

Innovative Specialty DC Power Systems



CONTACT

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## Model GPAD401MXX-1Y Convection / Conduction Cooled Power Supply

90-264 VAC / Single 400W Output



## **GENERAL OVERVIEW**

Jasper's highly efficient and compact Low-Noise (Fanless) Convection / Conduction Cooled Power Supplies are the ideal choice for low-voltage, high-current, high-power density applications including medical equipment, IT, sensitive electronics, and other applications where audible noise and maintenance must be kept to a minimum. Because there are no fans to fail or require periodic cleaning, maintenance is reduced and MTBF is enhanced. Units can also be optionally ruggedized against shock, vibration, and humidity to meet MIL-STDs such as MIL-STD-810 and MIL-STD-167 for military applications.

These Jasper GPAD-Series supplies, available from 200-500 Watts continuous output power, can be used in either convection cooling or conduction cooling configurations. The factory recommends conduction cooling when used in ambient temperatures over +50°C. All models have a 3 year warranty. Please see below for more details.

## FEATURES ON SELECT MODELS INCLUDE:

- Wide operating temperature: -20 to +50°C
- Power factor: ≥0.95
- Output over voltage, over current, short circuit and over temperature protection
- Flame retardant and moisture-proof design
- Low leakage current ≤0.7mA
- LED Lamp working status indication
- High efficiency
- Compact size of 255x50x30mm (LxWxH)
- Two supplies can be used in parallel

## PARTIAL 400W GPAD MODEL SELECTION

MODEL	INPUT VOLTAGE (VAC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED POWER (W)	DIMENSION (LxWxH)
GPAD401M12-1A	90-264	12	0-33.5	400	255 x 50 x 30mm
GPAD401M15-1A	90-264	15	0-26.5	400	255 x 50 x 30mm
GPAD401M24-1B	90-264	24	0-16.5	400	255 x 50 x 30mm
GPAD401M28-1B	90-264	28	0-14	400	255 x 50 x 30mm
GPAD401M36-1A	90-264	36	0-11	400	255 x 50 x 30mm
GPAD401M48-1A	90-264	48	0-8.5	400	255 x 50 x 30mm
GPAD401M54-1A	90-264	54	0-7.5	400	255 x 50 x 30mm







## PARTIAL 400W GPAD MODEL SELECTION WITH CURRENT SHARING

MODEL	INPUT VOLTAGE (VAC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED POWER (W)	DIMENSION (LxWxH)
GPAD401M12-1AF	90-264	12	0-33.5	400	255 x 50 x 30mm
GPAD401M15-1AF	90-264	15	0-26.5	400	255 x 50 x 30mm
GPAD401M24-1BF	90-264	24	0-16.5	400	255 x 50 x 30mm
GPAD401M28-1BF	90-264	28	0-14	400	255 x 50 x 30mm
GPAD401M36-1AF	90-264	36	0-11	400	255 x 50 x 30mm
GPAD401M48-1AF	90-264	48	0-8.5	400	255 x 50 x 30mm
GPAD401M54-1AF	90-264	54	0-7.5	400	255 x 50 x 30mm

## **TECHNICAL SPECIFICATIONS**

INPUT C	HARACTERISTICS				•	
	Parameter	Min	Тур	Мах	Unit	Remark
Input Voltage Range		90	220	264	VAC	
Input Cur	rent			5.8	A	
Inrush Cu	rrent			50	A	220 VAC input, rated load
Input Fre	quency Range	47	50	63	Hz	
Power Fa	ctor	0.95				220 VAC input, rated load
Harmonie	Distortion			15	%	230 VAC input, rated / half load
Ουτρυτ	CHARACTERISTIC	S			1	
	Parameter	Min	Тур	Мах	Unit	Remark
Output	GPAD401M12-1A		+12V		VDC	The output voltage is set according to requirements
Voltage	GPAD401M15-1A		+15V		VDC	
	GPAD401M24-1B		+24V		VDC	
	GPAD401M28-1B		+28V		VDC	
	GPAD401M36-1A		+36V		VDC	
	GPAD401M48-1A		+48V		VDC	
	GPAD401M54-1A		+54V		VDC	
Output	GPAD401M12-1A	0		33.5	A	The output voltage is set according to requirements
Current	GPAD401M15-1A	0		26.5	A	
	GPAD401M24-1B	0		16.5	A	
	GPAD401 M28-1B	0		14	A	
	GPAD401M36-1A	0		11	A	
	GPAD401M48-1A	0		8.5	A	
Output P	GPAD401M54-1A	0		7.5 400	A W	
Efficiency			92		%	220VAC input, rated loss
Ripple & Noise (Peak-Peak)				200	m Vp-p	Rated input, rated loss Rated input and load range, output is decoupled by a high frequency
nippie & Noise (reak-reak)				200		$0.1 \ \mu\text{F}$ cap and one $10 \ \mu\text{F}$ electrolytic capacitors. Bandwidth set at 20MHz
Load Regulation				±2	%	
Line Regulation				±0.5	%	
Temperature Coefficient				±0.03	%/°C	

