

Innovative Specialty DC Power Systems



CONTACT

1580 No. Kellogg Dr. Anaheim, California, 92807

(714) 917-0749

www.jasperelectronics.com sales@jasperelectronics.com

## Model GPAD501MXX-1Y Convection / Conduction Cooled Power Supply

90-264 VAC / Single 500W 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 +70°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 500W GPAD MODEL SELECTION

MODEL	INPUT VOLTAGE (VAC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED POWER (W)	DIMENSION (LxWxH)
GPAD501M12-1C	90-264	12	0-42	500	255 x 50 x 30mm
GPAD501M15-1A	90-264	15	0-33	500	255 x 50 x 30mm
GPAD501M24-1A	90-264	24	0-21	500	255 x 50 x 30mm
GPAD501M28-1F	90-264	28	0-18	500	255 x 50 x 30mm
GPAD501M36-1F	90-264	36	0-14	500	255 x 50 x 30mm
GPAD501M48-1A	90-264	48	0-10.5	500	255 x 50 x 30mm
GPAD501M54-1J	90-264	54	0-9	500	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)
GPAD501M12-1C	90-264	12	0-42	500	255 x 50 x 30mm
GPAD501M15-1A	90-264	15	0-33	500	255 x 50 x 30mm
GPAD501M24-1A	90-264	24	0-21	500	255 x 50 x 30mm
GPAD501M28-1F	90-264	28	0-18	500	255 x 50 x 30mm
GPAD501M36-1F	90-264	36	0-14	500	255 x 50 x 30mm
GPAD501M48-1A	90-264	48	0-10.5	500	255 x 50 x 30mm
GPAD501M54-1J	90-264	54	0-9	500	255 x 50 x 30mm

