



# EC6AW SERIES 8 WATT 4:1 INPUT ISOLATED DC-DC CONVERTER

## Features

- Efficiency Up to 86%
- 100KHz Switching Frequency
- Regulated Outputs
- Remote On/Off
- Fully Protected (OTP/OCP/OVP/UVLO)
- 1500Vdc I/O Isolation
- Operating Ambient Temperature -40 to +85°C
- DIP: 1.25"x0.80"x0.40", SMD: 1.25"x0.80"x0.43"
- Meet Industrial Standard
- EN 50155 Compliant with External Circuits
- Shock & Vibration EN 50155 (EN 61373) Compliant
- Fire & Smoke EN 45545-2 Compliant
- 3000m Operating Altitude
- Safety Meets IEC/EN/UL 62368-1
- Without Tantalum Capacitors Inside



| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT |         | INPUT CURRENT |           | % EFF. | CAPACITOR LOAD MAX. |
|--------------|---------------|----------------|----------------|---------|---------------|-----------|--------|---------------------|
|              |               |                | MIN.           | MAX.    | NO LOAD       | FULL LOAD |        |                     |
| EC6AW-24S33  | 9-36 VDC      | 3.3 VDC        | 0 mA           | 2000 mA | 10 mA         | 344 mA    | 80     | 2000uF              |
| EC6AW-24S05  | 9-36 VDC      | 5 VDC          | 0 mA           | 1600 mA | 10 mA         | 406 mA    | 82     | 1600uF              |
| EC6AW-24S12  | 9-36 VDC      | 12 VDC         | 0 mA           | 666 mA  | 10 mA         | 392 mA    | 85     | 666uF               |
| EC6AW-24S15  | 9-36 VDC      | 15 VDC         | 0 mA           | 530 mA  | 10 mA         | 390 mA    | 85     | 530uF               |
| EC6AW-24D05  | 9-36 VDC      | ±5 VDC         | 0 mA           | ±800mA  | 10 mA         | 406 mA    | 82     | 800uF               |
| EC6AW-24D12  | 9-36 VDC      | ±12 VDC        | 0 mA           | ±333mA  | 10 mA         | 392 mA    | 85     | 333uF               |
| EC6AW-24D15  | 9-36 VDC      | ±15 VDC        | 0 mA           | ±265mA  | 10 mA         | 390 mA    | 85     | 265uF               |
| EC6AW-48S33  | 18-75 VDC     | 3.3 VDC        | 0 mA           | 2000 mA | 5 mA          | 172 mA    | 80     | 2000uF              |
| EC6AW-48S05  | 18-75 VDC     | 5 VDC          | 0 mA           | 1600 mA | 5 mA          | 201 mA    | 83     | 1600uF              |
| EC6AW-48S12  | 18-75 VDC     | 12 VDC         | 0 mA           | 666 mA  | 5 mA          | 194 mA    | 86     | 666uF               |
| EC6AW-48S15  | 18-75 VDC     | 15 VDC         | 0 mA           | 530 mA  | 5 mA          | 193 mA    | 86     | 530uF               |
| EC6AW-48D05  | 18-75 VDC     | ±5 VDC         | 0 mA           | ±800mA  | 5 mA          | 201 mA    | 83     | 800uF               |
| EC6AW-48D12  | 18-75 VDC     | ±12 VDC        | 0 mA           | ±333mA  | 5 mA          | 194 mA    | 86     | 333uF               |
| EC6AW-48D15  | 18-75 VDC     | ±15 VDC        | 0 mA           | ±265mA  | 5 mA          | 193 mA    | 86     | 265uF               |

NOTE:

1. Nominal Input Voltage 24 or 48 VDC



# EC6AW Series

## PART NUMBER

| Series | Nominal Input Voltage      | Number of Outputs      | Nominal Output Voltage                                                                           | Remote On/Off Logic             | Packages              |
|--------|----------------------------|------------------------|--------------------------------------------------------------------------------------------------|---------------------------------|-----------------------|
| EC6AW- | II                         | O                      | XX                                                                                               | L                               | -Y                    |
| EC6AW  | 24 : 24 VDC<br>48 : 48 VDC | S : Single<br>D : Dual | 33 : 3.3VDC<br>05 : 5VDC<br>12 : 12VDC<br>15 : 15VDC<br>05 : ±5VDC<br>12 : ±12VDC<br>15 : ±15VDC | None : Positive<br>N : Negative | None : DIP<br>S : SMD |

Part Number Example:

**EC6AW-24S12N:** 1.25"x0.8", 8W, 4:1 9-36Vdc Input, Single 12Vdc Output, Negative Logic



# EC6AW Series

## TECHNICAL SPECIFICATIONS

(All specifications are typical at nominal input, full load at 25°C unless otherwise noted.)

### ABSOLUTE MAXIMUM RATINGS

| PARAMETER                     | NOTES and CONDITIONS             | Device         | Min.    | Typ.     | Max.      | Units           |
|-------------------------------|----------------------------------|----------------|---------|----------|-----------|-----------------|
| Input Voltage                 | Continuous                       | 24Vin<br>48Vin | 9<br>18 | 24<br>48 | 36<br>75  | V <sub>dc</sub> |
| Input Surge Voltage           | 100ms max.                       | 24Vin<br>48Vin |         |          | 50<br>100 | V <sub>dc</sub> |
| Operating Ambient Temperature | With derating, above 71°C        | All            | -40     |          | 85        | °C              |
| Operating Case Temperature    | At the center part of case plate | All            |         |          | 100       | °C              |
| Storage Temperature           |                                  | All            | -55     |          | 125       | °C              |

