



MODEL E-04C 121.5/406 MHz ELT

GPS CAPABLE ELT ACCEPTS ARINC 429, GARMIN AVIATION, BENDIX/KING AVIATION AND NMEA 0183 DATA



**LIGHTNING PROTECTION
DC GROUNDED PER MIL-B-5087
WITHSTANDS DIRECT
LIGHTNING STRIKES**

**THE ONLY ELT CERTIFIED TO THE NEW
TSO-C126b STANDARD
BATTERY CERTIFIED TO
TSO-C142a LITHIUM BATTERIES**



**FITS ARTEX AND KANNAD
PANEL CUTOUTS**

**DESIGNED FOR CORPORATE AND
COMMERCIAL AIRCRAFT**

MODEL E-04C 121.5/406 MHz ELT

SPECIFICATIONS

APPROVALS:

FAA / TRANSPORT CANADA

TSO -C126b TSO-C91a TSO-C142a

EASA

ETSO 2C126 ETSO 2C91a TSO-C142a

INDUSTRY CANADA

1863A-E04AF

BRAZIL ANAC/ANTEL

TSO-C126 TSO-C142a

TYPE:

TSO-C126b TSOC-91a AF

FREQUENCY:

121.5 MHz & 406.037 MHz

MODULATION:

406 MHz +/-2 kHz Bi-Phase L (16KOG1D)

121.5 MHz +/- 6 kHz AM (3K20A3N)

SWEPT DOWNWARD 1400 – 400 Hz

REPETITION RATE 3 Hz

MODULATION FACTOR ≥ 90%

DUTY CYCLE ≥ 45%

POWER AT TERMINAL 50 Ω LOAD:

121.5 MHz 20.7 dBm 50 HOURS@ -20C

406.037 MHz 37.3 dBm 24.5 HOURS @ -20C

PEAK EIRP WITH E-04.8 WHIP ANTENNA AND E-04.10.4 COAX CABLE:

121.5 MHz +22 dBm 160 mW

406.037 MHz +39.79 dBm 13.7 W

PEAK EIRP WITH S65-1231 BLADE ANTENNA AND E-04.10.4 COAX CABLE:

121.5 MHz +23 dBm 200 mW

406.037 MHz +39.79 dBm 13.7 W

OPERATING TEMPERATURE:

-20C TO +55C

STORAGE TEMPERATURE:

-55C TO +85C

CRASH ACTIVATION:

4.5 FpS +/- .5 FpS

DIMENSIONS:

7.750" x 2.850" x 2.850"

192 mm x 72 mm x 72 mm

WEIGHT:

ELT AND BATTERY PACK 1.6 lbs .73kg

ELT TRAY AND STRAPS .2 lbs .09kg

REMOTE CONTROL (RCPI) 12.5oz 31g

AUDIO ALERT INDICATOR 1.5 oz 43g

WHIP ANTENNA PART NUMBER E-04.8

LENGTH 20.625" 524 mm SWEPT 20°

WEIGHT 2.1 oz 60g

IMPEDANCE 50 OHM NOMINAL

VSWR @ 121.5 MHz ≤ 3.0:1

VSWR @ 406 MHz ≤ 1.4:1

MAXIMUM RECOMMENDED AIRSPEED 260 KNOTS@ SEA LEVEL

BLADE ANTENNA PART NUMBER S65-1231-1

HEIGHT 7.5" 190 mm SWEPT 20°

WEIGHT 23 oz 652g

IMPEDANCE 50 OHM NOMINAL

VSWR @ 121.5 MHz ≤ 2.0:1

VSWR @ 406 MHz ≤ 1.5:1

MAXIMUM RECOMMENDED AIRSPEED MACH 1 @ SEA LEVEL

ELECTRONIC HARDWARE/FIRMWARE

BEACON ASIC LOAD FILE: V1.01

BEACON ASIC FIRMWARE: V1.0

DO-254 LEVEL E

MODEL E-04.0 LITHIUM BATTERY SPECIFICATIONS

APPROVALS:

FAA / TRANSPORT CANADA

TSO-C142a

ETSO-C142a

BRAZIL ANAC TSO-C142a

WEIGHT:

1.18 lbs .535 kg

AMP HOUR RATING:

7.75 Ah

NON RECHARGEABLE

TYPE:

Li-SO2

NON FLAMMABLE ELECTROLYTE

LITHIUM CONTENT:

9.8 GRAMS

VOLTAGE:

12 VOLTS

MAXIMUM DISCHARGE RATE:

2.5 AMPS

OPERATING TEMPERATURE:

-20C TO +55C

BATTERY LIFE:

**5 YEARS WHEN USED WITH THE MODEL
E-04 ELT**

DIMENSIONS:

5.750" x 2.850" x 2.850"

146mm x 72mm x 72mm

**LIMITATIONS: ANY OTHER USE OF THIS BATTERY IN AIRCRAFT IS PROHIBITED UNLESS APPROVED BY
ACK TECHNOLOGIES INC.**

**THE CONDITIONS AND TESTS FOR TSO APPROVAL OF THIS ARTICLE ARE MINIMUM PERFORMANCE
STANDARDS. THOSE INSTALLING THIS ARTICLE, ON OR IN A SPECIFIC TYPE OR CLASS OF AIRCRAFT,
MUST DETERMINE THAT THE AIRCRAFT INSTALLATION CONDITIONS ARE WITHIN THE TSO STANDARDS.
TSO ARTICLES MUST HAVE SEPARATE APPROVAL FOR INSTALLATION IN AN AIRCRAFT. THE ARTICLE MAY
BE INSTALLED ONLY ACCORDING TO 14 CFR PART 43 OR THE APPLICABLE AIRWORTHINESS REQUIRE-
MENTS. LITHIUM CELL AND BATTERY SAFETY CONCERNS INCLUDE THE POSSIBILITY OF FIRE AND VENT-
ING OF TOXIC GASES**

SECTION 17 DO-160F/ED-14F ENVIRONMENTAL CATEGORIES

CONDITIONS	SECTION	DESCRIPTION OF TESTS CONDUCTED
<i>Temperature and Altitude</i>	<i>4.0</i>	<i>Qualifies To Category D1</i>
<i>Temperature Variation</i>	<i>5.0</i>	<i>Qualifies To Category A</i>
<i>Humidity</i>	<i>6.0</i>	<i>Qualifies To Category C</i>
<i>Shock and Crash DO-204 Par. 2.3.4.1 DO-204 Par. 2.4.2.4</i>	<i>7.0</i>	<i>Not Tested Category Identified as X Shock Crash Safety</i>
<i>Vibration</i>	<i>8.0</i>	<i>Qualifies To Category R</i>
<i>Explosive Atmosphere</i>	<i>9.0</i>	<i>Not Tested Category Identified as X</i>
<i>Waterproofness</i>	<i>10.0</i>	<i>Qualifies To Category S</i>
<i>Fluids Susceptibility</i>	<i>11.0</i>	<i>Not Tested Category Identified as X</i>
<i>Sand and Dust</i>	<i>12.0</i>	<i>Not Tested Category Identified as X</i>
<i>Fungus</i>	<i>13.0</i>	<i>Not Tested Category Identified as X</i>
<i>Salt Spray</i>	<i>14.0</i>	<i>Qualifies To Category S</i>
<i>Magnetic Effect</i>	<i>15.0</i>	<i>Qualifies To Category Z</i>
<i>Power Input</i>	<i>16.0</i>	<i>Qualifies To Category B Additional Testing to 16.6.1.3 (b)</i>
<i>Voltage Spike</i>	<i>17.0</i>	<i>Qualifies to Category B</i>
<i>Audio Frequency Conducted Susceptibility</i>	<i>18.0</i>	<i>Qualifies To Category B</i>
<i>Induced Signal Susceptibility</i>	<i>19.0</i>	<i>Qualifies To Category BC</i>
<i>Radio Frequency Susceptibility</i>	<i>20.0</i>	<i>Not Tested Category Identified as X</i>
<i>Radio Frequency Emissions</i>	<i>21.0</i>	<i>Qualifies To Category H</i>
<i>Lightning Induced Transient susceptibility</i>	<i>22.0</i>	<i>Not Tested Category Identified as X</i>
<i>Lightning Direct Effects</i>	<i>23.0</i>	<i>Not Tested Category Identified as X</i>
<i>Icing</i>	<i>24.0</i>	<i>Not Tested Category Identified as X</i>
<i>Electro-Static Discharge</i>	<i>25.0</i>	<i>Not Tested Category Identified as X</i>
<i>Fire, Flammability DO-204 Par. 2.3.7.1</i>	<i>26.0</i>	<i>Not Tested Category Identified as X Flame Test</i>

