



### ■ Features :

- AC input range selected by switch
- Protections: Short circuit / Overload / Over voltage
- Forced air cooling by built-in DC fan
- 100% full load burn-in test
- Fixed switching frequency at 75KHz
- Low cost
- High reliability
- 2 years warranty



## SPECIFICATION

| MODEL                     |  | Q-250B  |          |             |         | Q-250C       |          |          |         |
|---------------------------|--|---|----------|-------------|---------|--------------|----------|----------|---------|
| OUTPUT                    | DC VOLTAGE   | +5V   | +12V     | -12V        | -5V     | +5V          | +15V     | -15V     | -5V     |
|                           | RATED CURRENT  | 20A   | 7A       | 1A          | 1A      | 20A          | 5A       | 1A       | 1A      |
|                           | CURRENT RANGE  | 2 ~ 20A   | 0.5 ~ 7A | 0.5 ~ 1A    | 0 ~ 1A  | 2 ~ 20A      | 0.5 ~ 5A | 0.5 ~ 1A | 0 ~ 1A  |
|                           | RATED POWER  | 201W  |          |             |         | 195W         |          |          |         |
|                           | RIPPLE & NOISE (max.) Note.2   | 80mVp-p   | 120mVp-p | 120mVp-p    | 50mVp-p | 80mVp-p      | 150mVp-p | 150mVp-p | 50mVp-p |
|                           | VOLTAGE ADJ. RANGE   | 4.75 ~ 5.5V   |          |             |         | 4.75 ~ 5.5V  |          |          |         |
|                           | VOLTAGE TOLERANCE Note.3   | 2.0%  | +8, -10% | 10%         | 6.0%    | 2.0%         | 10%      | 10%      | 6.0%    |
|                           | LINE REGULATION  | 0.5%  | 1.0%     | 1.0%        | 1.0%    | 0.5%         | 1.0%     | 1.0%     | 1.0%    |
|                           | LOAD REGULATION  | 1.0%  | 6.0%     | 8.0%        | 2.0%    | 1.0%         | 8.0%     | 10%      | 2.0%    |
| SETUP, RISE, HOLD UP TIME |  | 800ms, 50ms, 20ms at full load  |          |             |         |              |          |          |         |
| INPUT                     | VOLTAGE RANGE  | 90 ~ 132VAC / 176 ~ 264VAC Selected by switch   |          |             |         | 248 ~ 370VDC |          |          |         |
|                           | FREQUENCY RANGE  | 47 ~ 63Hz   |          |             |         |              |          |          |         |
|                           | EFFICIENCY (Typ.)  | 73%   |          |             |         | 74%          |          |          |         |
|                           | AC CURRENT   | 6A/115VAC   |          | 3.5A/230VAC |         |              |          |          |         |
|                           | INRUSH CURRENT (max.)  | COLD START 50A  |          |             |         |              |          |          |         |
|                           | LEAKAGE CURRENT  | <2mA / 240VAC   |          |             |         |              |          |          |         |
| PROTECTION                | OVERLOAD   | 105 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |          |             |         |              |          |          |         |
|                           | OVER VOLTAGE   | +5V: 5.75 ~ 6.75V<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed             |          |             |         |              |          |          |         |
|                           |  |   |          |             |         |              |          |          |         |
| ENVIRONMENT               | WORKING TEMP.  | -10 ~ +60°C (Refer to output load derating curve)   |          |             |         |              |          |          |         |
|                           | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |          |             |         |              |          |          |         |
|                           | STORAGE TEMP., HUMIDITY  | -20 ~ +85°C, 10 ~ 95% RH  |          |             |         |              |          |          |         |
|                           | TEMP. COEFFICIENT  | 0.03%/°C (0 ~ 50°C)   |          |             |         |              |          |          |         |
|                           | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  |          |             |         |              |          |          |         |
| SAFETY & EMC              | SAFETY STANDARDS   | UL60950-1 approved  |          |             |         |              |          |          |         |
|                           | WITHSTAND VOLTAGE  | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC   |          |             |         |              |          |          |         |
|                           | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  |          |             |         |              |          |          |         |
| OTHERS                    | MTBF   | 219.5K hrs min. MIL-HDBK-217F (25°C)  |          |             |         |              |          |          |         |
|                           | DIMENSION  | 150*140*86mm (L*W*H)  |          |             |         |              |          |          |         |
|                           | PACKING  | 1.4Kg; 8pcs/11.5Kg/0.97CUFT   |          |             |         |              |          |          |         |
| NOTE                      | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> |   |          |             |         |              |          |          |         |