## **TECHNICAL SPECIFICATIONS**

INPUT CHARACTERISTICS							
Parameter		Min	Тур	Мах	Unit	Remark	
Input Voltage Range		90	220	264	VAC		
Input Curi	rent			6.5	A		
Inrush Cu	rrent			50	A	220 VAC input, rated load	
Input Free	quency Range	47	50	63	Hz		
Power Fac	tor	0.95				220 VAC input, rated load	
Harmonic	Distortion			15	%	230 VAC input, rated / half load	
OUTPUT	CHARACTERISTICS	5	Į	,			
	Parameter	Min	Тур	Max	Unit	Remark	
Output	GPAD501M12-1C		+12V		VDC	The output voltage is set according to requirements	
Voltage	GPAD501M15-1A		+15V		VDC		
	GPAD501M24-1A		+24V		VDC		
	GPAD501M28-1F		+28V		VDC		
	GPAD501M36-1F		+36V		VDC		
GPAD501M48-1A			+48V		VDC		
	GPAD501M54-1J		+54V		VDC		
Output	GPAD501M12-1C	0		42	A	The output voltage is set according to requirements	
Current	GPAD501M15-1A	0		33	A		
	GPAD501M24-1A	0		21	A		
	GPAD501M28-1F	0		18	A		
	GPAD501M36-1F	0		14	A		
	GPAD501M48-1A GPAD501M54-1J	0		10.5 9	A		
Output Po		0		500	A W		
Efficiency			90		%	220VAC input, rated loss	
Ripple & Noise (Peak-Peak)				240	m Vp-p	Rated input and load range. output is decoupled by a high frequency 0.1 $\mu$ F cap and one 10 $\mu$ 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			±1	0	%					
Dynamic Response Overshoot					5			25%~50%~25%, 50%~75%~50% load change, rate 0.1 A / us, cycle time			
								s			
Dynamic Response Recovery Time				200		ūS					
Start-Up Time				2		S	220	) VAC input, rated	load		
Isolation Time*	*						cur	rent sharing effec	can be used in parallel. In order to obtain a better at when in use, it is necessary to connect the cur- f the two power supplies in parallel.		
	** <b>O</b> p	tion for m	odel	with c	urrer	nt shari		-	le: GPAD501M12-1CF		
PROTECTION											
Parameter		Mi	n	Тур	Ma	ax l	Unit		Remark		
Over Voltage	GPAD501M12-	<b>1C</b> 14					VDC	220VAC input, h	nalf load, hiccup mode		
Protect	GPAD501M15-	<b>1A</b> 17					VDC	1			
	GPAD501M24-	<b>1A</b> 26					VDC	-			
	GPAD501M28-						VDC	-			
	GPAD501M26-							-			
							VDC				
	GPAD501M48-						VDC	-			
	GPAD501M54-				VDC						
Over Current	GPAD501M12-	<b>1C</b> 44					А	Hiccup mode, s	elf recovery		
Protect	GPAD501M15-						A	4			
	GPAD501M24-	<b>1A</b> 23					Α	4			
	GPAD501M28-	<b>1F</b> 20					A	-			
	GPAD501M36-						А				
	GPAD501M48-	<b>1A</b> 13					A				
	GPAD501M54-	-				A					
Short Circuit Pr	otect		Can withstand permanent short. Self recover.								
Over Temperat			Hiccup mode, self recovery								
High Temperat			t is dis	ssipated	l thro	ough th	ne pow	er supply chassis	. Avoid touching chassis while in operation		
SAFETY AND	INSULATION C	LASS						· · · · · · · · · · · · · · · · · · ·			
Parameter				Sta	ndar	d Requ	iireme	ent	Remark		
Input-Output				′≤10mA					No arcing, no breakdown		
Input-Earth				′≤10mA							
Output-Earth				≤10mA	/1 m	in					
Ground Contin		<0.1							Test Current: 32A, Test duration: 120S		
Insulation Resistance			MΩ						Normal atmospheric pressure, Relative humidity <90%, non-condensing, Test voltage: 500VDC		
Leakage Current			m A						264VAC/ 50HZ Input		
EMC TEST											
Test Item				Т	est F	Require	ement		Standard		
ESD		Air [	Discha	arge, ±8	KV				IEC 61000-4-2 (Criterion A)		
		Con	tact D	Discharg	le, ±6	5KV			IEC 61000-4-2 (Criterion A)		
Radiated RF field (RS)				lHz~2G e 80% <i>F</i>			ength	: 3V/m;	IEC 61000-4-3 ( Criterion A)		
Immunity to Conducted Disturbance (CS)				MHz ~ e modu				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         CSPR22; ENVIRONMENTAL           Parameter         Min         Typ         Max         Unit         Remark           Operating Temperature         -30         C         70         C         Need to mount a heat-sink, the temperature of the heat-sink           Storage Temperature         -40         L         85         C         C           Relative Humidity         20         S         %         Non-condensing         Conduction heat sink, the temperature of the heat-sink           Storage Relative Humidity         20         S         %         Non-condensing         Conduction heat dissipation           Storage Relative Humidity         20         S         %         Non-condensing         Conduction heat dissipation           Altitude         Image         Sooo         m         Frequencinon dissipation         Natural conduction heat dissipation           Vibration         Frequencinon: 150 m/s/s Duration: 11 ms         Natural conduction heat dissipation           Storage Relative Humidity         Collision waveform: half sine wave/ Acceleration: 180 m/s2; Pulse Width: Gns; G-phase, impact 100 times           Static Pressure Test         Tu-Mpiled pressure. Un	Fast Transient / Burst	± 2kV , Repeat frequency:5KHz & 100KHz IEC 61000-4-4 ( Criterion A)							