Additional DO-204 Testing

DO-204	Par 2.3.2.1	Low Temperature Battery Life
DO-204	Par 2.3.2.2	High Temperature Battery Life
DO-204	Par 2.3.2.3	Frequency Stability With Temperature Gradient
DO-204	Par 2.3.2.4	Thermal Shock
DO-204	Par 2.3.2.5	VSWR
DO-204	Par 2.3.2.6	Self Test
DO-204	Par 2.3.1.1	Low Temperature Activation
DO-204	Par 2.3.1.2	High Temperature Activation
DO-204	Par 2.3.1.3	Altitude
DO-204	Par 2.3.1.4	Decompression
DO-204	Par 2.3.1.5	Overpressure

E ELT S65-1231

COSPAS-SARSAT



DESCRIPTION

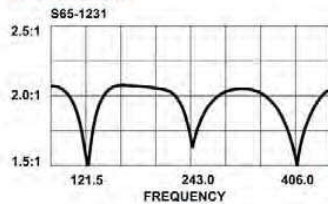
S65-1231: Cospas/Sarsat-approved ELT antenna. Covers 406, 121.5 and 243.0 MHz distress signal frequencies. Meets EUROCAE ED-62A requirements for ELT equipment.

Designed for high-speed aircraft, the light-weight, low-drag blade antenna is ruggedly constructed and DC-grounded. Able to withstand direct lightning strikes. BNC female connector.

Form-fit-function replacement for all ELT antennas. COSPAS approved with ACK Avionics and Air Precision ELT's; more in process.

FEDERAL & MILITARY SPECS: Cospas-Sarsat 192-1, DO-160G, MIL-HDBK-5400, MIL-E-8272, MIL-A-9094, MIL-B-5087, MIL-A-7772B (ASG), TSO-C91a & C126a.

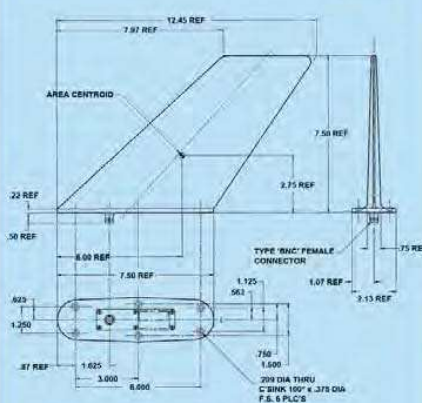
PERFORMANCE



SPECIFICATIONS	FOR REFERENCE ONLY		
MODEL	S65-1231		
ELECTRICAL			
Frequency	121.5 MHz	243.0 MHz	406.0 MHz
VSWR	≤2.0:1	≤2.3:1	≤1.5:1
Pattern	Omni/Az; Cos/EI		
Polarization	Vertical		
Impedance	50 ohms		
Power	150 mW	150 mW	5 watts
Lightning Protection	DC grounded per MIL-B-5087		
MECHANICAL			
Weight	23 oz.		
Height	7.50 in.		
Material	A356-T61 alum. alloy / glass		
Finish	Skydrol-resistant enamel		
Connector	BNC female		
Drag	0.6 lbs. Mach .85 @ 35,000 ft.		
ENVIRONMENTAL			
Side Load	12 psi		
Shock Load	30 G's		
Temperature	-65°F (-64°C) to +185°F (+85°C)		
Vibration	±10 G's		
Altitude	50,000 ft.		

OUTLINE DRAWING

S65-1231



Note: Prior to installation, contact Sensor Systems for the latest engineering drawings.