\*Specifications subject to change without notice.





ON / OFF Overs	hoot			±10	9	6					
Dynamic Response Overshoot				±5		6 259	5%~50%~25%, 50%~75%~50% load change, rate 0.1 A / us, cycle time				
						4m	S				
Dynamic Response Recovery Time				200	ūS						
Start-Up Time				2		5 220	)VAC input, rate	dload			
Isolation Funct	ion**			2				s can be used in parallel. In order to obtain a bette			
						cur	current sharing effect when in use, it is necessary to connect the cur- rent sharing buses of the two power supplies in parallel.				
	**Op	tion for mo	del with	curre	ent sł	naring fe	ature, for exam	ple: GPAD401M12-1AF			
PROTECTION											
Parameter		Min	Тур	N	lax	Unit		Remark			
Over Voltage	GPAD401M12-1	<b>A</b> 14				VDC	220VAC input,	half load, hiccup mode			
Protect	GPAD401M15-1	<b>A</b> 17				VDC					
	GPAD401M24-1	<b>B</b> 26		+		VDC	1				
	GPAD401M28-1	<b>B</b> 30		+		VDC	-				
	GPAD401M36-1			+		VDC	1				
	GPAD401M48-1			+		VDC					
	GPAD401M54-1			+-		VDC					
<u> </u>											
Over Current Protect	GPAD401M12-1					A	Hiccup mode,	self recovery			
	GPAD401M15-1 GPAD401M24-1					A	-				
				_		A	4				
	GPAD401 M28-					A	{				
	GPAD401M38-1			+		A					
	GPAD401M48-1			+		A	1				
Short Circuit Pi			/////	norm	anon						
Over Temperat			Can withstand permanent short. Self recover. Hiccup mode, self recovery								
High Temperat			Heat is dissipated through the power supply chassis. Avoid touching chassis while in operation								
	INSULATION C				lougi	in the pov		s. Avoid todening chassis while in operation			
Parameter			Si	anda	ord Re	equireme		Remark			
Input-Output		3000\	/AC/<10r					No arcing, no breakdown			
Input-Earth			/AC/≤10r								
Output-Earth			)C/≤10m					1			
Ground Contin	uity	<0.1Ω						Test Current: 32A, Test duration: 120S			
Insulation Resistance			Ω					Normal atmospheric pressure, Relative humidity <90%, non-condensing, Test voltage: 500VDC			
Leakage Curre	≤0.7n	ηA					264VAC/ 50HZ Input				
EMC TEST											
Test Item				Test	Requ	uirement		Standard			
ESD		Air Di	scharge, :	±8KV				IEC 61000-4-2 (Criterion A)			
		Conta	ct Discha	irge, ±	Ŀ6KV			IEC 61000-4-2 (Criterion A)			
Radiated RF field (RS)			30MHz~2 tude 80%			Strength <u>z</u> )	: 3V/m;	IEC 61000-4-3 ( Criterion A)			
Immunity to Conducted Disturbance (CS)						, Field Str 0% AM (1	ength: 3V/m, kHz)	IEC 61000-4-6 ( Criterion A)			

\*Specifications subject to change without notice.