Radiated Emission (RE)       Class B       INS5022; G9924         ENVIRONMENTAL       Parameter       Min       Typ       Max       Unit       Remark         Operating Temperature       -30       70       °C       Need to mount a heat-sink. He temperature of the heat-sink         Storage Temperature       -40       85       °C       Need to mount a heat-sink. He temperature of the heat-sink.         Storage Relative Humidity       20       95       %       Non-condensing         Storage Relative Humidity       20       95       %       Non-condensing         Altitude       -       5       95       %       Non-condensing         Cooling       -       -       50000       m       For 3000-4000m, operating temperature decrease 1°C for every increase of 200m.         Vibration       Freq: 10Hz-55Hz (Sinusoldal), Amplitude: 0.35 mm       Natural conduction heat dissipation         Storage Temperature       -       10       Natural conduction heat dissipation         Inspect (Collision)       Collision waveform: half sine wave; Acceleration: 180m/52; Pulse Width: 6ms; 6-phase, impact 100 times         Static Pressure Test       TL-Apple pressure, Unit: N. W: Package weight. Unit. g. Statis not gave; Select the maximum stacking layers; F. Selety factor, usually select 3: Duration: 180m/52; 95% S0 × 30         MetetHumid	Surge	Line-Line: 1	l KV, Lin	e-Earth:	IEC 61000-4-5 ( Criterion A)				
Natioated ministor (nc)         Case 5         GB9234           ENVIRONMENTAL         Remark         GB9234           Operating Temperature         3-0         70         C         Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C           Storage Temperature         -4-0         8         5         C         Non-condensing           Storage Relative Humidity         20         95         96         Non-condensing           Storage Relative Humidity         5         95         96         Non-condensing           Storage Cooling         1         1         Natural conduction heat dissipation           Vibration         Freq: 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mm         Natural conduction heat dissipation           Static Pressure Test         T.=Wr(51 PF9.8)(N)         TLApplied pressure, Unit N: Wt: Package weight. Unitkg: S: Allow stacking layers, select the maximum stacking layers; S: Safet pricer,	Conducted Emission (CE)	Class B CISPR22;							
ParameterMinTypMaxUnitRemarkOperating Temperature-3070°CNeed to mount a heat sink, the temperature of the heat-sink cannot exceed 65°CStorage Temperature-4085°CRelative Humidity2095%Non-condensingStorage Relative Humidity595%Non-condensingAltitude1595%Non-condensingAltitude595%Non-condensingCooling1595%Non-condensingColling1595%Non-condensingColling1595%Non-condensingColling11Natural conduction heat dissipationVibrationFree; 10H2~55H2 (Sinusoidal), Amplitude: 0.35 mmShockAcceleration: 150 m/s?, Duration: 11 msImpact CollisionCollision wareform: half sine ware; Acceleration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 timesStatic Pressure TestTL-Wt('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; 5: Safety factor, usually select 5: Duration: 2h,Moisture ProofGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.41939Anti-MoldGBr/2423.	Radiated Emission (RE)	I UIdas D							
Operating Temperature         -30         70         °C         Need to mount a heat-sink, the temperature of the heat-sink cannot exceed 65°C           Storage Temperature         -40         85         °C            Relative Humidity         20         95         %         Non-condensing           Storage Relative Humidity         5         95         %         Non-condensing           Altitude         5000         m         For 3000-4000m, operating temperature decrease 1°C for every increase of 200m           Cooling         1         0         Natural conduction heat dissipation           Vibration         Freq: 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mm         Non-condensing           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 - Applied pressure, Unit: N. WI: Package weight. Unit kg: S: Allow stacking layers; F: Safety factor, usually select 5: Duration: 2h,           Moisture Proof         GB/T2423.16-1999         Molt est, level 2           MTBF         ≥150.000h         EVERY ALLOW         Lx W + M (mm)           MECHANICAL         255 x 50 x 30         EVERY ALLOW         Output Negative           L x W + H (mm)         255 x 50 x 30 <t< th=""><th>ENVIRONMENTAL</th><th></th><th></th><th></th><th></th><th></th></t<>	ENVIRONMENTAL								