### INPUT CHARACTERISTICS

| PARAMETER                         | NOTES and CONDITIONS                                              | Device                 | Min.        | Typ.        | Max.        | Units            |
|-----------------------------------|-------------------------------------------------------------------|------------------------|-------------|-------------|-------------|------------------|
| Operating Input Voltage           |                                                                   | 24Vin<br>48Vin         | 9<br>18     | 24<br>48    | 36<br>75    | V <sub>dc</sub>  |
| Input Under Voltage Lockout       |                                                                   |                        |             |             |             |                  |
| Turn-On Voltage Threshold         | 100% Load                                                         | 24Vin<br>48Vin         | 8<br>16     | 8.5<br>16.5 | 8.8<br>17.5 | V <sub>dc</sub>  |
| Turn-Off Voltage Threshold        | 100% Load                                                         | 24Vin<br>48Vin         | 7.7<br>15.5 | 8<br>16     | 8.3<br>17   | V <sub>dc</sub>  |
| Lockout Hysteresis Voltage        | 100% Load                                                         | 24Vin<br>48Vin         |             | 0.5<br>1    |             | V <sub>dc</sub>  |
| Maximum Input Current             | V <sub>in</sub> =9V, Full load<br>V <sub>in</sub> =18V, Full load | 24Vin<br>48Vin         |             | 1.2<br>0.6  |             | A                |
| No-Load Input Current             | V <sub>in</sub> =Nominal, I <sub>o</sub> =0A                      | See Model Number Table |             |             |             | mA               |
| Input Filter                      | Pi filter                                                         | All                    |             |             |             |                  |
| Inrush Current (I <sub>2t</sub> ) | As per ETS300 132-2                                               | All                    |             |             | 0.1         | A <sup>2</sup> s |
| Input Reflected Ripple Current    | P-P thru 12uH inductor, 5Hz to 20MHz                              | All                    |             | 30          |             | mA               |

### OUTPUT CHARACTERISTICS

| PARAMETER                                                | NOTES and CONDITIONS                                      | Device                 | Min. | Typ.                      | Max.  | Units |
|----------------------------------------------------------|-----------------------------------------------------------|------------------------|------|---------------------------|-------|-------|
| Voltage Set Point Accuracy                               | V <sub>in</sub> =Nominal, full load, T <sub>c</sub> =25°C | All                    | -1.5 |                           | +1.5  | %     |
| Output Voltage Balance                                   | V <sub>in</sub> =Nominal, full load, T <sub>c</sub> =25°C | Dual                   | -1.0 |                           | +1.0  | %     |
| Output Voltage Regulation                                |                                                           |                        |      |                           |       |       |
| Line Regulation                                          | V <sub>in</sub> =High line to low line, full load         | All                    |      |                           | ±0.5  | %     |
| Load Regulation                                          | Full load to no load                                      | Single                 |      |                           | ±0.5  | %     |
|                                                          |                                                           | Dual                   |      |                           | ±1.0  | %     |
| Cross Regulation                                         | Load cross variation 25%/100%                             | Dual                   |      |                           | ±5.0  | %     |
| Temperature Coefficient                                  | T <sub>c</sub> =-40°C to 85°C                             | All                    |      |                           | ±0.03 | %/°C  |
| Output Voltage Ripple and Noise (5Hz to 20MHz bandwidth) |                                                           |                        |      |                           |       |       |
| Peak-to-Peak                                             | Full Load, 20MHz bandwidth 0.1uF Ceramic capacitor        | 3.3Vo                  |      |                           | 75    | mV    |
|                                                          |                                                           | 5Vo                    |      |                           |       |       |
|                                                          |                                                           | 12Vo<br>15Vo           |      |                           | 100   | mV    |
| Output Current Range                                     | V <sub>in</sub> =Nominal                                  | See Model Number Table |      |                           |       | A     |
| Over Current Protection                                  | Auto recovery                                             | All                    |      | 120                       |       | %     |
| Short Circuit Protection                                 |                                                           | All                    |      | Continuous, Auto Recovery |       |       |
| External Load Capacitance                                | Full load (resistive)                                     | See Model Number Table |      |                           |       | uF    |



## EC6AW Series

| PARAMETER                      | NOTES and CONDITIONS | Device | Min. | Typ. | Max. | Units |
|--------------------------------|----------------------|--------|------|------|------|-------|
| Output Over Voltage Protection | Zener or TVS Clamp   | 3.3Vo  |      | 3.9  |      | V     |
|                                |                      | 5Vo    |      | 6.2  |      |       |
|                                |                      | 12Vo   |      | 15   |      |       |
|                                |                      | 15Vo   |      | 18   |      |       |
|                                |                      | ±5Vo   |      | ±6.2 |      |       |
|                                |                      | ±12Vo  |      | ±15  |      |       |
|                                |                      | ±15Vo  |      | ±18  |      |       |

### EFFICIENCY

| PARAMETER | NOTES and CONDITIONS                                      | Device | Min.                   | Typ. | Max. | Units |
|-----------|-----------------------------------------------------------|--------|------------------------|------|------|-------|
| 100% Load | V <sub>in</sub> =Nominal, full load, T <sub>c</sub> =25°C |        | See Model Number Table |      |      | %     |

### DYNAMIC CHARACTERISTICS

| PARAMETER                               | NOTES and CONDITIONS                                                                                                                   | Device | Min. | Typ. | Max. | Units |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------|------|------|------|-------|
| Output Voltage Current Transient        |                                                                                                                                        |        |      |      |      |       |
| Error Band                              | 75% to 100% of I <sub>o_max.</sub> step load change<br>d <sub>i</sub> /d <sub>t</sub> =0.1A/us<br>(within 1% V <sub>out</sub> nominal) | All    | ±5   |      |      | %     |
| Recovery Time                           |                                                                                                                                        |        | 500  |      |      | us    |
| Turn-On Delay and Rise Time             | Full load (Constant resistive load)                                                                                                    |        |      |      |      |       |
| Turn-On Delay Time, From On/Off Control | V <sub>on/off</sub> to 10%V <sub>o_set</sub> , Remote on                                                                               | All    | 2    |      |      | ms    |
| Turn-On Delay Time, From Input          | V <sub>in_min.</sub> to 10%V <sub>o_set</sub> , Power up                                                                               | All    | 2    |      |      | ms    |
| Output Voltage Rise Time                | 10%V <sub>o_set</sub> to 90%V <sub>o_set</sub>                                                                                         | All    | 1.5  |      |      | ms    |

