TDK-Lambda

RDS50-110

SPECIFICATIONS

	ITEMS	MODEL		RDS50-110-5	RDS50-110-12	RDS50-110-15	RDS50-110-24
1	Nominal Output Voltage		V	5	12	15	24
2	Maximum Output Current		A	10.0	4.2	3.4	2.1
3	Maximum Output Power		W	50.0	50.4	51.0	50.4
4	Efficiency (Typ)	(*1)	%	83	84	84	84
5	Input Voltage Range	(*7)	-	60 to 143VDC (100% Load), 143 to 160VDC (80% Load)			
6	Input Current (Typ)	(*1)	A	0.55			
7	Inrush Current (Typ)	(*1)	-	3.7A			
8	Output Voltage Range	(*8)	V	4.5 - 6.0	10.8 - 13.2	13.5 - 16.5	21.6 - 26.4
9	Maximum Ripple	(*2)	mV	80	100	100	120
10	Maximum Ripple & Noise	(*2)	mV	100	120	150	240
11	Maximum Line Regulation	(*3)	mV	25	60	75	120
12	Maximum Load Regulation	(*4)	mV	50	120	150	240
13	Temperature Coefficient		-	Less than 0.02 %/ °C			
14	Over Current Protection	(*5)	A	10.5 - 14	4.4 - 6.1	3.5 - 5.0	2.2 - 3.1
15	Over Voltage Protection	(*6)	V	6.2 - 7.3	15.0 - 17.4	18.7 - 21.8	30.0 - 34.8
16	Remote ON/OFF control		-	Possible			
17	Parallel Operation		-	-			
18	Series Operation		-	Possible			
19	Operating Temperature	(*7)	-	-20 to +71°C (-20 to +50°C:100%, +60°C:60%, +71°C:50%) Need Forced Air Cooling between 60 & 71°C Only Start-up Guarantee between -40 & -20°C			
20	Operating Humidity		-	20 to 95%RH (No Condensing)			
21	Storage Temperature		-	-40 to +85°C			
22	Storage Humidity		-	10 to 95%RH (No Condensing)			
23	Cooling	(*7)	-	Convection Cooling, Forced Air Cooling			
24	Withstand Voltage		-	Input-Output, and Input-FG :2kVAC (20mA) for 1min., Output-FG:500VAC (50mA) for 1min., Output-CNT/TOG (+/-RC) : 100VAC (100mA) for 1min.			
25	Isolation Resistance		-	Output-FG : 100Mohm at 500VDC, Output-CNT/TOG (+/-RC) : 10Mohm at 100VDC			
26	Vibration (1)		-	49.0m/s^2 (max.) at No Operating, 10 to 55Hz (Sweep for 1min.), With Constant Amplitude 0.825mm, each 1hour for X,Y,Z direction			
	Vibration (2)		-	Designed to meet IEC61373 - Category 1 - Class B			
	Vibration (3)		-	Designed to meet JIS E 3014 - Grade 2			
27	Shock (1)		-	196.1m/s^2 (max.) for each X,Y,Z direction			
	Shock (2)		-	Designed to meet IEC61373 - Category 1 - Class B			
	Shock (3)		-	Designed to meet JIS E 3015 - Grade 2			
28	Safety		-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020)			
29	Conducted Emission		-	Designed to meet EN55011/EN55032-A, FCC-ClassA, VCCI-A			
30	Radiated Emission		-	Designed to meet EN55011/EN55032-A, FCC-ClassA, VCCI-A			
31	Immunity		-	Designed to meet IEC61000-4-2(Level 2,3), -3(Level 3), -4(Level 3) -5(Level 3), -6(Level 3), -8(Level 4)			
32	Weight (Typ)		g	400			
33	Size (W x H x D)		mm	40 x 95 x 130 (Refer to Outline Drawing)			

*Read instruction manual carefully, before using the power supply unit.

