					V
Max. input current at full load					A
No load input current			15		mA

Output Specifications

Characteristic	Conditions	min	typ	max	unit
U_{ACC} Output voltage accuracy		±2			%
Output voltage adjust					%
Line regulation			±0.5		%
Load regulation	10% / 100% step load change		±0.5		%
Load transient recovery time					µs
Load transient error band					%
Temperature coefficient			±0.05		%/K
Ramp up time					ms
Start up time					ms
Ripple and noise	BW = 20MHz	3V3/5V: 100, others: 1% of Uout			mVpp
Current limit		120		160	%
Over voltage protection					%
Short circuit protection					%
Short circuit characteristic		continuous			

General Specifications

Characteristic	Conditions	min	typ	max	unit
U_{ISO} Isolation voltage		none			V
R_{ISO} Isolation resistance					Ohm
R_{ISO} Switching frequency		150 typ.			kHz
Approvals					
Safety Approvals					
MTBF					h

	Case material		black coated copper with plastic base	
	Compound material			
	PCB material			
	Weight		17.8	gr
	Dimensions		31.8 x 20.3 x 10.2	mm
	Soldering infos		275°C for 10	s

EMC Specifications

Characteristic		Conditions	min	typ	max	unit
	EMC conducted	See EMC information				

Environmental Specifications

Characteristic		Conditions	min	typ	max	unit
T _{AMB}	Operation temperature		-25...+71			°C
T _{AMB}	Storage temperature		-40...+100			°C
T _{SD}	Thermal shutdown range					°C

Own notes

Eigene Notizen

Vos notices

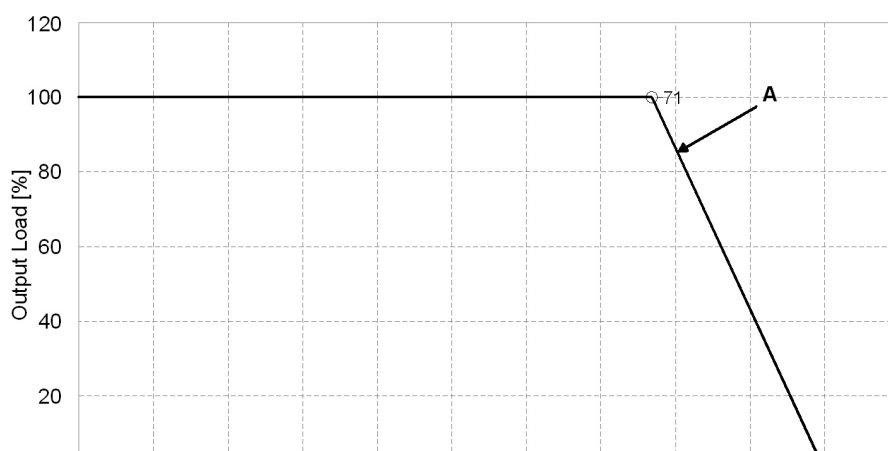
No EMC graph available yet, please contact factory

No EMC filter available yet, please contact factory

Derating

ERL 06-10W

The operating case temperature range of ERL 06-10W series is -25...+71°C. When operating the ERL 06-10W series, proper derating or cooling is needed. The following curves are the derating curves of ERL 06-10W. Please note that these are relative values in a test environment. Ambient temperature can not be exactly defined in an application, only the case temperature.



Own notes

Eigene Notizen

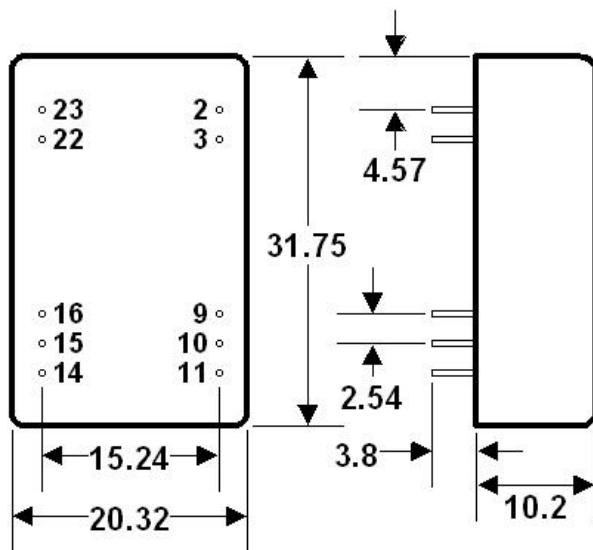
Vos notices

Ambient Temperature, Ta [°C]

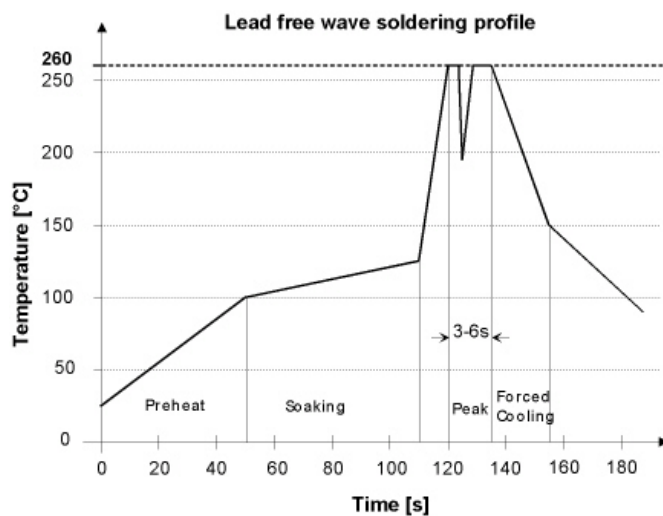
Normal tolerance 1/10 ± 0.5 mm, 1/100 ± 0.25 mm; Pin tolerance ± 0.5 mm diameter

NP = No pin, NC = Not connected, NA = Not available for electrical contact, do not connect

BOTTOM VIEW SIDE VIEW



Pin	Single
2	Gi
3	Gi
9	Go
10	NC
11	+Vo
14	+Vo
15	NC
16	Go
22	Vi
23	Vi



1. Soldering Materials: Sn/Cu/Ni
2. Preheat: 1.4 °C/s (From 30°C to 100°C)
3. Soaking: 0.5 °C/s (From 100°C to 130°C), 60 $\pm$ 20s
4. Peak temperature: 260°C, above 250°C 3~6s
5. Forced cooling: -10.0 °C/s (From 260°C to 150°C)

Cleaning

The modules are cleanable with the today's known and in the electronics industry usually used products. Due to the different cleaning processes and new available products, we highly recommend to do a compatibility test when using the converters the first time.

Waschen

Die Module sind waschbar mit den heute bekannten und in der Elektronikindustrie üblichen Reinigungsmitteln. Bedingt durch die verschiedenen Reinigungsprozesse und neu auf den Markt kommende Mittel, raten wir dringend beim Ersteinsatz der Konverter eine Verträglichkeitsprüfung vorzunehmen.

Lavage

Les modules sont lavables avec les solvants couramment utilisés dans l'industrie électronique. Dû aux différents processus de lavage et aux nouveaux détergents disponibles sur le marché, il est strictement recommandé de faire un test de compatibilité avant la première utilisation.

Own notes

Eigene Notizen

Vos notices

Notice: All statements, technical information, and recommendations related to FABRIMEX's products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before utilizing the product, the user should determine the suitability of the product for its intended use.

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