Storage Temperature         Image: Cannot exceed 65°C           Storage Temperature         -40         85         °C           Relative Humidity         20         95         %         Non-condensing           Storage Relative Humidity         5         95         %         Non-condensing           Altitude         1         5         95         %         Non-condensing           Altitude         1         2         0         m         For 3000-4000m, operating temperature decrease 1°C for every increase of 200m           Cooling         1         2         0         Natural conduction heat dissipation           Vibration         Freq: 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mm         Shock         Acceleration: 150 m/s <sup>2</sup> , 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(5-1) FP.9(N)/TL         Note tacking layers; FS afety factor, usually select 5: Duration: 2h, Mostare Proof           Molsture Proof         GB/T2423.4-1993         Alternating damp heat experiment, 24-45°C, 95%RH, 48h           MTBF         2150.000h         MEREMANICAL           LxW M (mm)         255 x 50 x 30         Meremating damp heat experiment, 24-45°C, 95%RH, 48h           Motiteret, Input <th>Parameter</th> <th>Min</th> <th>Тур</th> <th>Max</th> <th>Unit</th> <th>Remark</th>	Parameter	Min	Тур	Max	Unit	Remark			
Construction         Int         Int <thint< th=""> <th< th=""><th>Operating Temperature</th><th>-30</th><th></th><th>70</th><th>°C</th><th></th></th<></thint<>	Operating Temperature	-30		70	°C				
Storage Relative Humidity59596Non-condensingAltitudeI59596Non-condensingAltitudeI5000mFor 3000-4000m, operating temperature decrease 1°C for every increase of 200mCoolingINatural conduction heat dissipationVibrationFreq: 10Hz55Hz (Sinusoidal), Amplitude: 0.35 mmShockAcceleration: 15 0m /s², Duration: 11 msImpact (Collision)Collision waveform: half sine wave; Acceleration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 timesStatic Pressure TestTL=Wt(S1 )PF-98(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 ProofGB/T2423.41993Anti-MoldGB/T2423.41993GB/T2423.41993Alternating damp heat experiment, 24-45°C, 95%GH, 48hAnti-MoldGB/T2423.41993MTEF>150,000hMECHANICALL x W x H (mm)255 x 50 x 30Weight (Kg)0.55KgPIN DEFINITIONImput TerminalInput TerminalDescriptionQuiput PositiveV+Output PositiveV+Output PositiveV+Output PositiveV+Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Outpu	Storage Temperature	-40		85	°C				
Altitude         Description         For 3000-4000m, operating temperature decrease 1°C for every increase of 200m           Additive         Impact (Collision)         Freq: 10Hz-55Hz (Sinusoidal), Amplitude: 0.35 mm           Shock         Acceleration: 150 m/s², Duration: 11 ms         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-HWT(5-1) FP-9.8(N)         TL: Applied pressure, Unit: N: WE: Package weight. Unitkg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 5: Duration: 2h_o           Moisture Proof         GB/T2423.16-1999         Mold test, level 2           MTEF         ≥150,000h         MECHANICAL           L xW xH (mm)         255 x 50 x 30         Struct           Meight (Kg)         0.55Kg         PIN DEFINITION           Input Terminal         Description         Pin Function         Maximum Torque           Output Positive         V+         0.8N.M	Relative Humidity	20		95	%	Non-condensing			
Cooling         Increase of 200m         Increase	Storage Relative Humidity	5		95	%	Non-condensing			
Vibration         Freq: 10Hz~55Hz (Sinusoida), Amplitude: 0.35 mm           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=Wrt(S-1) YF9.8(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 <sub>0</sub> 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           MECHANICAL         L         X W XH (mm)         255 x 50 x 30           Weight (Kg)         0.55Kg         PIN DEFINITION           Input Terminal         Description         Pin Function         Maximum Torque           Qutput Positive         V+         0.8N.M         0.8N.M           Output Terminal         Output Positive         V+         0.8N.M           Output Regative         V-         0.8N.M         0.4N.M           Output Positive         V+         0.8N.M         0.4N.M           Output Regative         V-         0.8N.M         NA           Busindicround (Output Kegative <th>Altitude</th> <th></th> <th></th> <th>5000</th> <th>m</th> <th></th>	Altitude			5000	m				
