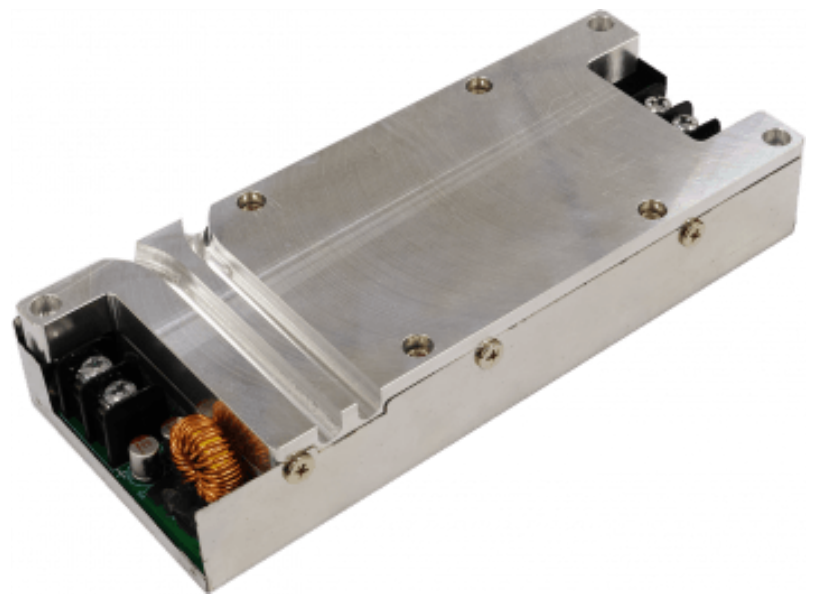




SK710

150W MILITARY STANDARD DC/DC CONVERTER MODULE
WITH GAIA SOLUTION:
12V TO 40V INPUT/12V OUTPUT,
EXTENDED TEMP. -40 TO 85°C



MAIN FEATURES

- Wide Input Range: 12V to 40V DC
- 12V DC Output up to 12.5 Amp
- Over voltage protection
- Over current protection
- Surge Protection
- Compact Size
- High efficiency (typ. 86% - 90%)
- Military Standard Compliance
- Extended Temperature -40°C to 85 °C
(with conduction cooling)

Specifications

Input Voltage	12V to 40V (2P Terminal block)
Output	150W, 12V @ 12.5A (2P Terminal block) Ps: 12V workable with derating 114W
Power Efficiency	Type. 86% - 90%
Performance Characteristic	Ripple: < 300mVp-p Line Regulation : < 100 mV Load Regulation: < 100 mV
Operation Temperature	-40 to 85°C
Storage Temperature	-40 to 85°C
Dimension	172.4(L) x 70.8(W) x 29.1(H) mm

Certification

Certification

Military Standard Compliance

MIL-STD-461	CE102 basic curve, 10kHz - 30 MHz RE102, 10KHz to 18GHz RS103, 1.5 MHz - 200MHz, 200MHz~3.2GHz, 3.0GHz~5GHz
MIL-STD-1275	5.1.2 Start Operation 5.1.3.1.2 Emitted voltage spikes +/-250V to 100V at 1msec. 5.1.3.2.2 Emitted voltage spikes +100V at 50ms to +33V at 500ms to 1000ms 5.1.3.1.1 Voltage Spike +/-250V/100KHz to 500KHz 5.1.3.2.1 Voltage Surges 100V/ 50ms 5.1.1.2 Voltage Ripple MIL-STD-461/CS461/CS101 Extended to 250KHz
MIL-STD-704	Load Measurements (LDC101) Steady State Limits for Voltage (LDC102) Voltage Distortion Spectrum (LDC103) Total Ripple (LDC104) Normal Voltage Transients (LDC105) Power Interrupt (LDC201) Abnormal Steady State Limits for Voltage (LDC301) Abnormal Voltage Transients (LDC302) Emergency Steady State Limits for Voltage (LDC401)

Starting Voltage Transients (LDC501)
 Power Failure (LDC601)
 Phase Reversal (LDC602)

DO-160D/E	MGDS-15x-H-J with FGDS-10A-50V
MIL-STD-810	<p>Method 500.5, Procedures I and II (Altitude, Operation): 12,192M, (40,000 ft) for the initial cabin altitude (18.8Kpa or 2.73 Psia)</p> <p>Method 500.5, Procedures III and IV (Altitude, Non-Operation): 15,240, (50,000 ft) for the initial cabin altitude (14.9Kpa or 2.16 Psia)</p> <p>Method 501.5, Procedure I (Storage/High Temperature) Method 501.5, Procedure II (Operation/High Temperature) Method 502.5, Procedure I (Storage/Low Temperature) Method 502.5, Procedure II (Operation/Low Temperature) Method 503.5, Procedure I (Temperature shock) Method 507.5, Procedure II (Temperature & Humidity) Method 509.7 Salt Spray (50±5)g/L Method 514.6, Vibration Category 24/Non-Operating (Category 20 & 24,Vibration) Method 514.6, Vibration Category 20/Operating (Category 20 & 24,Vibration) Method 516.5-1, frequencies: 10-2000 Hz, cross-over frequency 45 Hz shock: peak acceleration 20g,+/- 10 shocks per axis (3x) Method 516.6, Shock-Procedure V Non-Operating (Mechanical Shock) Method 516.6, Shock-Procedure I Operating (Mechanical Shock)</p>
CE/FCC compliant	<p>EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-4: Signal and DC-Net: 1 kV EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 55022, class A EN 61000-4-3: 10V/m</p>