### ISOLATION CHARACTERISTICS

| PARAMETER                                                | NOTES and CONDITIONS      | Device | Min. | Typ. | Max. | Units           |
|----------------------------------------------------------|---------------------------|--------|------|------|------|-----------------|
| Isolation Voltage<br>(100% factory Hi-Pot tested @2sec.) | 1 Minute; input to output | All    |      |      | 1500 | V <sub>dc</sub> |
| Isolation Resistance                                     | Input to output           | All    | 1000 |      |      | MΩ              |
| Isolation Capacitance                                    | Input to output           | All    |      | 1000 |      | pF              |

### FEATURE CHARACTERISTICS

| PARAMETER                                                       | NOTES and CONDITIONS                                                                                                              | Device | Min.                      | Typ. | Max. | Units |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------|------|------|-------|
| Switching Frequency                                             | V <sub>in</sub> =Nominal, I <sub>o</sub> =I <sub>o_max</sub> .<br>V <sub>in</sub> =Low line, I <sub>o</sub> =I <sub>o_max</sub> . | All    | 200<br>100                |      |      | KHz   |
| On/Off Control, Positive Remote On/Off Logic, Refer to -Vin Pin |                                                                                                                                   |        |                           |      |      |       |
| Logic Low (Module Off)                                          | V <sub>on/off</sub> at I <sub>on/off</sub> =1.0mA                                                                                 | All    | 0                         |      | 1.2  | V     |
| Logic High (Module On)                                          | V <sub>on/off</sub> at I <sub>on/off</sub> =0.1uA, Pin open=on                                                                    | All    | 3.5 or<br>Open<br>Circuit |      | 36   | V     |
| On/Off Control, Negative Remote On/Off Logic, Refer to -Vin Pin |                                                                                                                                   |        |                           |      |      |       |
| Logic High (Module Off)                                         | V <sub>on/off</sub> at I <sub>on/off</sub> =0.1uA, Pin open=off                                                                   | All    | 3.5 or<br>Open<br>Circuit |      | 36   | V     |
| Logic Low (Module On)                                           | V <sub>on/off</sub> at I <sub>on/off</sub> =1.0mA                                                                                 | All    | 0                         |      | 1.2  | V     |
| On/Off Current (for Both Remote On/Off Logic)                   | I <sub>on/off</sub> at V <sub>on/off</sub> =0V                                                                                    | All    |                           | 0.3  | 1    | mA    |
| Leakage Current (for Both Remote On/Off Logic)                  | Logic high, V <sub>on/off</sub> =15V                                                                                              | All    |                           |      | 30   | uA    |
| Off Converter Input Current                                     | Shutdown input idle current                                                                                                       | All    |                           | 4    | 10   | mA    |

### GENERAL SPECIFICATIONS

| PARAMETER | NOTES and CONDITIONS                                                               | Device | Min. | Typ. | Max. | Units      |
|-----------|------------------------------------------------------------------------------------|--------|------|------|------|------------|
| MTBF      | I <sub>o</sub> =100% of I <sub>o_max</sub> ;<br>MIL-HDBK - 217F_Notice 1, GB, 25°C | Single |      | 1.5  |      | M<br>hours |
|           |                                                                                    | Dual   |      | 1.3  |      |            |
| Weight    |                                                                                    | All    |      | 18.4 |      | grams      |



# EC6AW Series

## GENERAL SPECIFICATIONS

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| Case Material       | Black Coated Copper                                 |
| Base plate Material | Non-Conductive Base                                 |
| Potting Material    | UL 94V-0                                            |
| Pin Material        | Base: Copper<br>Plating: Nickel with Matte Tin      |
| Shock/Vibration     | MIL-STD-810F/EN61373 Compliant                      |
| Humidity            | 95% RH max. Non Condensing                          |
| Altitude            | 3000m Operating Altitude, 12000m Transport Altitude |
| Thermal Shock       | MIL-STD-810F                                        |
| Fire & Smoke        | EN 45545-2 Compliant                                |

## EMC SPECIFICATIONS (External components required, please refer to application note.)

|                                 |                                                                                                                                 |                                        |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| EMI                             | Meets EN 55032 & EN 50155 Compliant (with external filter)                                                                      | Class A                                |
| ESD                             | EN 61000-4-2 Level 3: Air $\pm 8\text{kV}$ , Contact $\pm 6\text{kV}$                                                           | Perf. Criteria A                       |
| Radiated Immunity               | EN 61000-4-3 Level 3: 80~1000MHz, 20V/m                                                                                         | Perf. Criteria A                       |
| Fast Transient                  | EN 61000-4-4 Level 3: On power input port, $\pm 2\text{kV}$ , external components required (EN 50155)                           | Perf. Criteria A                       |
| Surge                           | EN 61000-4-5 Level 3: Line to earth, $\pm 2\text{kV}$ , Line to line, $\pm 1\text{kV}$ (EN 50155), external components required | Perf. Criteria A                       |
| Conducted Immunity              | EN 61000-4-6 Level 3: 0.15~80MHz, 10V                                                                                           | Perf. Criteria A                       |
| Interruptions of Voltage Supply | EN 50155 Class S3: 20ms interruptions                                                                                           | Perf. Criteria A                       |
| Supply Change Over              | EN 50155 Class C2: During a supply break of 30 ms                                                                               | Perf. Criteria A                       |
| Application Note Link           |                                                                                                                                 | <a href="#">EC6AW Series App Notes</a> |
| Packaging Information Link      |                                                                                                                                 | <a href="#">Packaging Information</a>  |