Shock     Acceleration: 150 m/s <sup>2</sup> , 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(S-1) FP.9.8(N) TL: Applied pressure, Unit: N: WI: Package weight, Unit:kg: S: Allow stacking layers, select the maximum stacking layers; F: Safet y 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       MECHANICAL       L x W x H (mm)     255 x 50 x 30       Weight (Kg)     0.55Kg       PIN DEFINITION       Input Terminal     Description     Pin Function       Maximum Torque       Output Positive     V+       Output Regative     V-       Output Negative     V-       Output Current Sharing Signal Terminal     Signal Ground (Output Ground)     GND (Output Ground)       Prover Supply Status Indication     S+	Cooling					Natural conduction heat dissipation			
Impact (Collision)         Collision waveform: half sine wave; Acceleration: 180m/s2; 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. Unit:kg: S: Allow stacking layers, select the maximum stacking layers; F: Safety factor, usually select 5: Duration: 2h_a           Moisture Proof         GB/T2423.41993         Alternating damp heat experiment, 24~45°C, 95%RH, 48h           Anti-Moid         GB/T2423.16-1999         Moid test, level 2           MTBF         ≥150,000h            Meight (Kg)         0.55Kg            PIN DEFINITION             Input Terminal         Description         Pin Function           AC Input         L         0.5N.M           Output Versitive         V+         0.8N.M           Output Positive         V+         0.8N.M           Output Negative         V-            Output Negative         V-            Output Negative         V-            Output Negative         V-            Output Regative         V-            Output Negative         V-            Output Negative         V-            Output	Vibration	Freq: 10Hz~55Hz (Sinusoidal), Amplitude: 0.35 mm							
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 <sub>o</sub> Moisture Proof     GB/T2423.4-1993       Anti-Moid     GB/T2423.4-1993       MTBF     >150,000h       MECHANICAL        L x W x H (mm)     255 x 50 x 30       Weight (Kg)     0.55Kg       PIN DEFINITION        Input Terminal     Description       AC Input     L       AC Input     L       Output Terminal     Output Positive       Output Negative     V+       Output Negative     V-       Ping Ging Ground (Output Ground)     SHARE       Bus     Signal Ground (Output Ground)       Signal Ground (Output Ground)     GND       Power Supply     S+	Shock								
Description         Pin Function         Maximum stacking layers, select the maximum stacking layers, select the maximum stacking layers, scafety 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         0         0           MECHANICAL         User Status         User Status           L x W x H (mm)         255 x 50 x 30         User Status         User Status           PIN DEFINITION         Description         Pin Function         Maximum Torque           Input Terminal         Description         Pin Function         Maximum Torque           Output Terminal         Output Positive         V+         0.8N.M           Output Terminal         Output Positive         V+         0.8N.M           Output Negative         V-         0.8N.M         NA           Signal Ground         GIND         NA         NA           Signal Ground         GIND         NA         NA           Power Supply Status Indication         S+         SHARE         NA	Impact (Collision)	Collision waveform: half sine wave; Acceleration: 180m/s2; Pulse Width: 6ms; 6-phase, impact 100 times							