UL/CSA/EN Standard 60950 Compliance

Input/Output Connector

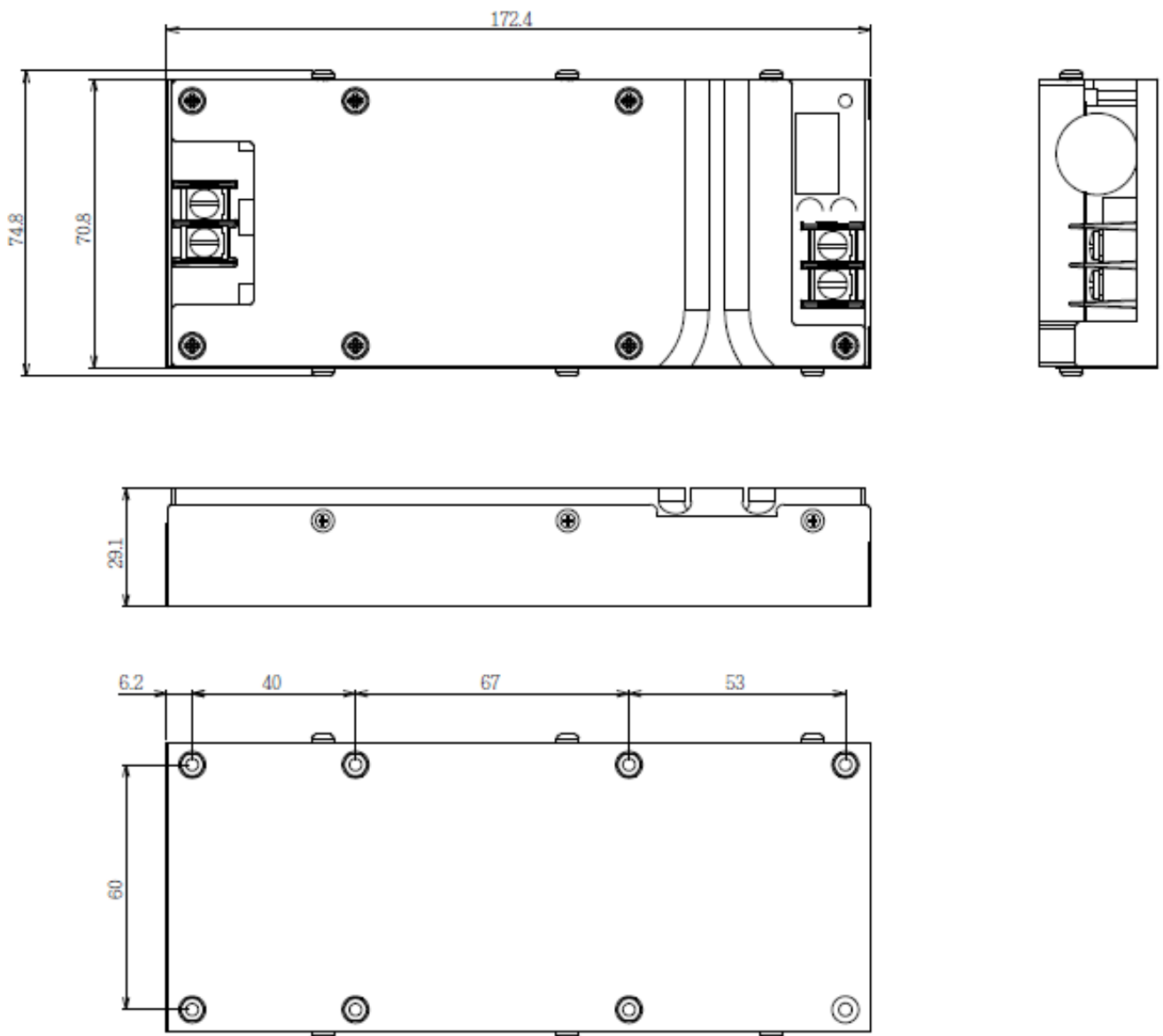
Voltage Input

Pin Number	Assignment
+	12V to 40V
GND	GND

Voltage Output

Pin Number	Assignment
+	12V
GND	GND

Dimension



Pin Define

Power Output
12V ; 150W



Power Input
12V~40V

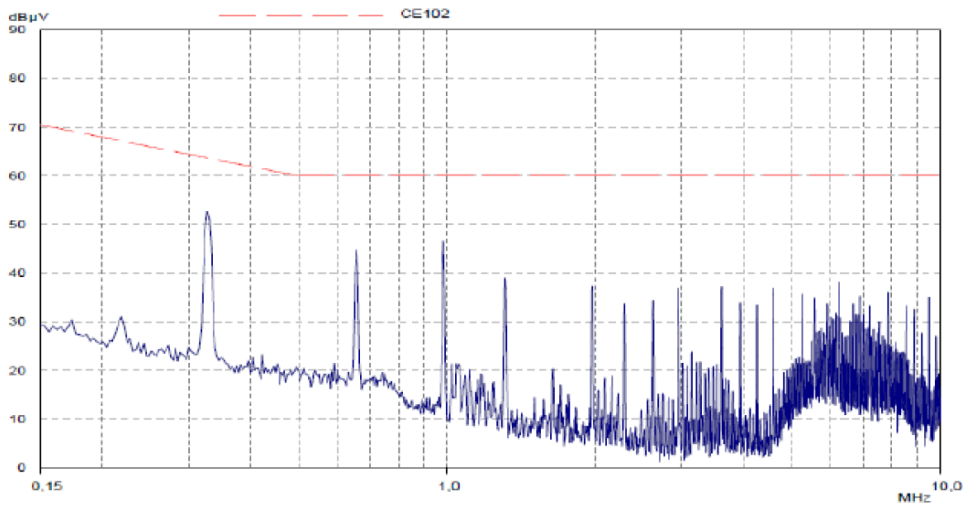
MIL-STD-1275/704 Power supply with Voltage transient protections

SK710 is a wide input board type converter supporting input range from 12V to 40V. Possessing military standard filter for EMI avoidance, SK710 guarantees the stability of voltage and electric current for system operation, especially suitable for application in military or other harsh environment. Furthermore, with parallel design, two SK710 can be combined for double power of 150W, supporting prominent system