## Immunity to Environmental Conditions

| Phenomenon                                                    | EN50155; 2017 Reference Clause(s) | Reference Standard | Test Conditions                                                                                                                                                                                                                                                                           | Result |
|---------------------------------------------------------------|-----------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Low Temperature Start-up test                                 | 13.4.4                            | EN 60068-2-1       | Class OT4<br>Temperature: $-40^{\circ}\text{C}$<br>Duration: 2 hrs                                                                                                                                                                                                                        | Pass   |
| Dry Heat Test                                                 | 13.4.5                            | EN 60068-2-2       | Class OT4 & Cycle B<br>Temperature: $70^{\circ}\text{C}$<br>Duration: 6 hrs<br>Extended temperature: $85^{\circ}\text{C}$<br>Extended Duration: 10min                                                                                                                                     | Pass   |
| Low Temperature Storage Test                                  | 13.4.6                            | EN 60068-2-1       | Temperature: $-40^{\circ}\text{C}$<br>Duration: 16 hrs                                                                                                                                                                                                                                    | Pass   |
| Cyclic Damp Heat Test                                         | 13.4.7                            | EN 60068-2-30      | Temperature: $25^{\circ}\text{C} - 55^{\circ}\text{C}$<br>Humidity: 90% RH<br>Duration: 48 hrs                                                                                                                                                                                            | Pass   |
| Random Vibration Test                                         | 13.4.11                           | EN 61373           | Temperature: $25^{\circ}\text{C} \pm 10^{\circ}\text{C}$<br>Humidity: 50% $\pm 25\%$ RH<br>Frequency range: 5 ~ 150 Hz<br>Vertical: $0.98 \text{ m/s}^2$<br>Transverse: $0.44 \text{ m/s}^2$<br>Longitudinal: $0.69 \text{ m/s}^2$<br>Duration: 10 min / axis                             | Pass   |
| Simulated Long Life Test at Increased Random Vibration Levels | 13.4.11                           | EN 61373           | Temperature: $25^{\circ}\text{C} \pm 10^{\circ}\text{C}$<br>Humidity: 50% $\pm 25\%$ RH<br>Frequency range: 5 ~ 150 Hz<br>Vertical: $5.72 \text{ m/s}^2$<br>Transverse: $2.5 \text{ m/s}^2$<br>Longitudinal: $3.96 \text{ m/s}^2$<br>Duration: 5 hrs / axis                               | Pass   |
| Shock Test                                                    | 13.4.11                           | EN 61373           | Temperature: $25^{\circ}\text{C} \pm 10^{\circ}\text{C}$<br>Humidity: 50% $\pm 25\%$ RH<br>Frequency range: 5 ~ 150 Hz<br>$\pm$ Vertical: $30 \text{ m/s}^2$<br>$\pm$ Transverse: $30 \text{ m/s}^2$<br>$\pm$ Longitudinal: $50 \text{ m/s}^2$<br>Duration: 30ms x18 (Each axis 3 shocks) | Pass   |



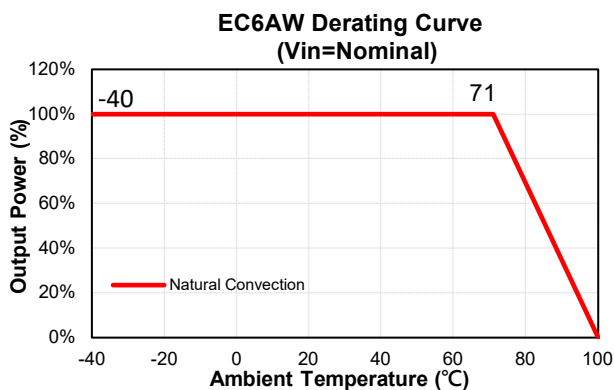
# EC6AW Series

## EN45545-2 Fire & Smoke Test Conditions

| Item |                     | Standard                                 | Hazard Level  |
|------|---------------------|------------------------------------------|---------------|
| R22  | Oxygen Index Test   | EN 45545-2: 2013<br>EN ISO 4589-2: 2006  | HL1, HL2, HL3 |
|      | Smoke Density Test  | EN 45545-2: 2013<br>EN ISO 5659-2: 2013  | HL1, HL2, HL3 |
|      | Smoke Toxicity Test | EN 45545-2: 2013<br>NF X70-100: 2006     | HL1, HL2, HL3 |
| R23  | Oxygen Index Test   | EN 45545-2: 2013<br>EN ISO 4589-2: 2006  | HL1, HL2, HL3 |
|      | Smoke Density Test  | EN 45545-2: 2013<br>EN ISO 5659-2: 2013  | HL1, HL2, HL3 |
|      | Smoke Toxicity Test | EN 45545-2: 2013<br>NF X70-100: 2006     | HL1, HL2, HL3 |
| R24  | Oxygen Index Test   | EN45545-2: 2013<br>EN ISO 4589-2         | HL1, HL2, HL3 |
| R25  | Glow - Wire Test    | EN 45545-2:2013<br>EN 60695-2-11:2001    | HL1, HL2, HL3 |
| R26  | Vertical Flame Test | EN 45545-2: 2013<br>EN 60695-11-10: 2013 | HL1, HL2, HL3 |