Surge      Line-Line:1 KV, Line-Earth: 2KV      IEC 61000-4-5 (Criterion A)        Conducted Emission (CE)      Class B      Class B      ClopPa22; (BS222; (GB224)        Radiated Emission (RE)      Class B      ClopPa22; (GB224)      ClopPa22; (GB224)        Parameter      Min      Typ      Max      Unit      Remark        Operating Temperature      -40      50      °C      Need to mount a heat sink, the temperature of the heat-sink can- not exceed 5°C        Storage Temperature      -40      25      °C      Need to mount a heat sink, the temperature of the heat-sink can- not exceed 5°C        Storage Relative Humidity      2      95      %      Non-condensing        Storage Relative Humidity      5      95      %      Non-condensing        Attitude      Image: Coloring      Image: Coloring      Image: Coloring      Image: Coloring        Vibration      Freq: 104z~54z (Sinusoidal), Amplitude: 0.35 mm      Stock      Acceleration: 11 ms        Stock      Collision waveform: half sine wave; Acceleration: 180m/52; Pulse Width: 6m; 6+phase, Impact 100 times        Static Pressure Test      TL-WP(S-1)FP-9.81N      TL: Applied pressure, Unit NW: Package weight. Unitkgr; S: Allow stacking layers, select the maximum stacki	Fast Transient / Burst	± 2kV , Rep	peat free	auencv:	5KHz & 1	0KHz IEC 61000-4-4 ( Criterio	n A)		
Conducted Emission (CE)      Class B      Use S      CISPR22: EMSD22; G89234        FAVIROMENTAL      Class B      Unit      Remark      EMSD22; G89234        Parameter      40      50      °C      Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C        Storage Temperature      40      85      °C      Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C        Storage Relative Humidity      5      95      9h      Non-condensing        Storage Relative Humidity      5      95      9h      Non-condensing        Cooling      Image: Signal Count      Freq: 10H2-S5H2 (Sinusoidal), Ampitude: 0.35 mm      Natural conduction heat dissipation        Storage Relative Humidity      Freq: 10H2-S5H2 (Sinusoidal), Ampitude: 0.35 mm      Stock      Acceleration: 180m/s2; Pulse Width: 6m; 6-phase, impact 100 times        Static Pressure Test      TL-Wr(S-1)F9-8(N)      TL: Applied pressure, Unit N: Wt: Packaeleration: 180m/s2; Pulse Width: 6m; 6-phase, impact 100 times        Static Pressure Test      TL-Wr(S-1)F9-98(N)      TL: Applied pressure, Unit N: Wt: Packaelerating damp heat experiment, 24-45°C, 95%RH, 48h        Anti-Mold      GB/72423-1993      Alternating damp heat experiment, 24-45°C, 95%RH, 48h        Anti-Mold	Surge								
Radiated Emission (RE)  Class B  ENSS022; GB9254    ENV/IROMENTAL  Parameter  Min  Typ  Max  Unit  Remark    Operating Temperature  -40  50  °C  Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C    Storage Temperature  -40  85  °C  Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C    Storage Relative Humidity  20  95  %  Non-condensing    Storage Relative Humidity  5  95  %  Non-condensing    Altitude  -  5000  m  Fron 2000-4000m, operating temperature decrease 1°C for every increase of 200m    Cooling  -  -  5000  m  Non-condensing    Storage Relative Humidity  5  95  %  Non-condensing    Colling  -  -  5000  m  Non-condensing    Colling  -  -  Non-condensing  Natural conduction heat dissipation    Vibration  Free; 10Hz-55Hz (Sinusoidal). Amplitude: 0.35 mm  Shock  Acceleration: 150 m/s/2. Duration: 11 ms    Impact (Collision)  Collison waveform: half sine wave; Acceleration: 180m/s/2. Pulse Width: 6m; 6-phase, impact 100 times  Start Pressure 75, Shok 20    Stor APoof  GB/27423.16-1993  Altern							,		
ParameterMinTypMaxUnitRemarkOperating Temperature-4050°CNeed to mout a heat-sink, the temperature of the heat-sink cannot exceed 65°CStorage Temperature-4085°CRelative Humidity2095%Non-condensingStorage Relative Humidity595%Non-condensingStorage Relative Humidity595%Non-condensingAttitude595%Non-condensingCoolingC5000mFor 3000-4000m, operating temperature decrease 1°C for every increase of 200mCoolingCS500mFor 3000-4000m, operating temperature decrease 1°C for every increase of 200mCoolingCCNatural conduction heat dissipationVibrationFreq: 10Hz~55Hz (Sinuscidal), Amplitude: 0.35 mmShockAcceleration: 150 m/s?, Duration: 11 msImpact (Collision)Collision waveform: bir is ine wave (celeration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 timesStatic Pressure TestTL-Wt(S-1)*P>3MTL: Applied pressure, Unit: N: WE Package weight. Unit: Ags: S. Allow stacking layers, select the maximum stacking Jayers; 5: Safer factor, usually select 5: Duration: 2h_Moisture ProofGB/12423-16199Ant: MoldGB/12423-16199MeterANICALEL X W X H (mm)255 x 50 x 3MeterMoltGS/12423-16199Moter Errit MoltGS/12423-16199Moter Errit MoltGS/12423-16199Output PositiveV-Output Posi						EN55022;			