Anti-Mold       GB/T2423.16-1999       Mold test, level 2         MTBF       ≥150,000h         MECHANICAL       L         L x W x H (mm)       255 x 50 x 30         Weight (Kg)       0.55Kg         PIN DEFINITION       Description       Pin Function       Maximum Torque         AC Input       L       0.5N.M         AC Input       L       0.5N.M         Output Terminal       Output Positive       V+       0.8N.M         Output Negative       V-       0.8N.M         Output Negative       V-       0.8N.M         Current Sharing Signal Terminal       Current Sharing       SHARE       NA         Signal Ground (Output Ground)       GND       NA         Status Indication       S+       S+	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       Vinceton       0.5N.M         AC Input       L       0.5N.M         Protective Earth       PE         Output Positive       V+       0.8N.M         Output Negative       V-       0.40.00.8N.M         Output Negative       V-       0.40.00.8N.M         Signal Ground (Output Kegative       SHARE       NA         Signal Ground (Output Ground)       GND       SHARE       NA         Power Supply Status Indication       S+       S+       S+	Moisture Proof	GB/T2423.4-1993 Alternating damp heat experiment, 24~45°C, 95%RH, 48h							
MECHANICALL x W x H (mm)255 x 50 x 30Weight (Kg)0.55KgPIN DEFINITIONInput TerminalDescriptionPin FunctionMaximum TorqueAC InputL0.5N.MAC InputNProtective EarthPEOutput TerminalOutput PositiveV+Output VesitiveV+Output NegativeV-Output NegativeV-Output NegativeV-Output NegativeV-Signal Ground (Output Ground)GNDPower Supply Status IndicationS+	Anti-Mold	GB/T2423.16-1999 Mold test, level 2							
LxWxH(mm)       255 x 50 x 30         Weight (Kg)       0.55Kg         PIN DEFINITION       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+       0.8N.M         Output Negative       V-       0.400000000000000000000000000000000000	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 Bus     SHARE Bus     NA       Signal Ground (Output Ground)     GND     NA	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 Negative       V+         Output Negative       V-         Output Negative       V-         Output Negative       V-         Output Ground       GND         Signal Ground       GND         Power Supply       S+	L x W x H (mm)	255 x 50 x 3	255 x 50 x 30						
Input TerminalDescriptionPin FunctionMaximum TorqueAC InputL0.5N.MAC InputN0.5N.MAC InputN0.5N.MProtective EarthPEOutput PositiveV+Output PositiveV+Output NegativeV-Output NegativeV-Output NegativeV-Output Sharing Signal TerminalCurrent Sharing BusSignal Ground (Output Ground)GNDPower Supply Status IndicationS+	Weight (Kg)	0.55Kg							
AC Input       L       0.5N.M         AC Input       N       0.5N.M         Protective Earth       PE       0.8N.M         Output Terminal       Output Positive       V+       0.8N.M         Output Negative       V+       0.400000000000000000000000000000000000	PIN DEFINITION								
AC Input     N       Protective Earth     PE       Output Terminal     Output Positive     V+       Output Negative     V+       Output Negative     V-       Output Negative     V-       Output Negative     V-       Signal Ground (Output Ground)     GND       Power Supply Status Indication     S+	Input Terminal	Descript	tion	Pin Fu	Inction	Maximum Torque			
Protective EarthPEOutput TerminalOutput PositiveV+0.8N.MOutput PositiveV+0.8N.MOutput NegativeV-Output NegativeOutput NegativeV-Output NegativeOutput NegativeV-Output NegativeCurrent Sharing Signal TerminalCurrent Sharing BusSHARE Signal Ground (Output Ground)NAPower Supply Status IndicationS+		AC Inp	ut		L	0.5N.M			
Output TerminalOutput PositiveV+0.8N.MOutput PositiveV+0.400000000000000000000000000000000000		AC Inp	ut		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	F	PE				
Output Negative       V-         Output Negative       V-         Current Sharing Signal Terminal       Current Sharing Bus       SHARE       NA         Signal Ground (Output Ground)       GND       Power Supply Status Indication       S+	Output Terminal	Output Po	sitive	\	/+	0.8N.M			
Output Negative     V-       Current Sharing Signal Terminal     Current Sharing Bus     SHARE       Signal Ground (Output Ground)     GND       Power Supply Status Indication     S+		Output Pc	sitive	\	/+				
Current Sharing Signal Terminal       Current Sharing Bus       SHARE       NA         Signal Ground (Output Ground)       GND       Image: Current Sharing Bus       SHARE       NA         Power Supply Status Indication       S+       S+       S+       S+		Output Ne	gative	, v	V-				
Bus       Signal Ground (Output Ground)     GND       Power Supply Status Indication     S+		Output Ne	gative	, v	V-				
(Output Ground)       Power Supply       Status Indication	Current Sharing Signal Terminal			SH	ARE	NA			
Status Indication				G	ND				
		Status Indi	cation		5+				

