

DESCRIPTION

X-band marine radar solid-state 25 kW high power limiter with an integral filter for protection against magnetron generated spurious signals. A triggered STC generator circuit is provided.

CHARACTERISTICS (at 20 °C ambient, see notes 1 and 6)

Frequency	9.36 to 9.46 GHz
Return loss.....	20 dB min
Insertion loss.....	1 dB max
Total peak leakage (P _o – 25 kW)	100 mW max
Recovery to -3 dB (P _o – 25 kW)	1.3 µs max
STC maximum (see note 2)	20 dB
STC response:	
at 3.0 µs (see note 3)	10.0 ± 1.5 dB
at 11 µs	1.5 dB max
Clutter saturation (see note 4)	3 dB max
STC bias voltage (see note 5)	4.25 V min

MAXIMUM AND MINIMUM RATINGS

	Min	Max	
Peak continuous operating power.....	-	25	kW
Mean operating power	-	25	W
Pulse duration	-	1.5	µs
Duty ratio	-	0.001	
STC circuit supply	11.5	12.5	V
STC trigger pulse	3.5	5.5	V
Storage temperature	-55	90	°C
Operating temperature (see note 6).....	-40	90	°C

GENERAL (see note 7)

Outline	B3LT1668_SHT3
Overall dimensions	49 x 41 x 35 mm
Waveguide size	WG16, WR90
Connectors:	
waveguide	mates with UG39/U
STC circuit.....	Lumberg 2.5MBC 3
Pin 1	supply
Pin 2	trigger
Pin 3	earth
Mounting position (see note 8).....	any
Net weight.....	0.1 kg approx.

NOTES

1. High power tests measured at 9.4 GHz, tp 0.1 µs, Du 0.001. STC tests measured at 9.4 GHz, V_s +12 V, V_p +3.5 V, tp 2 µs.
2. Attenuation level that the maximum attenuation from the STC generator circuit can be set to by variable resistor RV1.
3. Measured from the start of the STC ramp with maximum attenuation of 20 dB.
4. Change in the maximum attenuation of the STC curve due to 10 mW of incident power.
5. Voltage at the cathode of D1A then the attenuation is 20 dB. Design parameter only.
6. Maximum and minimum characteristic values may be exceeded at the temperature extremes. Contact e2v for details.
7. The components on the STC generator circuit are exposed and are static sensitive. Correct procedures for handling such components are to be adhered to.
8. The STC circuit cable must be clamped on installation to minimise damage resulting from excessive flexing. The limiter must be mounted so that the EMC effects are contained.

The design of the STC generator circuit and cable are the property of Litton Marine Systems BV and e2v technologies (uk) limited take no responsibility for the performance of this design.



NZ T: +64 9 4145520
AU T: 1800 148 793
E: sales@aepacific.co.nz
www.aepacific.com

Whilst e2v technologies has taken care to ensure the accuracy of the information contained herein it accepts no responsibility for the consequences of any use thereof and also reserves the right to change the specification of goods without notice. e2v technologies accepts no liability beyond the set out in its standard conditions of sale in respect of infringement of third party patents arising from the use of tubes or other devices in accordance with information contained herein.

e2v technologies (uk) limited, Waterhouse Lane, Chelmsford, Essex CM1 2QU United Kingdom Holding Company: e2v technologies plc

Telephone: +44 (0)1245 493493 Facsimile: +44 (0)1245 492492

Contact e2v by e-mail: enquiries@e2v.com or visit www.e2v.com for global sales and operations centres.

© e2v technologies (uk) limited 2016

A1A-781658 Version 2, June 2016

Template: DF764388A-3

123197