Operating Temperature      -0      -0      Stor      C      Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C        Storage Temperature      -0      85      °C      Non-condensing        Storage Relative Humidity      20      95      %      Non-condensing        Storage Relative Humidity      5      9      %      Non-condensing        Storage Relative Humidity      5      9      %      Non-condensing        Storage Relative Humidity      5      9      %      Non-condensing        Attitude      5      9      %      Non-condensing        Cooling      I      9      %      Non-condensing        Cooling      I      9      %      Non-condensing        Cooling      I      9      Non-condensing        Cooling      I      %      Non-condensing        Storage Relative Humidity      So      N	ENVIROMENTAL					i i i i i i i i i i i i i i i i i i i			
Storage Temperature      Image: Content of the second of the seco	Parameter	Min	Тур	Max	Unit	Remark			
Relative Humidity      20      95      %      Non-condensing        Storage Relative Humidity      5      95      %      Non-condensing        Altitude      1      5      5000      m      For 3000-4000m, operating temperature decrease 1°C for every increase of 200m        Cooling      1      1      0      Natural conduction heat dissipation        Vibration      Freq: 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mm      Storage Relative Humidity increase of 200m        Stock      Acceleration: 150 m/s?, Duration: 11 ms      Impact (Collision)      Collision waveform: half sine wave; Acceleration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 times        Static Pressure Test      TL=WT(6:1)FF9.8(N)      TL=WT(6:1)F9.9(N)      TL=WT(6:1)F9.9(N)        Static Pressure Test      TL=WT(2:2).1F 99.9(N)      TL=WT(2:2).1F 99.9(N)      Static Pressure Test      TL=WT(2:2).1F 99.9(N)        Math-Mold      GB/72423.16-1999      Mol test, level 2	Operating Temperature	-40		50	°C		ture of the heat-sink can-		
Storage Relative Humidity      5      95      96      Non-condensing        Altitude      2      95      96      Non-condensing        Altitude      2      95      96      Non-condensing        Altitude      2      5000      m      For 3000-4000m, operating temperature decrease 1°C for every increase of 200m        Cooling      5      5000      m      Natural conduction heat dissipation        Vibration      Free; 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mm      Shock      Acceleration: 10 m/s?, Duration: 11 ms        Impact (Collision)      Collision waveform: half sine wave; Acceleration: 180m/s2; Pulse Width: 6m; 6-phase, impact 100 times        Static Pressure Test      TL=Wt(S-1)PP-98(N)      TL: Mplied pressure, Unit: N: W: Package weight, Unitkg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 3: Duration: 2h_0        Moisture Proof      GB/72423.16-1999      Molt est, level 2        MTEF      2100,000+      Esto.000+        MECHANICAL      255 x50 x30      Esto.000+        L x W x H (mm)      255 x50 x30      GS/7        PIN DEFINITION      AC Input      N        Input Terminal      Output Positive      V+	Storage Temperature	-40		85	°C				
Altitude      Image: Solution of the second of the	Relative Humidity	20		95	%	Non-condensing			
CoolingImage: CoolingImage: CoolingImage: CoolingImage: CoolingNatural conduction heat dissipationVibrationFreq: 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mmShockAcceleration: 150 m/s², Duration: 11 msImpact (Collision)Collision wave(mm: half sine wave; Acceleration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 timesStatic Pressure TestTL=Wt'(S-1 )+F'9.8(N)TL:=Wt'(S-1 )+F'9.8(N)TL: Applied pressure, Unit: N: Wt: Package weight. Unitskg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 5: Duration: 2h, Singer ProofGB/T2423.16-1999Moltenzing damp heat experiment, 24-45°C, 95%RH, 48hAnti-MoldGB/T2423.16-1999Motore ProofGB/T2423.16-1999Motore Proof <t< th=""><th>Storage Relative Humidity</th><th>5</th><th></th><th>95</th><th>%</th><th>Non-condensing</th><th></th></t<>	Storage Relative Humidity	5		95	%	Non-condensing			