## CHARACTERISTIC CURVE

### Power Derating Curve

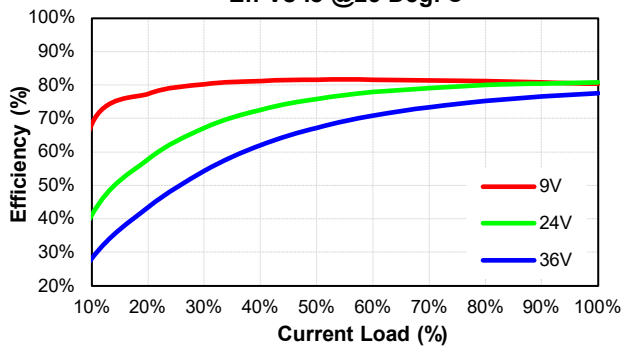




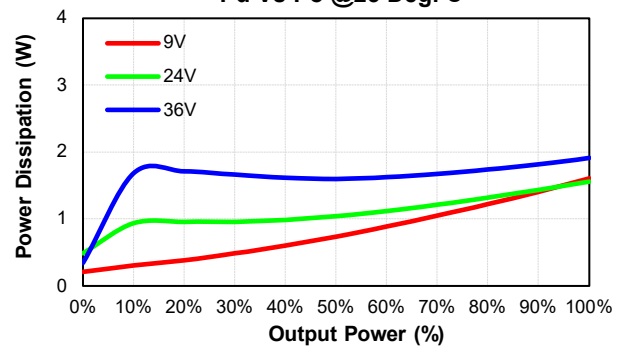
# EC6AW Series

## Performance Data

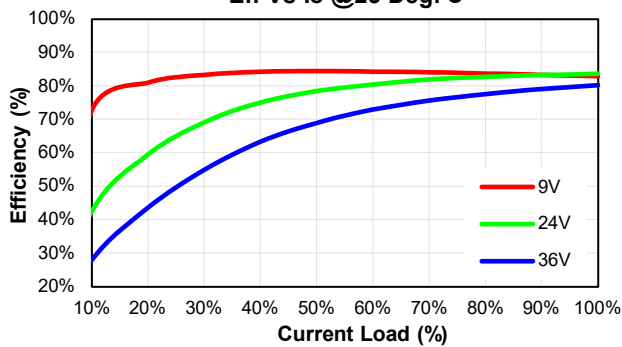
**EC6AW-24S33**  
Eff Vs Io @25 Deg. C



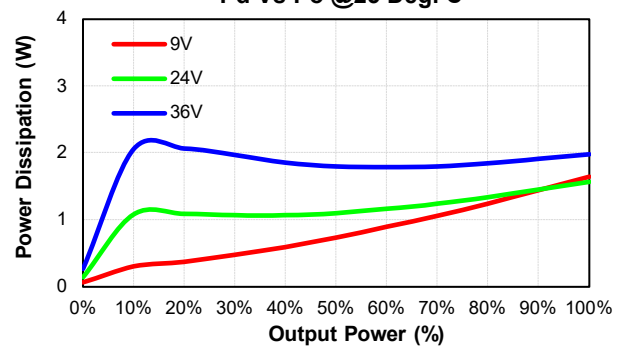
**EC6AW-24S33**  
Pd Vs Po @25 Deg. C



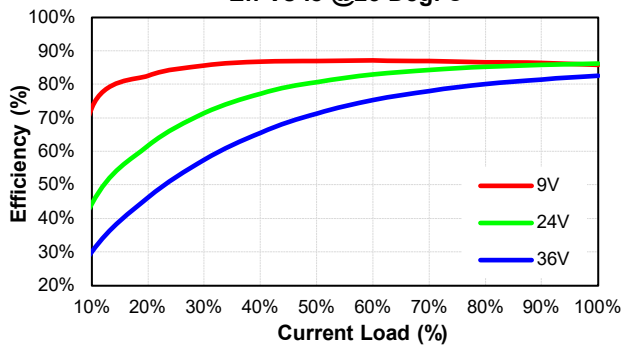
**EC6AW-24S05**  
Eff Vs Io @25 Deg. C



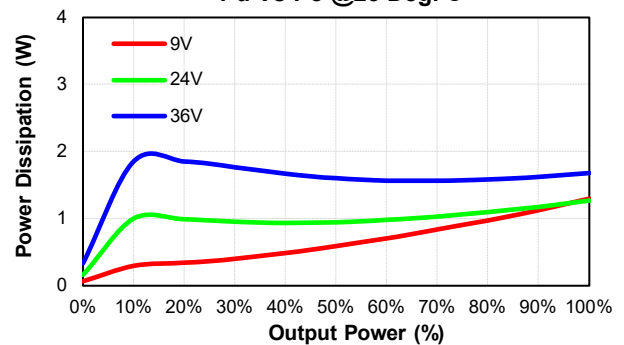
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Pd Vs Po @25 Deg. C



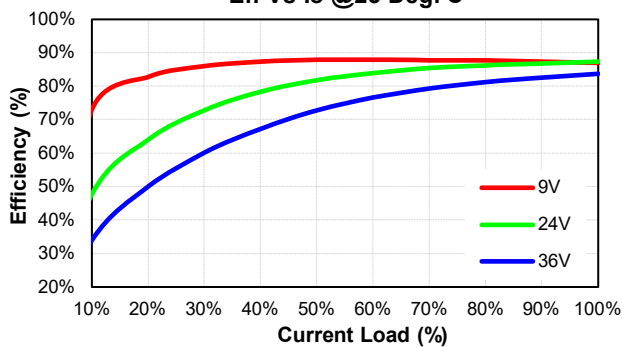
**EC6AW-24S12**  
Eff Vs Io @25 Deg. C



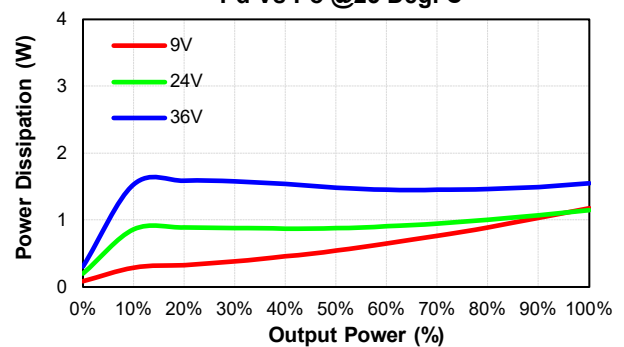
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Pd Vs Po @25 Deg. C



**EC6AW-24S15**  
Eff Vs Io @25 Deg. C



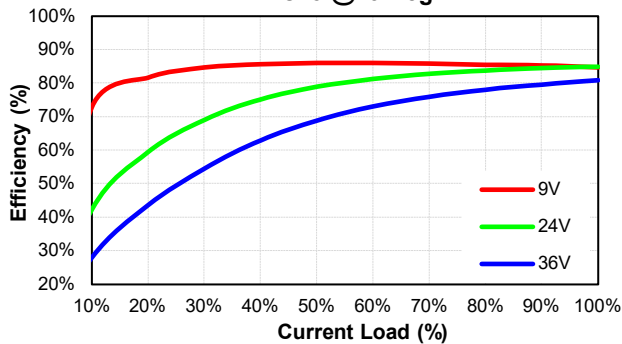
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Pd Vs Po @25 Deg. C



