

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
- RoHS Compliant

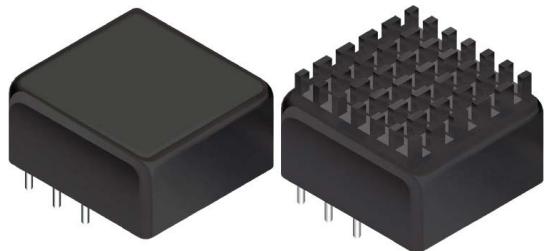
Specifications typical at TA=25°C nominal input voltage and rated output current unless otherwise specified

Part Number	Input Voltage Range	Input Current (mA TYP)		Output Voltage Range	Output Current	Efficiency
	Vdc	No Load	Full Load			
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 A X - C XX D X E F X 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

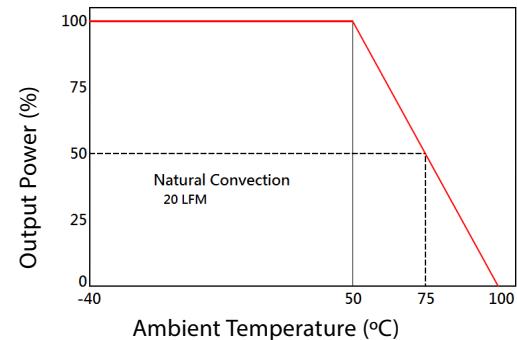
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±2	%
Short Circuit Protection	Continuous, Auto-Recovery				
Over Voltage Protection	Continuous, Auto-Recovery	110	170		%
	3.3Vdc	3.7	5.4		
	5Vdc	5.6	7.0		
	12Vdc	13.5	19.6		Vdc
	15Vdc	18.3	22.0		
	24Vdc	29.1	32.5		
Line Regulation	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

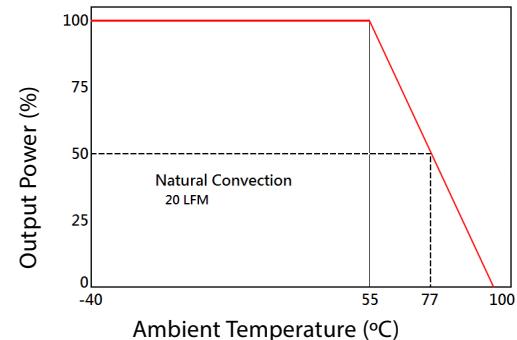
Parameters	Conditions	Min	Typ	Max	Units
Isolation Voltage	Input To Output	1500			
	Input (Output) To Case	1000			Vdc
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	3.3 & 5.0 Vout models: other models:	245 300	275 330	305 360	KHz
Operating Temperature	Without Heatsink	-40		75	°C
	With Heatsink	-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

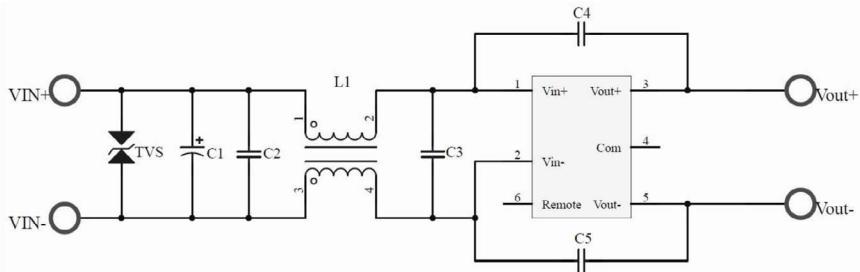
Derating Curve



Derating Curve With Heat-Sink

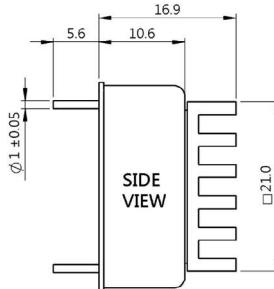
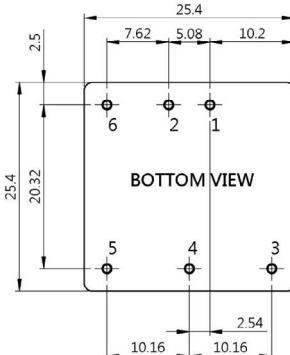
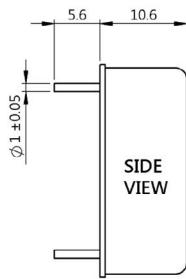
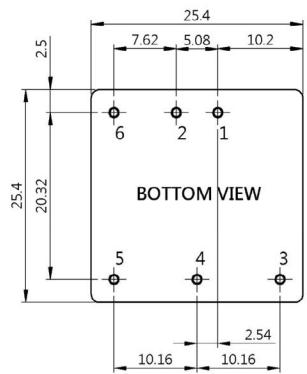


Recommended Test Circuit



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 \pm 0.5, XX.XX \pm 0.25

Heat Sink

UNIT: mm

Tolerances are XX.X \pm 0.5, XX.XX \pm 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