Vibration      Freq: 10Hz~55Hz (Sinusoida), Amplitude: 0.35 mm        Shock      Acceleration: 150 m/s², Duration: 11 ms        Impact (Collision)      Collision waveform: half sine wave; Acceleration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 times        Static Pressure Test      TL=Wtr(S-1) P-9.8(N)      TL:Applied pressure, Unit: N: W: Package weight. Unit:kg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 5: Duration: 2h_0        Moisture Proof      GB/T2423.4-1993      Alternating damp heat experiment, 24~45°C, 95%RH, 48h        Anti-Mold      GB/T2423.16-1999      Mold test, level 2        MTBF      ≥150.000h        MeECHANICAL      L      L        L x W x H (mm)      255 x 50 x 30      Maximum Torque        Input Terminal      Description      Pin Function      Maximum Torque        Qutput Positive      V+      0.8N.M      Output Positive      V+        Output Positive      V+      0.8N.M      Output Positive      V+        Output Negative      V-      O.8N.M      Output Positive      V+        Output Negative      V-      O.8N.M      Output Positive      V+        Output Negative      V-      O.8N.M      O	Altitude			5000	m	For 3000~4000m, operating temperature decrease 1°C for every			
Shock      Acceleration: 150 m/s <sup>2</sup> , Duration: 11 ms        Impact (Collision)      Collision waveform: half sine wave; Acceleration: 180m/s <sup>2</sup> ; Pulse Width: 6ms; 6-phase, impact 100 times        Static Pressure Test      TL=Wt*(S-1)*F*9.8(N) TL: Applied pressure, Unit: N: Wt: Package weight. Unitkg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 5: Duration: 2h_        Moisture Proof      GB/T2423.16-1999      Alternating damp heat experiment, 24~45°C, 95%RH, 48h        Anti-Mold      GB/T2423.16-1999      Mold test, level 2        MTBF      ≥150,000h      E        Meight (Kg)      0.55Kg      Vertext H (mm)        Veight (Kg)      0.55Kg      Vertext H (mm)        Input Terminal      Description      Pin Function      Maximum Torque        AC Input      L      0.5N,M      0.5N,M        Output Terminal      Output Positive      V+      0.8N,M        Output Positive      V+      0.8N,M      0.4N,M        Current Sharing Signal Terminal      Current Sharing Signal Ground (Output Ground)      GND      SHARE      NA        Signal Ground (Output Ground)      GND      SHARE      NA	Cooling					Natural conduction heat dissipation			
Shock      Acceleration: 150 m/s², Duration: 11 ms        Impact (Collision)      Collision waveform: half sine wave; Acceleration: 180m/s²; Pulse Width: 6ms; 6-phase, impact 100 times        Static Pressure Test      TL=Wtr(S-1) /F'9.8(N) TL: Applied pressure, Unit: N: Wt: Package weight: Unitkg: S: Allow stacking layers, select the maximum stacking layers; F: Safet yf factor, usually select 5: Duration: 2h_        Moisture Proof      GB/T2423.4-1993      Alternating damp heat experiment, 24~45°C, 95%RH, 48h        Anti-Mold      GB/T2423.16-1999      Mold test, level 2        MTBF      ≥150,000h      E        Meight (Kg)      0.55Kg      Output Terminal        PIN DEFINITION      Input      AC Input      L        AC Input      N      Output Positive      V+        Output Terminal      Output Positive      V+      0.8N.M        Output Regative      V-      Output Positive      V+        Output Regative      V-      Output Regative      NA        Signal Ground (Output Ground)      GND      GND      NA	Vibration								
Static Pressure Test    TL=Wt*(S-1)*F*9.8(N)      TL: Applied pressure, Unit: N: Wt: Package weight. Unit:kg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 5: Duration: 2h_      Moisture Proof    GB/T2423.4-1993      Anti-Mold    GB/T2423.4-1999      MOIS    GB/T2423.4-1999      MTBF    >150,000h      MECHANICAL       L x W x H (mm)    255 x 50 x 30      Weight (Kg)    0.55Kg      PIN DEFINITION       Input Terminal    Description    Pin Function      AC Input    L    0.5N.M      AC Input    N       Protective Earth    PE       Output Positive    V+    0.8N.M      Output Negative    V-       Output Vestive    V-       Output Vestive    V-       Output Negative    V-    <	Shock								
Description      Pin Function      Maximum stacking layers, select the maximum stacking lay	Impact (Collision)								
Anti-Mold      GB/T2423.16-1999      Mold test, level 2        MTBF      ≥150,000h        MECHANICAL	Static Pressure Test	TL: Applied pressure, Unit: N: Wt: Package weight. Unit:kg: S: Allow stacking layers, select the maximum							
MTBF    ≥150,000h      MECHANICAL    Lx W x H (mm)      Lx W x H (mm)    255 x 50 x 30      Weight (Kg)    0.55Kg      PIN DEFINITION    Description    Pin Function    Maximum Torque      Input Terminal    Description    Pin Function    Maximum Torque      Output Terminal    Output Positive    V+    0.5N.M      Output Terminal    Output Positive    V+    0.8N.M      Output Negative    V-    Output Negative    V-      Current Sharing Signal Terminal    Current Sharing    SHARE    SHARE      Signal Ground (Output Ground)    GND    SHARE    NA      Power Supply Status Indication    S+    SHARE    NA	Moisture Proof	GB/T2423.4-1993 Alternating damp heat experiment, 24~45°C, 95%RH, 48h							
