

FEATURES:

- 1" X 1" DIL Package
- 4:1 Wide Input Voltages Range
- Regulated Output Types
- High Efficiency Up To 92%
- Customized Solutions Available
- Remote Control: On/Off
- UL/cUL/IEC 60950-1 , 62368-1 Approved (5V/12V Single Output Only)
- EMC Standard of EMI EN55032:2012+AC:2013 (Class B) Approved
- MC Standard of EMS EN55024:2010 Approved
- UL Recognized

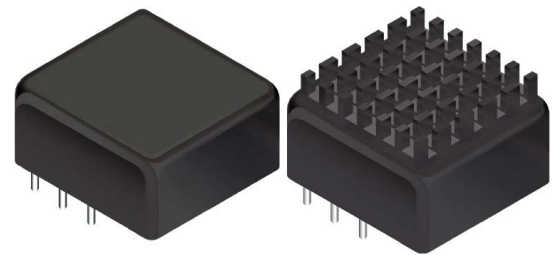
Specifications typical at TA=25°C nominal input voltage and rated output current unless otherwise specified

Part Number	Input Voltage Range		Input Current (mA TYP)		Output Voltage Range		Output Current	Efficiency
	Vdc	No Load	Full Load	Vdc	mA	%TYP		
RQ9S-24S12R	9~36	10	1404	12	2500	89		
RQ9S-24S05R	9~36	10	1420	5	6000	88		
RQ9S-24S24R	9~36	10	1389	24	1250	90		
RQ9S-48S05R	18~75	7	702	5	6000	89		



DC-DC Converter RQ9S Series

30 Watt 1.5KV Isolated
4:1 Input Voltage Range
Single & Dual Output
1" x 1"



Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types	Vo, Io Nom			4:1	
Surge Voltage (1 sec. max.)	24V models			50	Vdc
	48V models			100	
Remote ON/OFF	Positive logic	DC-DC ON		Open or 3 ~ 15VDC	
		DC-DC OFF		Short or 0 ~ 1.2VDC	
	Input current of Ctrl pin			-0.5 ~ +1.0 mA	
	Remote off input current			2.0 mA TYP	

Part Number

RQ9 X - XX X XX X X
A B C D E F G

- A: Series
- B: Package
- C: Input Voltage
- D: Single (S) / Dual Output (D)
- E: Output Voltage
- F: Regulated (R)
- G: Isolation Voltage

Output Specifications

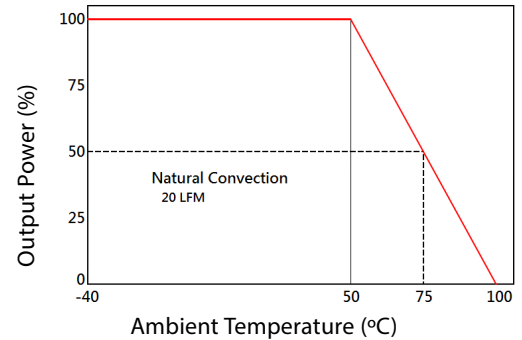
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±2	%
Short Circuit Protection	Continuous, Auto-Recovery				
Output Power Protection	Continuous, Auto-Recovery	110		170	%
Over Voltage Protection	3.3Vdc	3.7		5.4	
	5Vdc	5.6		7.0	
	12Vdc	13.5		19.6	Vdc
	15Vdc	18.3		22.0	
	24Vdc	29.1		32.5	
Line Regulation	Nominal Input Voltage			±0.5	%
Load Regulation	Single			±0.5	%
Ripple & Noise	BW=DC To 20MHz Single: 3.3V & 5V with 22uF 12V & 15V with 2*22uF 24V with 2*6.8uF			100	mVp-p
Start up time	Nominal Input Voltage			30	ms
Transient Response Setting Time	25% load step change		350		us

