

1.2.2 Operational Characteristics

Unit	Part Number	Operating Temp	Altitude	Voltage	Current Req.
SA 3	305005-01	-55° to +70° C	70,000 Ft.	28Vdc	
SA 3L	305005-02	-55° to +70° C	70,000 Ft.	28Vdc	
SA 3NVG	306070-00	-55° to +70° C	35,000 Ft.	28Vdc	
SA 15	305004-01	-55° to +70° C	70,000 Ft.	N/A	N/A
SA 24	305003-01	-55° to +70° C	70,000 Ft.	N/A	.003Amp
SR 34	305501-00	-20° to +55° C	50,000 Ft.	28Vdc	60mA
SR 54	305498-00	-20° to +55° C	50,000 Ft.	28Vdc	120mA
SR 64	305499-00	-20° to +55° C	50,000 Ft.	28Vdc	120mA
SR 263	305001-01	-55° to +70° C	70,000 Ft.	28Vdc	150mA
SR 343	305000-01	-55° to +70° C	70,000 Ft.	28Vdc	220mA
SR 623	305002-01	-55° to +70° C	70,000 Ft.	28Vdc	250mA
SRU 1	305146-00	-55° to +70° C	70,000 Ft.	N/A	N/A
SRU 5	305018-00	-55° to +70° C	70,000 Ft.	N/A	N/A
SRU 5-01	305018-01	-55° to +70° C	70,000 Ft.	N/A	N/A
SRU 10	305014-00	-55° to +70° C	70,000 Ft.	N/A	N/A

1.2.3 Certification

Unit	Part Number	PMA	STC	Aircraft
SA 3	305005-01	Yes Yes*	ST09475SC ST3007WI-T	Embraer EMB120 Cessna Citation 650
SA 3L	305005-02	No		
SA 3NVG	306070-00	Pending	Pending	Eurocopter BK-117-C2
SA 15	305004-01	Pending		
SA 24	305003-01	Yes**	ST09475SC	Embraer EMB120
SR 34	305501-00	Pending		
SR 54	305498-00	Pending		
SR 64	305499-00	Pending		
SR 263	305001-01	Yes	ST00318DE-D	Learjet 55
SR 343	305000-01	Yes	ST00318DE-D	Learjet 55
SR 623	305002-01	Yes	ST3007WI-T	Cessna Citation 650
SRU 1	305146-00	Yes*/**	ST09475SC	Embraer EMB 120
SRU 5	305018-00	Yes	ST3007WI-T	Cessna Citation 650
SRU 5-01	305018-01			Eurocopter BK-117-C2
SRU 10	305014-00			

* SA3 PMA'd with SRU1 as SAS 1-3

** SA 24 PMA'd with SRU 1 as SAS 1-24

NOMENCLATURE: MARC70 RELAY, DIODE ISOLATOR, INVERTER AND REGULATOR UNIT

TYPE/MODEL/PART NO: MARC70/SA3, SA15, SA54, SR263, SR343, SR623

TSO NUMBER: DO160Env. Cat.E1-BBA[(SBL09U)]XXXXXXXXZZAZZULXXX

MANUFACTURER'S SPECIFICATION AND/OR OTHER APPLICABLE SPECIFICATIONS:

MARC70 INSTALLATION MANUAL 305147-00

ENVIRONMENTAL TEST PLAN SR343, SR263, SR623, SA24, SA15, SA3 Doc # MK700020

MANUFACTURER: SANDIA AEROSPACE

ADDRESS: 3700 OSUNA RD NE, STE 711, ALBUQUERQUE, NM 87109

REVISION & CHANGE NUMBER OF DO-160: REV D. DATED JULY 27, 1997

CONDITION	SECTION	DESCRIPTION OF TESTS CONDUCTED
Temperature and Altitude	4.0	Equipment tested to category E1
Low Temperature	4.5.1	Tested to +70°C Operating High Temperature Tested to +85°C Ground Survival
High Temperature	4.5.2 & 4.5.3	
In-flight Loss of Cooling	4.54	Test not Applicable
Altitude	4.6.1	70,000 feet
Decompression	4.6.2	Test not Applicable
Overpressure	4.6.3	Test not Applicable
Temperature Variation	5.0	Tested to Category B
Humidity	6.0	Tested to Category B
Operational Shock and Crash Safety	7.0	Tested to Category A, Aircraft Type 5. Random Orientation
Vibration	8.0	Tested to Category S, Aircraft Zone 2 using vibration curves B and M. Tested to Category U, Helicopter Zone 2 using vibration curves F and F1.
Explosion	9.0	Equipment identified as Category X, no test performed
Waterproofness	10.0	Tested to Category X, no test performed
Fluids Susceptibility	11.0	Equipment identified as Category X, no test performed
Sand and Dust	12.0	Equipment identified as Category X, no test performed
Fungus	13.0	Equipment identified as Category X, no test performed
Salt Spray	14.0	Equipment identified as Category X, no test performed
Magnetic Effect	15.0	Equipment is Category Z
Power Input	16.0	Tested to Category Z
Voltage Spike	17.0	Tested to Category A
Audio Frequency Susceptibility	18.0	Tested to Category Z
Induced Signal Susceptibility	19.0	Tested to Category Z
Radio Frequency Susceptibility	20.0	Tested to Category U
Radio Frequency Emission	21.0	Tested to Category L
Lightning Induced Transient Susceptibility	22.0	Tested to Category X, no test performed
Lightning Direct Effects	23.00	Equipment identified as Category X, no test performed
Icing	24.0	Equipment identified as Category X, no test performed
Electrostatic Discharge	25.0	Equipment identified as Category X, no test performed

SA 3, SA 15, SA 24, SR263, SR 343, SR 623
Environmental Qualification Form