

Key data

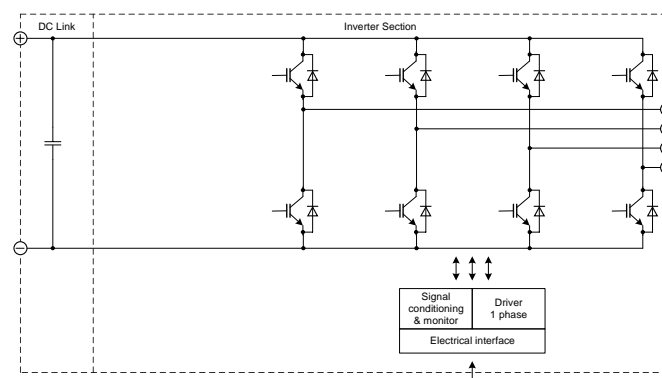
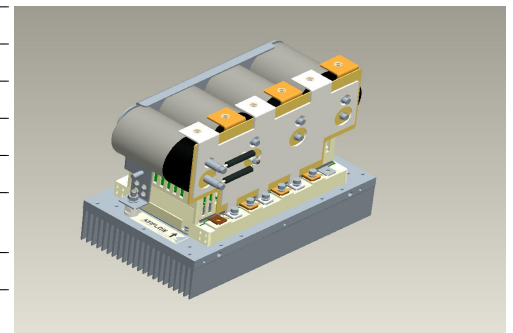
1x 574A rms at 690V rms, forced air (fan not implemented)

General information

Stacks for various inverter application.

Please read carefully the complete document and maintain the proper design environment!

| | | |
|---------------------------|------------------------------------|----------------|
| Topology | 1/2 B2I | |
| Application / Modulation | Inverter / Sine | |
| Load type | resistive, inductive | |
| Cooling | forced air (fan not implemented) | |
| Implemented sensors | current, temperature | |
| Semicond. (Unit 1) | none | |
| DC Link | 1.6mF | |
| Semicond. (Unit 2) | IGBT | 4x FF300R17KE4 |
| Driver signals IGBT | electrical CMOS 0 .. 15V | |
| Standards | EN50178, UL94, prepared for UL508C | |
| Sales - name | 2PS12017E44G35911 | |
| Internal ID | 35911 | |
| Mechanical drawing number | 35911_MB | |
| Electrical drawing number | 2PS-C4-V | |



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| approved by: YZ | revision: 2.0 |

Technical Information

PrimeSTACK™

2PS12017E44G35911



Preliminary data

Notes

Overvoltage shutdown must be realized by the customer.

Electrical data

| DC Link | | | min | typ | max | units |
|---------|--|----------|-----|------|------|-------|
| Voltage | | V_{DC} | | 1100 | 1200 | V |

| Unit 2 AC | | | min | typ | max | units |
|----------------------------------|--|----------------------|-------|------|-------|------------|
| Voltage | depending on controller | V_{Unit2} | | 690 | | V_{RMS} |
| Continuous current | $V_{Unit2} = 690V_{RMS}$, $V_{DC} = 1100V$, $T_{inlet} = 40^{\circ}C$, $T_J \leq 125^{\circ}C$, $f_{Unit2} = 50Hz$, $f_{sw2} = 2000Hz$, $\cos(\phi) = 0,85$ | I_{Unit2} | | | 574 | A_{RMS} |
| Continuous current overload cap. | $T_{inlet} = 40^{\circ}C$, for overload capability 150% for 60s | | | 418 | | A_{RMS} |
| Short time current | $T_{inlet} = 40^{\circ}C$, 10s, every 180s, initial load = $510A_{RMS}$ | I_{Unit2} | | | 638 | A_{RMS} |
| DC current | no rotating field, $T_{inlet} = 40^{\circ}C$ | $I_{Unit2 DC}$ | | | 280,0 | A_{av} |
| Overcurrent shutdown | within 15 μ s | | | 2500 | | A_{peak} |
| Switching frequency | | f_{sw2} | | | 7000 | Hz |
| Power losses | $V_{Unit2} = 690V$, $V_{DC} = 1100V$, $T_{inlet} = 40^{\circ}C$, $T_J \leq 125^{\circ}C$, $f_{Unit2} = 50Hz$, $f_{sw2} = 2000Hz$, $\cos(\phi) = 0,85$, $I_{Unit2} = 574A_{RMS}$ | P_{loss2} | | 2160 | | W |
| Power factor | | $\cos(\phi)_{Unit2}$ | -1,00 | | 1,00 | |

| General data | | | min | typ | max | units |
|---------------------------------------|--|----------------|-------------|-----|-----|------------|
| Power losses (PCB) | | $P_{loss aux}$ | | | 40 | W |
| EMC test | according to IEC61800-3 at named interfaces | power | V_{Burst} | 2 | | kV |
| | | control | V_{Burst} | 1 | | kV |
| | | aux (24V) | V_{Surge} | 1 | | kV |
| Insulation management is designed for | | V_{Line} | | 690 | | V_{RMS} |
| Insulation test voltage | according to EN50178, $f = 50Hz$, $t = 60s$ | V_{isol} | | 2,5 | | kV_{RMS} |

| Controller interface data | | | min | typ | max | units |
|-------------------------------|---|----------------|------|---------------------------|------|----------|
| Auxiliary voltage | | V_{aux} | 13 | 24 | 30 | V_{av} |
| Auxiliary power requirement | $V_{aux} = 24V_{av}$ | P_{aux} | | 40 | | W |
| Driver and interface board | see separate technical information | | | DR240 | | |
| Driver core | | | | EiceDRIVER 2ED300C17-S | | |
| Digital input level | resistor to GND 10,0k Ω , capacitor to GND 1nF | V_{in} | 0,0 | | 15,0 | V |
| Digital output level | open collector, low = ok, max 15mA | V_{out} | 0,0 | | 30,0 | V |
| Analog current outputs Unit 2 | load max 1mA; at 574A | $V_{ana out}$ | 3,10 | 3,16 | 3,22 | V |
| Analog temperature output | load max 1mA; at $T_{NTC} = 76^{\circ}C$ correspond to $T_J = 125^{\circ}C$ | $V_{T out}$ | 8,69 | 8,87 | 9,05 | V |
| Overtemperature shutdown | at $T_{NTC} = 81^{\circ}C$ correspond to $T_J = 136^{\circ}C$ | $V_{T out OT}$ | | 10 | | V |

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