MECHANICAL      255 x 50 x 30        L x W x H (mm)      255 x 50 x 30        Weight (Kg)      0.55Kg        PIN DEFINITION         Input Terminal      Description      Pin Function      Maximum Torque        AC Input      L      0.5N.M        AC Input      L      0.5N.M        AC Input      N      Protective Earth      PE        Output Terminal      Output Positive      V+      0.8N.M        Output Positive      V+      0.8N.M        Output Negative      V-      Output Negative        V-      Output Negative      V-        Signal Ground (Output Ground)      GND      NA        Power Supply Status Indication      S+      S+	Anti-Mold	GB/T2423.16-1999 Mold test, level 2							
Lx W x H (mm)255 x 50 x 30Weight (Kg)0.55KgPIN DEFINITIONInput TerminalDescriptionPin FunctionMaximum TorqueAC InputL0.5N.MAC InputN0.5N.MProtective EarthPEOutput TerminalOutput PositiveV+Output VesitiveV+Output NegativeV-Output NegativeV-Output NegativeV-Signal GroundGNDSignal GroundGNDPower Supply Status IndicationS+	MTBF	≥150,000h							
Weight (Kg)  0.55Kg    PIN DEFINITION  Description  Pin Function  Maximum Torque    Input Terminal  Description  Pin Function  Maximum Torque    AC Input  L  0.5N.M    AC Input  N  Protective Earth  PE    Output Terminal  Output Positive  V+  0.8N.M    Output Negative  V-  Output Negative  V-    Current Sharing Signal Terminal  Current Sharing  SHARE Bus  SHARE Signal Ground (Output Ground)  NA    Power Supply Status Indication  S+	MECHANICAL								
Display Terminal    Description    Pin Function    Maximum Torque      AC Input    L    0.5N.M      AC Input    N    0.5N.M      Protective Earth    PE      Output Terminal    Output Positive    V+      Output Vesitive    V+      Output Negative    V-      Output Negative    V-      Output Negative    V-      Output Signal Terminal    Current Sharing      Signal Ground (Output Ground)    GND      Power Supply Status Indication    S+	L x W x H (mm)	255 x 50 x 30							
Input TerminalDescriptionPin FunctionMaximum TorqueAC InputL0.5N.MAC InputN0.5N.MProtective EarthPEOutput TerminalOutput PositiveV+Output PositiveV+Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Signal GroundGNDSignal GroundGNDPower SupplyS+Status IndicationS+	Weight (Kg)	0.55Kg							
AC Input  L  0.5N.M    AC Input  N  0.5N.M    Protective Earth  PE    Output Terminal  Output Positive  V+    Output Positive  V+    Output Negative  V-    Output Negative  V-    Output Negative  V-    Signal Terminal  Current Sharing    Signal Ground (Output Ground)  GND    Power Supply Status Indication  S+	PIN DEFINITION								
AC InputNProtective EarthPEOutput TerminalOutput PositiveV+Output PositiveV+Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Signal GroundSHARESignal GroundGNDPower Supply Status IndicationS+	Input Terminal	Descrip	tion	Pin Fu	nction	Maximum Toro	lne		
Protective EarthPEOutput TerminalOutput PositiveV+Output PositiveV+Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Signal TerminalCurrent Sharing BusSHARESignal Ground (Output Ground)GNDPower Supply Status IndicationS+		AC Inp	out	I	_	0.5N.M			
Output TerminalOutput PositiveV+0.8N.MOutput PositiveV+0.400000000000000000000000000000000000		AC Inp	out	1	N				
Output Positive    V+      Output Negative    V-      Output Negative    V-      Output Negative    V-      Current Sharing Signal Terminal    Current Sharing Bus      Signal Ground (Output Ground)    GND      Power Supply Status Indication    S+		Protective	Earth	Р	E				
Output Negative    V-      Output Negative    V-      Current Sharing Signal Terminal    Current Sharing Bus    SHARE      Signal Ground (Output Ground)    GND      Power Supply Status Indication    S+	Output Terminal	Output Po	ositive	V	+	0.8N.M			
Current Sharing Signal Terminal  Current Sharing Bus  SHARE  NA    Signal Ground (Output Ground)  GND  Power Supply Status Indication  S+		Output Po	ositive	V	+				
Current Sharing Signal Terminal    Current Sharing Bus    SHARE    NA      Signal Ground (Output Ground)    GND    Power Supply Status Indication    S+		Output Ne	egative	V	/_				
Bus    Signal Ground (Output Ground)    Power Supply Status Indication	Output Negative V-								
(Output Ground)    Power Supply    Status Indication	Current Sharing Signal Terminal			SH	ARE	NA			
Status Indication				GN	ND				
		Status Indi	ication	S	+				