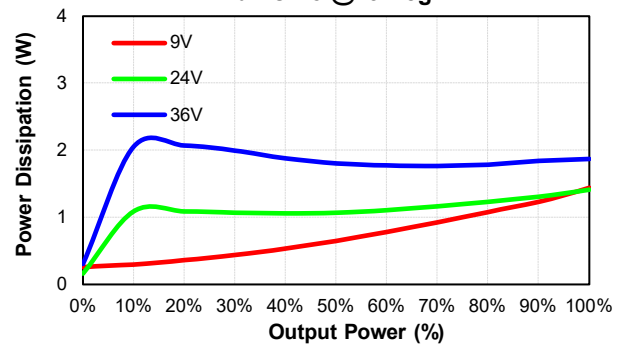


## EC6AW Series

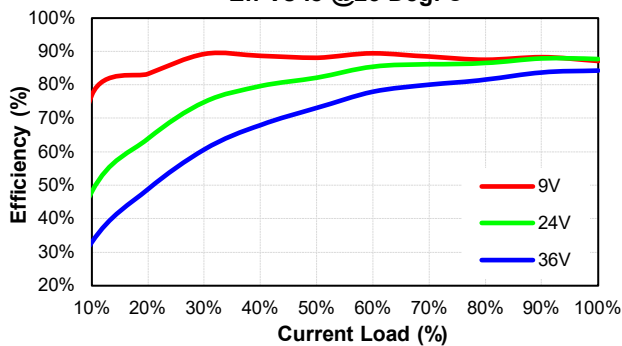
**EC6AW-24D05**  
**Eff Vs Io @25 Deg. C**



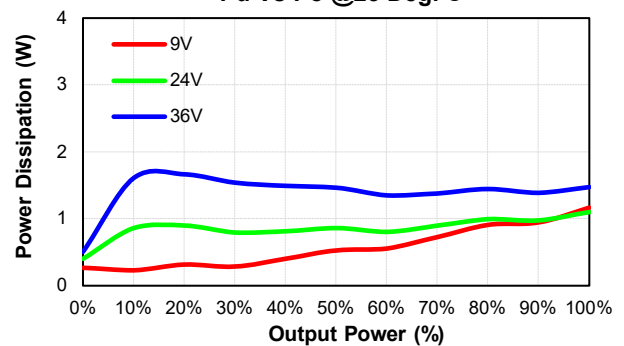
**EC6AW-24D05**  
**Pd Vs Po @25 Deg. C**



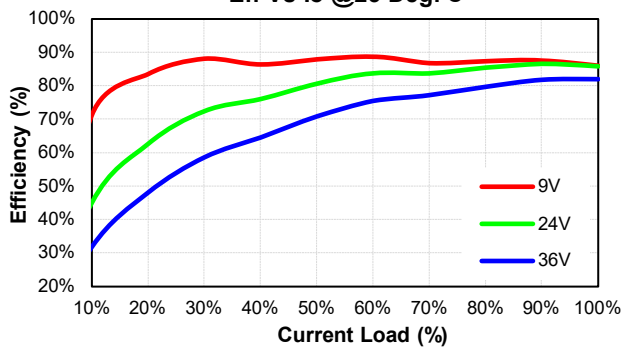
**EC6AW-24D12**  
**Eff Vs Io @25 Deg. C**



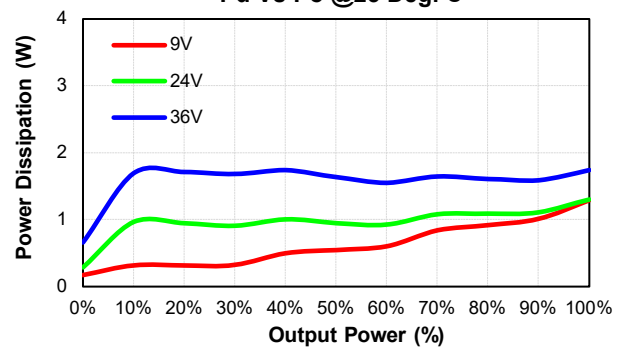
**EC6AW-24D12**  
**Pd Vs Po @25 Deg. C**



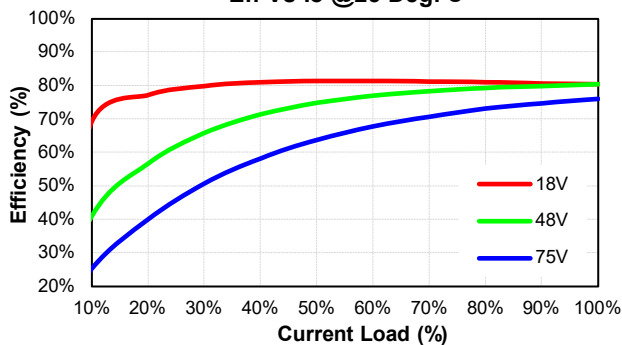
**EC6AW-24D15**  
**Eff Vs Io @25 Deg. C**



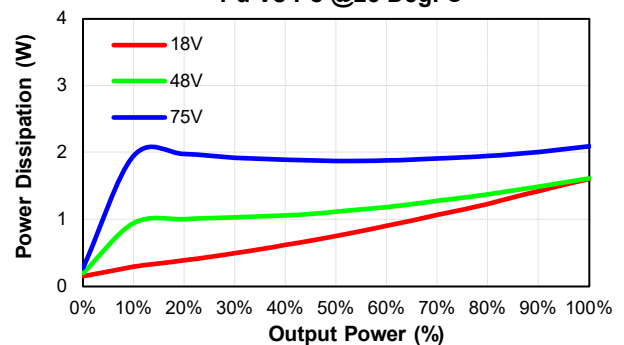
**EC6AW-24D15**  
**Pd Vs Po @25 Deg. C**



**EC6AW-48S33**  
**Eff Vs Io @25 Deg. C**



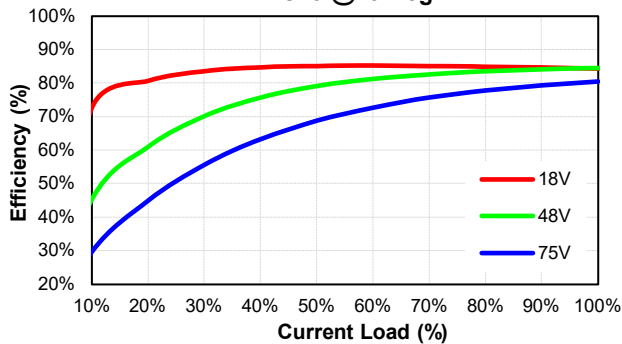
**EC6AW-48S33**  
**Pd Vs Po @25 Deg. C**



