



SynQor Products and MIL-STD-461 Compliance

To better serve our customer's needs when designing with our power converters for compliance with MIL-STD-461, SynQor has performed testing with the following Hi-Rel and MCOTS product(s). We can verify that our solutions meet or exceed the requirements of each subsection as listed below. Though testing was explicitly done with only 5V output product, results should be similar for other output voltages of each family.

EMI Military Standard 461 Compliance Matrix

This table shows the MIL-STD-461 requirements/limits that will be met* by the stand-alone setups indicated below:

Mil-Std-461	MIL-STD-461C		Mil-Std-461	MIL-STD-461D/E/F	
	Requirement	Most Stringent Limit Listed		Requirement	Most Stringent Limit Listed
Conducted Emissions	CE01 CE03 CE07	Class A5 (Submarine) Class A5 (Submarine)‡ Class A1 (Aircraft)	Conducted Emissions	CE101 CE102	Submarine Basic Curve
Conducted Susceptibility	CS01 CS02 CS06 CS10 CS11	Class A5 (Submarine) Class A5 (Submarine) Class A1/A5 (Aircraft/Sub) Class A5 (Submarine) Class A5 (Submarine)	Conducted Susceptibility	CS101 CS114 CS115 CS116	Curve #2 Curve #5 Basic Waveform Imax = 10A
Radiated Emissions	RE01 RE02†	Class A5 (Submarine) Class A5 (Submarine)	Radiated Emissions	RE101 RE102‡	Navy Submarine Fixed Wing Internal, >25 meters Nose to Tail
Radiated Susceptibility	RS01 RS02 RS03	Class A5 (Submarine) Class A1/A5 (Aircraft/Sub) Class A4 (Surface Ship)	Radiated Susceptibility	RS101 RS103	Army Aircraft External

* Susceptibility requirements/limits are considered to be met as long as transient deviations in the converter's output voltage remain within $\pm 10\%$ of its initial value.

† Met with metal screen shield covering the filter, converter, and resistive load.

‡ In almost every case the limit listed is the most stringent of the requirements. The one exception is CE03 - High Frequency Broadband Conducted Emissions, Converter with Passive Filter. In this case the filter and converter passed the A1 limit. The filter and converter pass the CE03 - Narrowband Conducted Emissions at the A5 limit level.



- MQME-28-P (or -T) Filter
- MQFL-28-05S Converter
- 120W Resistive load
- Metal Chassis Plane

Hi-Rel

- MQME-270-P Filter
- MQFL-270-05S Converter
- 120W Resistive load
- Metal Chassis Plane



- MCOTS-F-28-P Filter
- MCOTS-28-05S Converter
- 120W Resistive load
- Metal Chassis Plane

MCOTS

- MCOTS-F-270-P Filter
- MCOTS-270-05-QT Converter
- 120W Resistive load
- Metal Chassis Plane