General Specifications

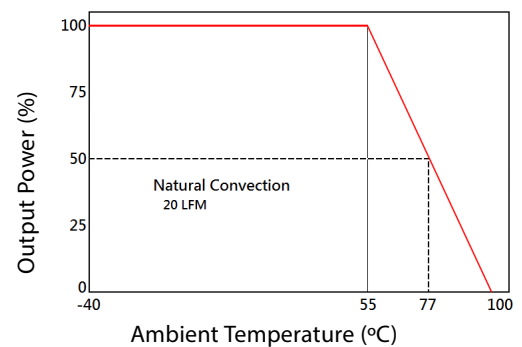
Parameters	Conditions	Min	Typ	Max	Units
Isolation Voltage	Input To Output	1500			Vdc
	Input (Output) To Case	1000			
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	3.3 & 5.0 Vout models:	245	275	305	KHz
	other models:	300	330	360	
Operating Temperature	Without Heatsink	-40		75	°C
	With Heatsink	-40		77	
Case Temperature				105	°C
Humidity	Non Condensing	5		95	%
Cooling	Natural Convection (20LFM)				
Case Material	Six-side shield case				
MTBF	MIL-HDBK-217F@25°C	1,200,000			Hours
Weight	Without Heatsink		22		g
	With Heatsink		24.5		
Dimensions			25.4x25.4x10.6		mm

Temperature Derating Graph @20LFM

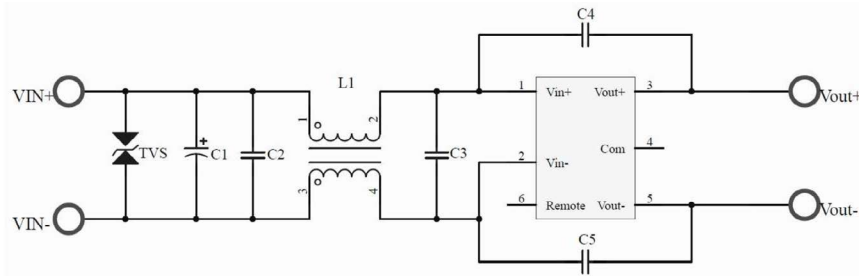
Derating Curve



Derating Curve With Heat-Sink

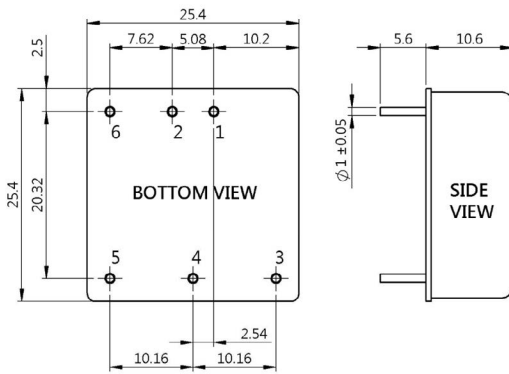


Recommended Test Circuit



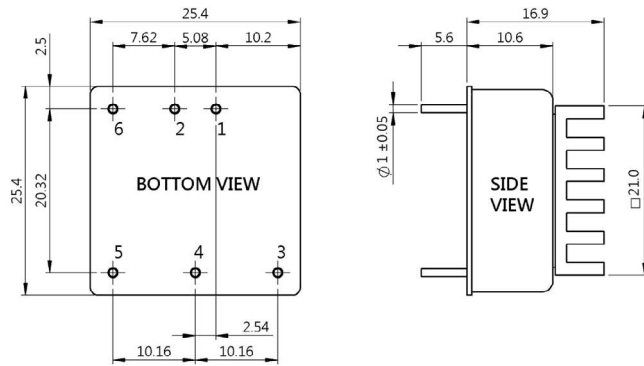
24V C1 220uF/100V&C2&C3 4.7uF/50V C4&C5 2200pF/2kV L1 0.94mH TVS 3.0SMCJ58AG
 48V C1 220uF/100V&C2&C3 4.7uF/100V C4&C5 3200pF/2kV L1 6.20mH TVS 3.0SMCJ120AG

Dimensions



No Heat Sink

UNIT: mm
 Tolerances are XX.X±0.5, XX.XX±0.25



Heat Sink

UNIT: mm
 Tolerances are XX.X±0.5, XX.XX±0.25

PIN Connection

PIN	1	2	3	4	5	6
Single	+Vin	-Vin	+Vout	Trim	-Vout	Remote ON/OFF
Dual	+Vin	-Vin	+Vout	Com	-Vout	Remote ON/OFF