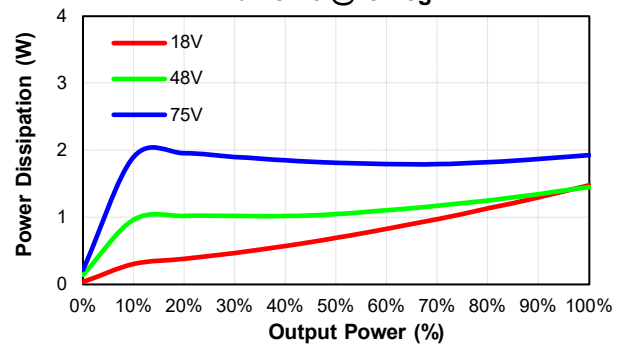


## EC6AW Series

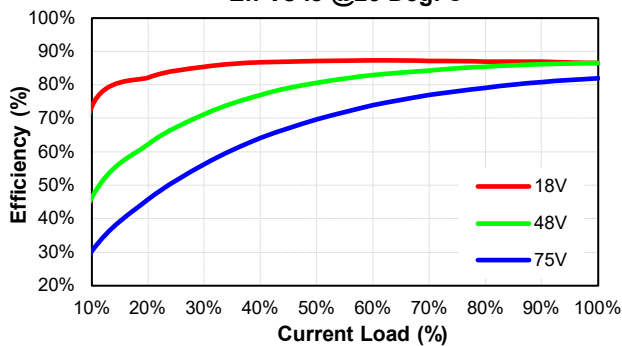
**EC6AW-48S05**  
**Eff Vs Io @25 Deg. C**



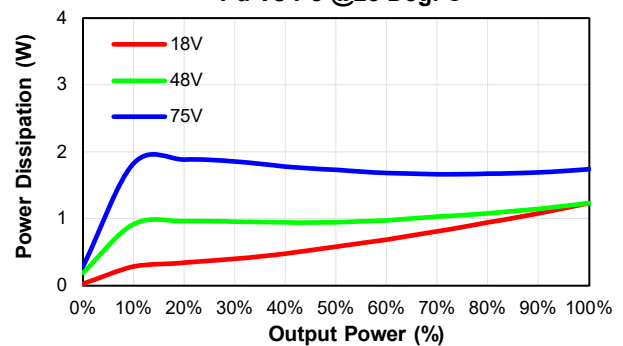
**EC6AW-48S05**  
**Pd Vs Po @25 Deg. C**



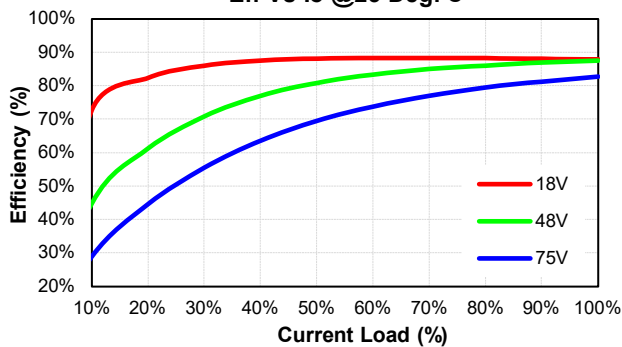
**EC6AW-48S12**  
**Eff Vs Io @25 Deg. C**



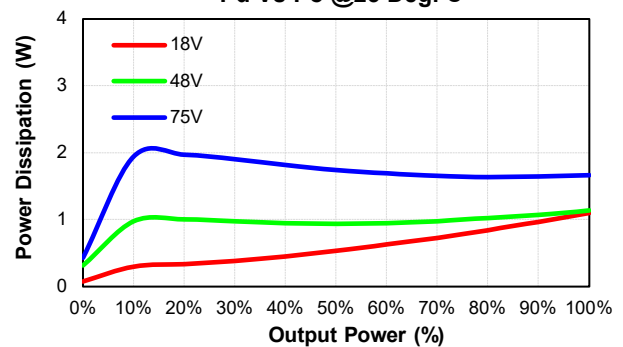
**EC6AW-48S12**  
**Pd Vs Po @25 Deg. C**



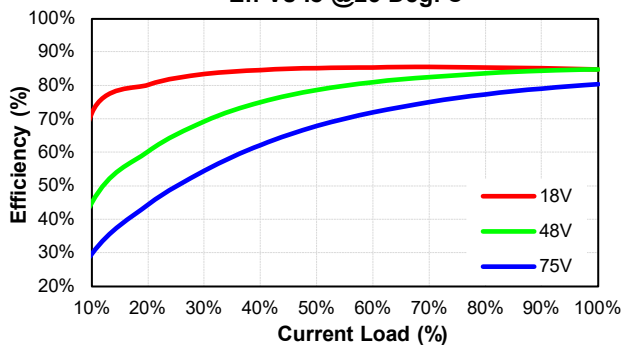
**EC6AW-48S15**  
**Eff Vs Io @25 Deg. C**



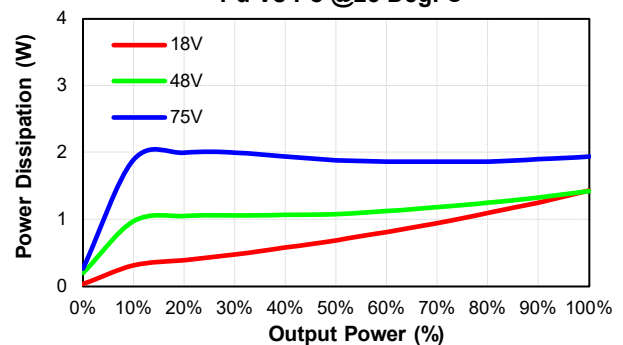
**EC6AW-48S15**  
**Pd Vs Po @25 Deg. C**



