



## Dual-Use Checklist

This check list is based on:

EU Council Regulation (EU) No 599/2014 of 16 April 2014.

Setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0599&from=EN>

Clauses listed are potentially relevant to Tomco Technologies' products.

Clauses not included are not applicable

**Product: 250W Oceanographic Doppler Radar Amplifier**

**Model no. BTM00250-AlphaSA**

**Category 0 Nuclear materials, facilities and equipment n/a**

**Category 1 Special materials and related equipment n/a**

**Category 2 Materials processing n/a**

**Category 3 Electronics**

Clause	Description	Pass/Fail /NA	Notes
3A001		P	
3A001.a	Electronic components and specifically designed components	P	
	1. Integrated circuits – radiation hardened	P	Never used
	2. Microprocessors , microcomputers, microcontrollers, SICs, ADC, DAC, electro-optical/optical integrated circuits, field programmable logic	P	None of the stated components present in the system

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	devices, custom integrated circuits, FFT processors, EPROMS< flash memories, SRAMS rated for either >125C or <-55 or -55C to 125C		
	3. Microprocessors clock frequency>40MHz	P	No micros in system
	5. ADC and DAC integrated circuits	P	None in system
	6. electro-optical devices	P	None in system
	7. Field programmable logic devices	P	None in system
	9. Neural network integrated circuit	P	Never used
	10. Custom Integrated Circuits	P	Never used
	11. Digital Integrated Circuits	P	None in system
	12. FFT processors	P	None in system
3A001.b	Microwave or millimetre wave components	P	
	1. Electronic vacuum tubes and cathodes	P	None in system
	2. MMIC power amplifiers	P	SD2942W Maximum rated frequency 250MHz
	3. Discrete microwave transistors	P	Max. rated frequency 250MHz
	4. Microwave solid-state amplifiers	P	Max. rated frequency 250MHz
	5. Tunable filters	P	None in system
	7. Converters and harmonic mixers	P	None in system
	8. Microwave power amplifiers containing tubes	P	Never used
	9. Microwave power modules consisting of a travelling wave tube, MMIC and electronic power conditioner	P	Never used
	10. Oscillators	P	None in system
	11. Frequency synthesiser	P	None in system
3A001.c	Acoustic wave devices	P	Never used
3A001.d	Electronics devices and circuits containing components manufactured from superconductive materials	P	Never used
3A001.e	High energy devices	P	
	1. Cells	P	Never used
	2. High energy storage capacitors	P	Max. voltage rating <5kV
	3. Superconductive electromagnets or solenoids	P	Never used
	4. Solar cells, CICs, solar panels, solar arrays	P	Never used

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3A001.f	Rotary input type position encoders	P	Never used
3A001.g	Solid-state pulsed power switching thyristor devices	P	None in system
3A001.h	Solid-state power semiconductor switches, diodes or modules	P	Blocking voltage <300V
3A002	General purpose electronic equipment and accessories	P	
3A002.a	Recording equipment	N/A	
3A002.c	Radio frequency signal analysers	N/A	
3A002.d	Frequency synthesised signal generators	N/A	
3A002.e	Network analysers	N/A	
3A002.f	Microwave test receivers	N/A	
3A002.g	Atomic frequency standards	N/A	
3A003	Spray cooling thermal management system	N/A	
3A101	Electronic equipment, devices and components other than 3A001		
3A101.a	ADCs usable in missiles	N/A	
3A101.b	Accelerators rated for 2MeV or greater	N/A	
3A102	Thermal batteries	N/A	
3A201	Electronic components other than those specified in 3A001		
3A201.a	Capacitors with either 1. V>1.4kV, energy>10J, C>0.5uF, L<50nH 2. V>750V, C,0.25uF, L<10nH	P	Max. capacitor voltage <750V
3A201.b	Superconducting solenoidal electromagnets	N/A	
3A201.c	Flash X-ray generators or pulsed electron generators	N/A	
3A225	Frequency changers or generators	N/A	
3A226	High-power direct current power supplies	P	Power supply voltage = 48V
3A227	High-voltage direct current power supplies	P	Power supply voltage = 48V
3A228	Switching devices	P	None in system
3A229	High-current pulse generators	P	None in system
3A230	High-speed pulse generators	P	None in system
3A231	Neutron generator systems	N/A	
3A232	Multipoint initiation systems	N/A	
3A233	Mass spectrometers	N/A	
3B	Test, inspection and production equipment	P	Not relevant
3C	Materials Hetero-epitaxial, resists, organo-inorganic,	P	No non-standard materials used.



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	hydrides, SiC, GaN, AlN, AlGaN		Silicon, non hetero-epitaxial devices only
3D	Software	P	No software in system
3E	Technologies	P	

**Category 4 Computers n/a**

**Category 5 Telecommunications and 'information security' n/a**

**Category 6 Sensors and lasers n/a**

**Category 7 Navigation and avionics n/a**

**Category 8 Marine n/a**

**Category 9 Aerospace and propulsion n/a**

Check all fields are complete.

All fields in this column must record a P or N/A to record a PASS.

BTM00250-AlphaSA: PASS