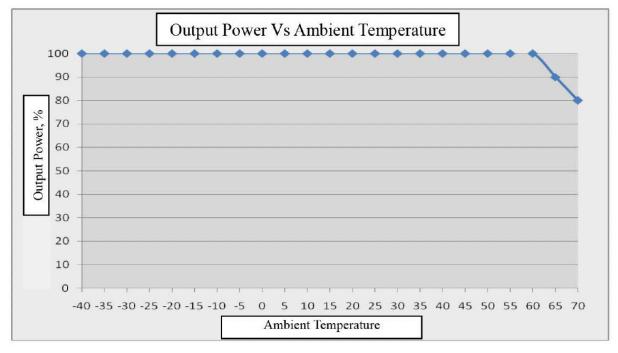
\*Specifications subject to change without notice.

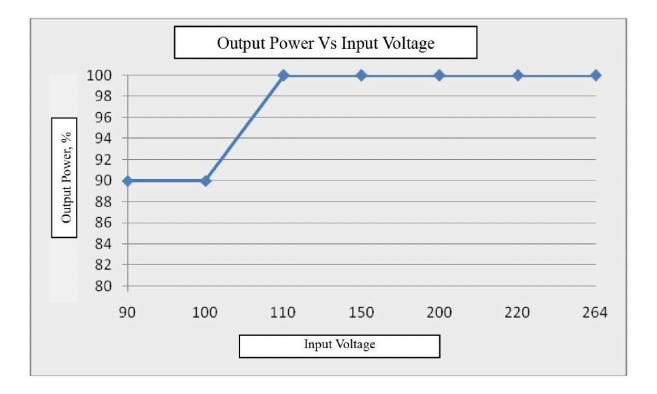




## **DERATING CURVE**

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









## **PACKAGING AND SHIPPING**

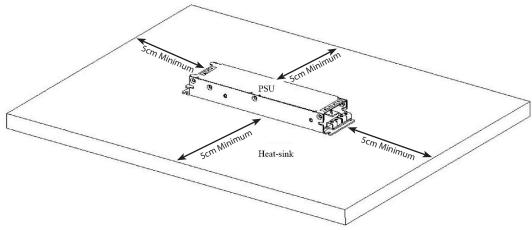
JE ships FOB Origin from the Anaheim, CA factory or our other subsidiary facilities.

## LIMITED WARRANTY POLICY

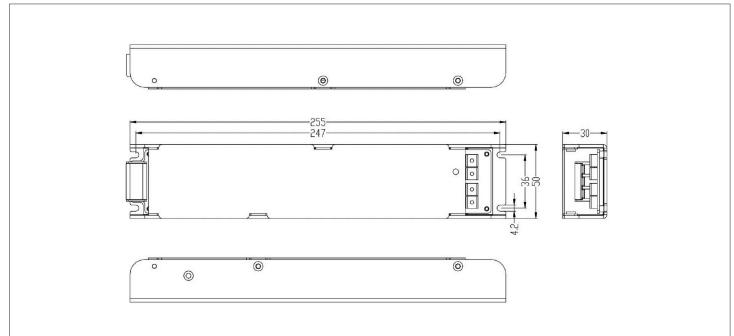
All Jasper Electronics (JE) standard GPAD model power supplies and products are guaranteed to be free of defects in workmanship and materials for a minimum of three (3) years from the date of original shipment, when operated within specification. Non-standard (custom) power supplies and products may 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



ASR ISO9001:2015

American Systems REGISTRAR



(714) 917-0749 • www.jasperelectronics.com • sales@jasperelectronics.com