**EC6AW-48D05**  
**Eff Vs Io @25 Deg. C**



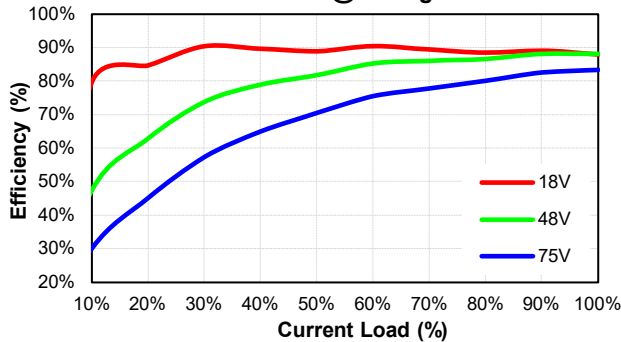
**EC6AW-48D05**  
**Pd Vs Po @25 Deg. C**



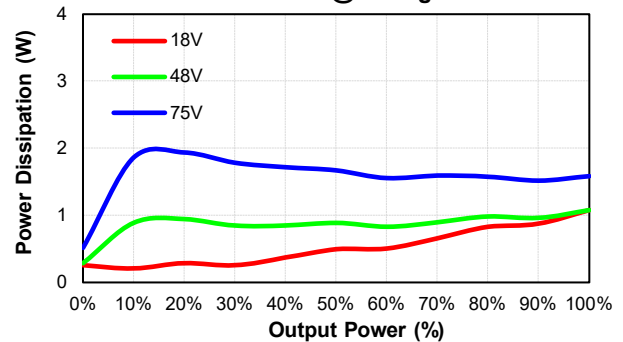


# EC6AW Series

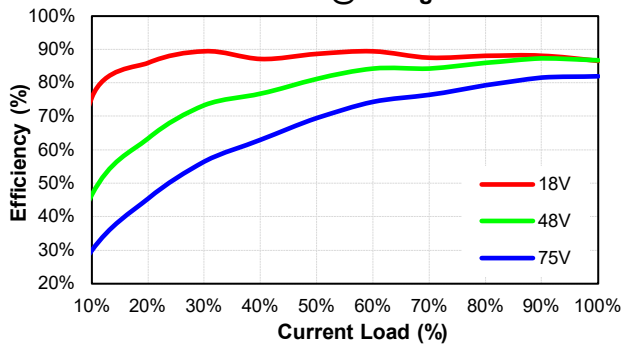
**EC6AW-48D12**  
Eff Vs Io @25 Deg. C



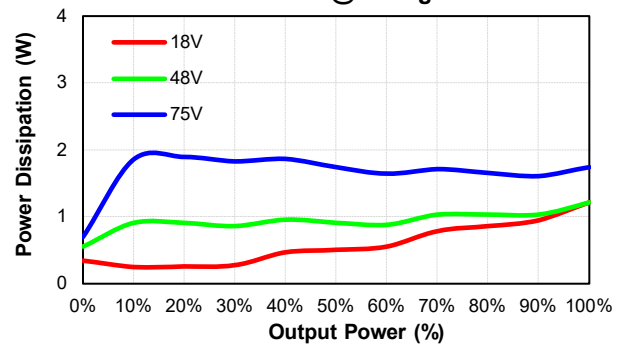
**EC6AW-48D12**  
Pd Vs Po @25 Deg. C



**EC6AW-48D15**  
Eff Vs Io @25 Deg. C



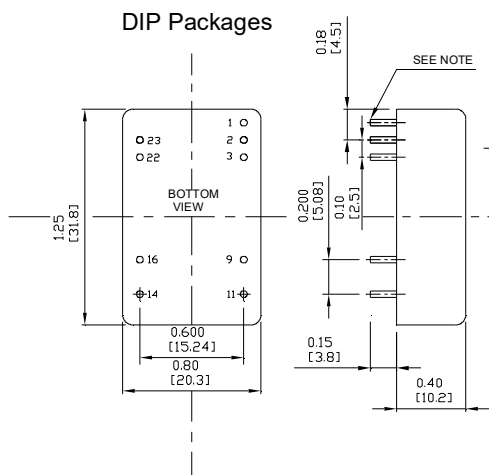
**EC6AW-48D15**  
Pd Vs Po @25 Deg. C



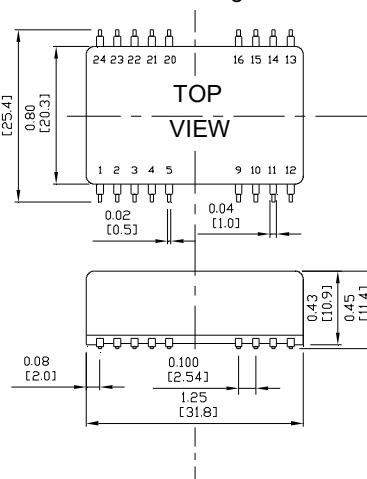
## MECHANICAL SPECIFICATION

NOTE: Pin Size is 0.02±0.002 Inch (0.5±0.05 mm) DIA  
All Dimensions In Inches (mm)  
Tolerances Inches: X.XX= ±0.02, X.XXX= ±0.010  
Millimeters: X.X= ±0.5, X.XX=±0.25

**DIP Packages**



**SMD Packages**



| PIN CONNECTION |               |               |               |               |
|----------------|---------------|---------------|---------------|---------------|
| Pin            | Single Output |               | Dual Output   |               |
|                | DIP           | SMD           | DIP           | SMD           |
| 1              | Remote on/off | Remote on/off | Remote on/off | Remote on/off |
| 2,3            | -V Input      |               | -V Input      |               |
| 4,5            | NP            | NC            | NP            | NC            |
| 9              | NP            | NC            | Common        |               |
| 10             | NP            | NC            | NP            | NC            |
| 11             | NC            |               | -V Output     |               |
| 12             | NP            | NC            | NP            | NC            |
| 13             | NP            | +V Output     | NP            | NC            |
| 14             | +V Output     |               | +V Output     |               |
| 15             | NP            | -V Output     | NP            | NC            |
| 16             | -V Output     |               | Common        |               |
| 20,21,24       | NP            | NC            | NP            | NC            |
| 22,23          | +V Input      |               | +V Input      |               |

\* NC-NO CONNECTION WITH PIN  
\* NP-NO PIN

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