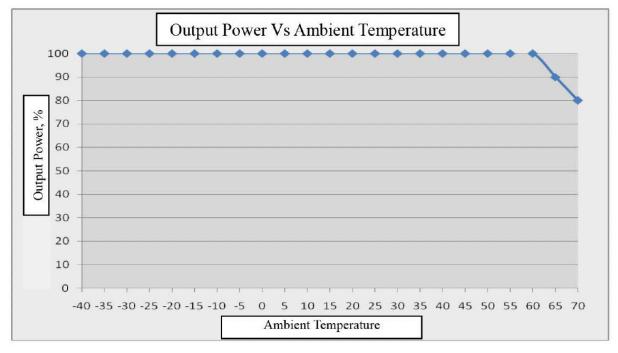
\*Specifications subject to change without notice.

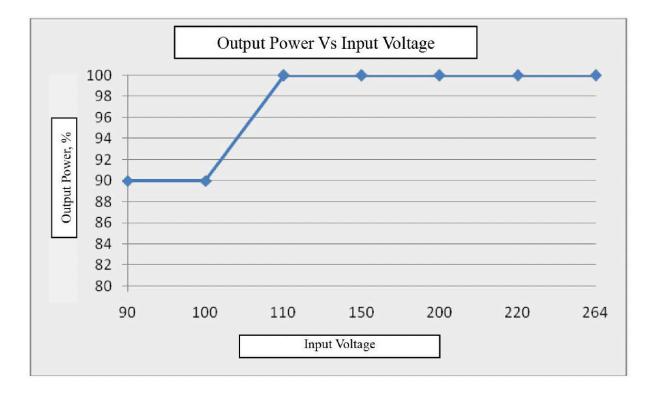




## **DERATING CURVE**

Output Power vs Ambient Temperature & Input Voltage is as follows:









## **PACKAGING AND SHIPPING**

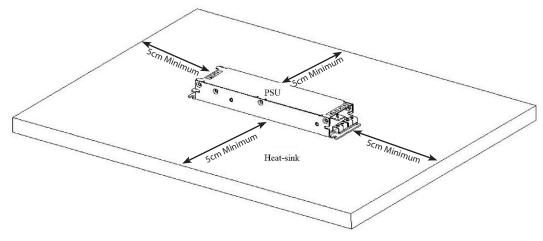
JE ships FOB Origin from the Anaheim, CA factory or our other subsidiary facilities.

## LIMITED WARRANTY POLICY

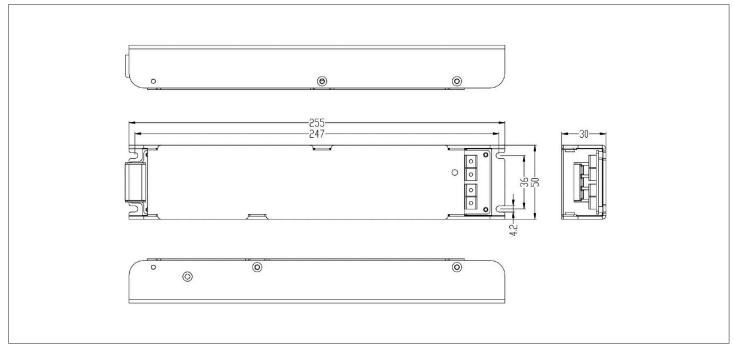
All Jasper Electronics (JE) standard GPAD model power supplies and products are guaranteed to be free of defects in workmanship and materials for a minimum of three (3) years from the date of original shipment, when operated within specification. Non-standard (custom) power supplies and products may be warranted on an individual basis. The unused portion of this warranty is fully transferable with the original equipment in which the power supply is installed. Please see our website for full warranty statement.