Sensor Systems, Inc. 8929 Fullbright Ave., Chatsworth, CA 91311 Ph: 818-341-5366 Fax: 818-341-9059
 Email: info@sensorantennas.com www.sensorantennas.com

E-04C 121.5/406 Mhz ELT WITH MACH 1 BLADE ANTENNA

GPS CAPABLE ELT ACCEPTS GARMIN AVIATION, COMPLETE INSTALL KIT INCLUDES

BENDIX/KING AVIATION, NMEA 0183 AND ARINC 429 DATA

RETAINS GPS COORDINATES AFTER POWER IS REMOVED

REMOTE FITS ARTEX AND KANNAD PANEL CUT-OUTS



THE ONLY ELT CERTIFIED TO THE NEW

TSO-C126b STANDARD

BATTERY CERTIFIED TO

TSO-C142a LITHIUM BATTERIES

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
1	E-04C	121.5/406 MHz ELT
1	E-04.5.1	Remote with vertical placard
1	E-04.5.1.0H	Remote horizontal placard
1	S65-1231	Mach 1 blade antenna
1	E-04.10.4	Coax cable 60"
1	E-04.10.1.11	Warning horn
1	E-04.4	Mounting Tray
1	E-04.4.1	Retaining strap front
1	E-04.4.2	Retaining strap battery case
1	E-04.10.1.13K	2 Pin plug kit
1	E-04.10.1.4K	8 Pin circular plug kit
1	E-04.10.1.10K	15 Pin plug kit
1	E-04.11.1	Switch cover
1	E-04CM	Installation/Operation/Manual
1	N/A	Antenna drill template

E-04C.1 121.5/406 Mhz ELT WITH 250 KNOT WHIP ANTENNA

GPS CAPABLE ELT ACCEPTS GARMIN AVIATION,
 BENDIX/KING AVIATION, NMEA 0183 AND ARINC 429 DATA
 RETAINS GPS COORDINATES AFTER POWER IS REMOVED
 REMOTE FITS ARTEX AND KANNAD PANEL CUT-OUTS
 THE ONLY ELT CERTIFIED TO THE NEW TSO-C126b STANDARD
 BATTERY CERTIFIED TO TSO-C142a LITHIUM BATTERIES

COMPLETE INSTALL KIT INCLUDES

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
1	E-04C	121.5/406 MHz ELT
1	E-04.5.1	Remote with vertical placard
1	E-04.5.1.0H	Remote horizontal placard
1	E-04.8	Whip antenna
1	E-04.10.1.12	Electrostatic discharger
1	E-04.10.4	Coax cable 60"
1	E-04.10.1.11	Warning horn
1	E-04.4	Mounting Tray
1	E-04.4.1	Retaining strap front
1	E-04.4.2	Retaining strap battery case
1	E-04.10.1.13K	2 Pin plug kit
1	E-04.10.1.4K	8 Pin circular plug kit
1	E-04.10.1.10K	15 Pin plug kit
1	E-04.11.1	Switch cover
1	E-04CM	Installation/Operation/Manual



E-04C.2 121.5/406 Mhz ELT WITH NO ANTENNA

GPS CAPABLE ELT ACCEPTS GARMIN AVIATION,

BENDIX/KING AVIATION, NMEA 0183 AND ARINC 429 DATA

RETAINS GPS COORDINATES AFTER POWER IS REMOVED

REMOTE FITS ARTEX AND KANNAD PANEL CUT-OUTS

THE ONLY ELT CERTIFIED TO THE NEW TSO-C126b STANDARD

BATTERY CERTIFIED TO TSO-C142a LITHIUM BATTERIES



COMPLETE INSTALL KIT INCLUDES

<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
1	E-04C	121.5/406 Mhz ELT
1	E-04.5.1	Remote with vertical placard
1	E-04.5.1.0H	Remote horizontal placard
1	E-04.10.4	Coax cable 60"
1	E-04.10.1.11	Warning horn
1	E-04.4	Mounting Tray
1	E-04.4.1	Retaining strap front
1	E-04.4.2	Retaining strap battery case
1	E-04.10.1.13K	2 Pin plug kit
1	E-04.10.1.4K	8 Pin circular plug kit
1	E-04.10.1.10K	15 Pin plug kit
1	E-04.11.1	Switch cover
1	E-04CM	Installation/Operation/Manual