



U.S. Patent 7,746,282

DESCRIPTION

S65-8282-831: Representing current state-of-the-art in digitally-tuned antenna technology, the S65-8282-831 provides high-gain VHF/UHF performance. Frequency tuning is accomplished using solid-state microprocessor technology with switching speeds less than 50 microseconds, supporting secure, frequency-hopping voice communication systems.

The S65-8282-831 is tunable from 30 MHz to 512 MHz and has four to ten times more gain (in both transmit and receive) in the crucial 30-88 MHz frequency band, than comparative passive antennas.

The aerodynamic composite blade of the antenna houses a microprocessor-based logic controller, RF tuning circuitry and DC switching power supply resulting in a single antenna package. The antenna operates on a standard 28 VDC power source. The antenna is less than 10 inches tall, making it ideal for applications with severe mounting concerns.

Frequency setting information is transmitted directly to the antenna from the radio via a multi-pin connector. Tuning of the inductor circuits is achieved by the logic controller via PIN diodes.

The antenna is compatible with Raytheon ARC-210 and ARC-231.

FEDERAL & MILITARY SPECS: MIL-HDBK-5400, MIL-STD-810.

NSN: 5985015985646



SPECIFICATIONS			
MODEL	S65-8282-831		
ELECTRICAL	VHF/FM	VHF/AM	UHF
Frequency	30-88 MHz	108-174 MHz	225-512 MHz
VSWR	1.3:1-1.9:1	2.0:1	1.8:1
Pattern	Omni/Az, Cos/EI		
Polarization	Vertical		
Impedance	50 ohms		
RF Power	25 watts		
DC Power	+28 VDC, 0.8 Amps		
Switching Speed	< 50 μ S		
MECHANICAL			
Weight	4.0 lbs.		
Height	9.60 in.		
Width	3.25 in.		
Length	10.94 in. (16.27 in. w/top load)		
Material	6061-T6 Aluminum/fiberglass		
Finish	Skydrol-Resistant Polyurethane Enamel		
RF Connector	TNC Female		
DC Connector	MS27505E11A35P		
Drag	2.0 lb. Mach .85 @ 35,000 ft.		
ENVIRONMENTAL			
Side Load	9 psi		
Temperature	-40° F (-40° C) TO +194° F (+90° C)		
Shock	15Gs		
Vibration	10Gs		
Altitude	70,000 ft.		