## **CONVECTION vs. CONDUCTION CONFIGURATION**

In stock form, Jasper GPAD Supplies dissipate heat by natural convection. The factory recommends that conduction cooling be used for applications with ambient temperatures in excess of +50°C. For conduction cooling, please ensure that there is a heatsink (or casing) at the bottom of the power supply, and that its surface is smooth. The heatsink / casing surface must be sealed to the bottom of the power supply by adding thermal compound or silicone oil. In some applications, the GPAD supplies are mounted to liquid cooled metallic cold plates to remove heat. Generally, the recommended heatsink size is 400mm x 300mm x 20mm (L x W x H). Note: If the recommended external heat dissipation conditions are not met, the unit may shut down to protect itself against overheating. Please reduce the load accordingly in order to prevent an overheating condition.



## **GPAD MECHANICAL OUTLINE**





1580 No. Kellogg Dr., Anaheim, California, 92807 USA (714) 917-0749 • www.jasperelectronics.com • sales@jasperelectronics.com





# INNOVATIVE SPECIALTY DC POWER SYSTEMS

## Standard and Custom Power Supplies from 5W to 10KW

#### TRAFFIC CONTROL POWER SUPPLIES



- 70-400+ Watts / 120 and 220 VAC Models Available
- CALTRANS TEES, NYSDOT, CDOT, GDOT Compliant for 332, 334, 336, 342, 344, and 346 Series cabinets
- RoHS and NEMA Compliant
- Custom labeling and barcoding available
- Ruggedization against shock / vibration / humidity available

#### CUSTOM POWER DISTRIBUTION ASSEMBLIES (PDAs)



- Compliant with TEES 2020
- 1U smaller than the PDA2-LX and PDA3-LX
- User accessible slots as specified
- Custom labeling and barcoding available
- Ruggedization against shock / vibration / humidity available

#### **COMPACT PCI**



- AC or DC input, 175W 500W DC output, active PFC
- 3U x 8HP, 6U x 8HP sizes
- PICMG 2.11 compliant, UL/CSA, NEMKO/TUV/CE certified, ROHS compliant
- Ruggedization against shock/ vibration/ humidity optional

#### Primary Applications: Industrial Computing, Military, Satellite Comm, Test, Transportation, Telecom, Aerospace

#### SPECIALTY HOT-SWAPPABLE POWER SUPPLIES



- 200-1500W, Universal Input, 5-54VDC Output
- Hot Swap. N+1, 90+% Efficiency
- 1U Form Factors
- 30+ Variations for Various Applications Including Nuclear
- Ruggedization against shock/ vibration/ humidity optional

#### Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

### RACK POWER SYSTEMS



- 200W-1500W, 2-8 slots, single or mixed output voltages, up to 10KW total
- Single, dual, or individual unit AC or DC input
- Internally or externally redundant DC outputs
- Standard 19" and 23" size or user-specified configurations also available
- Ruggedization against shock/ vibration/ humidity optional

#### Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics

#### LOW NOISE CONVECTION / CONDUCTION COOLED POWER SUPPLIES



- 200W-500W, 90—264VAC full range input with 12-54 VDC Output
- Wide operating temperature range / high efficiency
- Small form factors
- Ruggedization against shock/ vibration/ humidity optional

#### Primary Applications: Medical Equipment, Military, IT, Sensitive Electronics

Jasper

**Electronics** 

#### **MEDICAL ADAPTERS**



- 6W-250W, Efficiency levels V & VI
- Desktop, Wall-mount, and Interchangeable AC
  plug types
- Large selection of output connectors additional cable lengths available
- UL60601 (medical) approved adapters available
- Ruggedization against shock/ vibration/ humidity optional

#### **CUSTOMS & MODIFIED STANDARDS**



- 75W-2KW
- Single to 7 outputs
- Designed and built to custom or semi-custom specifications
- Ruggedization against shock/ vibration/ humidity optional
- Custom electrical specs, chassis, paint, labeling, connectors, interface all available

#### Primary Applications: Medical Equipment, Military, Test, Automotive, Computing, Audio, Sensitive Electronics



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