=NOTES=

*1. At 110VDC, Ta=25°C, nominal output voltage and maximum output power.

*2. Measure with JEITA RC-9131A probe, Bandwidth of scope :100MHz.

*3. 60 to 160VDC, constant load.

*4. No load to Full load, constant input voltage.

*5. OCP Type : Constant current limit (Performance differs according to output voltage model below.)
   5V output model: Shutdown by LVP circuit, manual reset by DC input or Control ON/OFF recycling.
   12V, 15V, 24V output model: Automatic recovery without shutdown.

*6. OVP circuit will shut the output down. Manual reset by DC input or control ON/OFF recycling.

*7. Ratings
   - Derating at standard mounting. Refer to output derating curve (B043-01-02_).
   - Load (%) is percent of maximum output power or maximum output current, whichever is greater.

*8. At 110VDC Input.(Refer to instruction manual.)
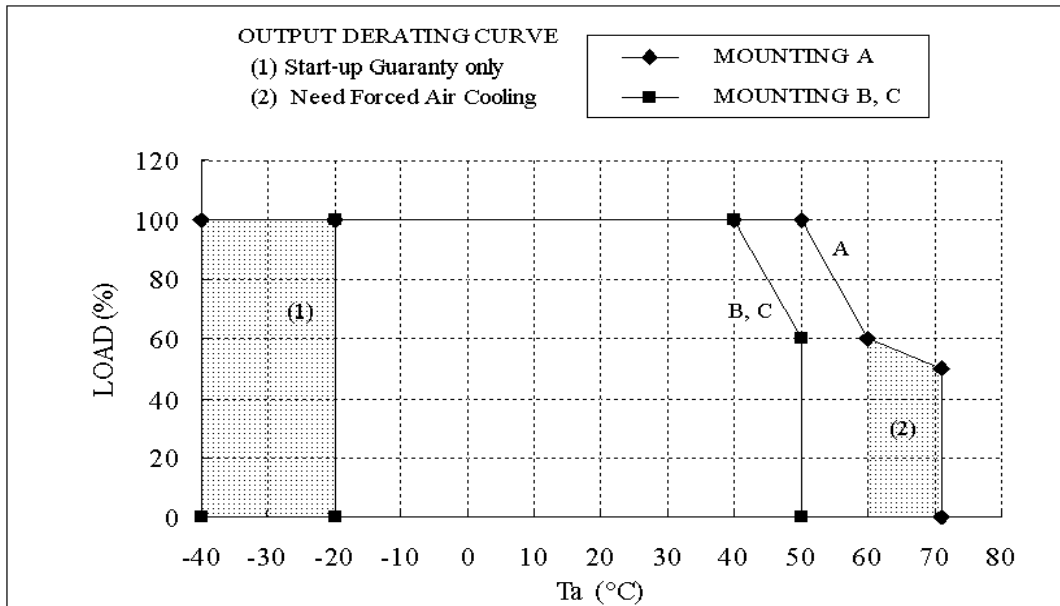
RDS50-110

OUTPUT DERATING

B043-01-02A

Input Voltage Derating

Vin (V DC)	LOAD (%)	
60 to 143	100% of the Output derating curve below.	
143 to 160	80% of the Output derating curve below. *	* Including between 40 & 71 °C area.

Ambient Temperature Derating

Ta (°C)	LOAD (%)		Cooling Method
	MOUNTING A	MOUNTING B, C	
-40 to -20	(Only Start-up Guarantee)	(Only Start-up Guarantee)	-
-20 to 40	100	100	Convection Cooling
50	100	60	Convection Cooling
60	60	-	Convection Cooling
71	50	-	Forced Air Cooling

OUTPUT DERATING CURVE
(1) Start-up Guaranty only
(2) Need Forced Air Cooling

MOUNTING A
MOUNTING B, C

DON'T USE

MOUNTING A	MOUNTING B	MOUNTING C	MOUNTING D	MOUNTING E
(STANDARD MOUNTING)				