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### SPECIFICATION

| MODEL                     |   | Q-250D  |          |             |          | Q-250F       |          |          |          |
|---------------------------|---|---|----------|-------------|----------|--------------|----------|----------|----------|
| OUTPUT                    | DC VOLTAGE  | +5V   | +12V     | +24V        | -12V     | +5V          | +15V     | +24V     | -15V     |
|                           | RATED CURRENT   | 10A   | 5A       | 5A          | 1A       | 10A          | 4A       | 5A       | 1A       |
|                           | CURRENT RANGE   | 2 ~ 15A   | 0.5 ~ 6A | 0.5 ~ 5A    | 0 ~ 1A   | 2 ~ 15A      | 0.5 ~ 5A | 0.5 ~ 5A | 0 ~ 1A   |
|                           | RATED POWER   | 242W  |          |             |          | 245W         |          |          |          |
|                           | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 120mVp-p | 240mVp-p    | 120mVp-p | 80mVp-p      | 150mVp-p | 240mVp-p | 150mVp-p |
|                           | VOLTAGE ADJ. RANGE  | 4.75 ~ 5.5V   |          |             |          | 4.75 ~ 5.5V  |          |          |          |
|                           | VOLTAGE TOLERANCE Note.3  | 2.0%  | +6, -10% | 8.0%        | 6.0%     | 2.0%         | +6, -10% | 8.0%     | 6.0%     |
|                           | LINE REGULATION   | 0.5%  | 1.0%     | 1.0%        | 1.0%     | 0.5%         | 1.0%     | 1.0%     | 1.0%     |
|                           | LOAD REGULATION   | 1.0%  | 5.0%     | 6.0%        | 2.0%     | 1.0%         | 4.0%     | 6.0%     | 2.0%     |
| SETUP, RISE, HOLD UP TIME | 800ms, 50ms, 16ms at full load  |   |          |             |          |              |          |          |          |
| INPUT                     | VOLTAGE RANGE   | 90 ~ 132VAC / 176 ~ 264VAC Selected by switch   |          |             |          | 248 ~ 370VDC |          |          |          |
|                           | FREQUENCY RANGE   | 47 ~ 63Hz   |          |             |          |              |          |          |          |
|                           | EFFICIENCY (Typ.)   | 78%   |          |             |          | 78%          |          |          |          |
|                           | AC CURRENT  | 6A/115VAC   |          | 3.5A/230VAC |          |              |          |          |          |
|                           | INRUSH CURRENT (max.)   | COLD START 50A  |          |             |          |              |          |          |          |
|                           | LEAKAGE CURRENT   | <2mA / 240VAC   |          |             |          |              |          |          |          |
| PROTECTION                | OVERLOAD  | 105 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |          |             |          |              |          |          |          |
|                           | OVER VOLTAGE  | +5V: 5.75 ~ 6.75V<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed             |          |             |          |              |          |          |          |
| ENVIRONMENT               | WORKING TEMP.   | -10 ~ +60°C (Refer to output load derating curve)   |          |             |          |              |          |          |          |
|                           | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing  |          |             |          |              |          |          |          |
|                           | STORAGE TEMP., HUMIDITY   | -20 ~ +85°C, 10 ~ 95% RH  |          |             |          |              |          |          |          |
|                           | TEMP. COEFFICIENT   | 0.03%/°C (0 ~ 50°C)   |          |             |          |              |          |          |          |
|                           | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  |          |             |          |              |          |          |          |
| SAFETY & EMC              | SAFETY STANDARDS  | UL60950-1 approved  |          |             |          |              |          |          |          |
|                           | WITHSTAND VOLTAGE   | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC   |          |             |          |              |          |          |          |
|                           | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  |          |             |          |              |          |          |          |
| OTHERS                    | MTBF  | 219.5K hrs min. MIL-HDBK-217F (25°C)  |          |             |          |              |          |          |          |
|                           | DIMENSION   | 150*140*86mm (L*W*H)  |          |             |          |              |          |          |          |
|                           | PACKING   | 1.4Kg; 8pcs/11.5Kg/0.97CUFT   |          |             |          |              |          |          |          |
| NOTE                      | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation. |   |          |             |          |              |          |          |          |