performance. Compliant with MIL-STD 1275/704/461, DO-160F and extended operating temperature from -40 to 85°C, SK710 performs as an ideal converter module for severe environmental usage.

The GAIA Hi-Rel DC/DC CONVERTER it also provides Undervoltage Lockout (UVLO), Output Over Current Protection (OCP), Output Overvoltage Protection (OVP) and Over Temperature Protection (OTP) to made stability and safety.

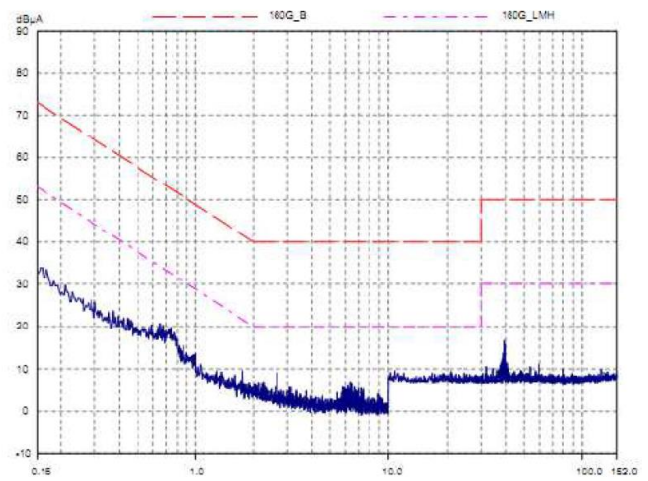
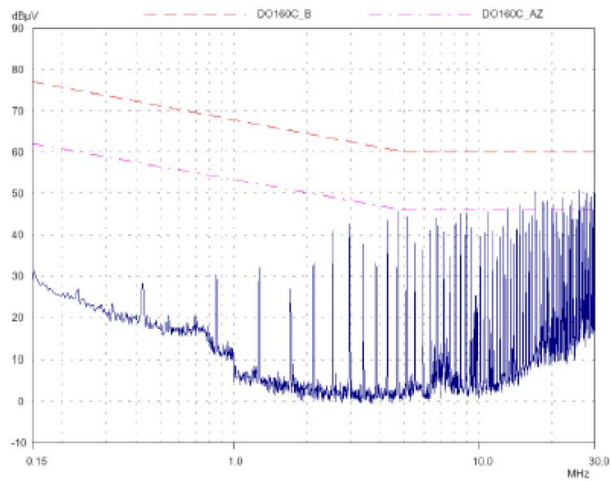
Module Compliance with MIL-STD-461C/D/E Standards





MIL-STD-461E : MGDS-15x-H-J with FGDS-10A-50V

DO-160G : MGDS-15x-H-J with FGDS-10A-50V



Ordering Information

SK710 150W DC/DC Converter Module with Input 12V to 40V , Output 12V, operation temperature $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$