



UHF High-Power Amplifier R&S VD 6530

The R&S VD 6530 is a 30 W AM/45 W FM high-power amplifier for the UHF frequency band. For transmit frequencies outside the UHF band and for receive mode a bypass will be used.

High-power amplifiers are used for improving the communication link reliability under difficult operational conditions, planned or unforeseen.



ROHDE & SCHWARZ

Specifications

Frequency range	
UHF	225 MHz to 399.975 MHz
VHF	100 MHz to 224 MHz (with bypass)
RF power input	
AM mode	10 W
FM/FSK mode	15 W
Input VSWR	≤2.0:1
Power output	
	24 V to 30 V DC
Power levels	
Active bypass mode	-2 dB typ.
Bypass mode	-22 dB typ.
Passive bypass mode	-1 dB typ.
AM mode	30 W + 2.5 dB
FM/FSK mode	45 W + 2.5 dB
Reduction	
Permissible mismatch without damage	VSWR ∞ ≤1 dB at 22 V DC ≤3 dB at temperatures >+55 °C
Modulation characteristics	
Distortion at $f_{mod} = 1$ kHz, $m = 0.8$	≤5% + exciter distortion
Modulation depth with input	
$f_{mod} = 1$ kHz, $m = 0.8$	0.75 to 0.85
S/N ratio at $m = 0.8$	≥40 dB
Spurious attenuation	
±25 kHz ≤Δf <±100 kHz	≥80 dBc
±100 kHz ≤Δf <±2 MHz	≥85 dBc
±2 MHz ≤Δf	≥120 dBc
Attenuation in receiver mode	
Active bypass mode	2 dB typ.
Passive bypass mode	1 dB typ.
Power supply	
Supply range	to MIL-STD-704 A, cat. B 22.0 V to 30 V DC (negative ground)
Emergency operation	16.0 V to 22.0 V DC (auto bypass mode) ≤16.0 V DC mechanical bypass (fail-safe), attenuation 1 dB typ.
Transients	MIL-STD-704A

Cooling	
Convection	Transmit:Receive ≤(1 min/5 min) at T ≤35 °C Transmit:Receive ≤(0.5 min/5 min) at T = 55 °C
RF connector	
J1: transceiver in/out	MIL-C-39012/TNC series female
J2: antenna in/out	MIL-C-39012/N series female
Power/control connector	
J3	851-00R18-32PN-50
Finish	
	FED-STD-595 colour no. 37038 (lusterless black)
Changeover time	
Receive/transmit	≤500 μs
Transmit/receive	≤500 μs
Power consumption	
Transmit	28 V DC ≤300 W
Receive	≤10 W
Standby	≤0.3 W
Environmental conditions	
Operating temperature range ¹⁾	-40 °C to +55 °C
Storage temperature range ¹⁾	-57 °C to +85 °C
Shock/vibration	MIL-STD-810 E
EMC	MIL-STD-461 D, cat. Aircraft Airforce
Dimensions (without connectors)	
(W x H x D)	90 mm x 180 mm x 200 mm
Weight	
	≤7.0 kg

¹⁾ To MIL-HDBK-5400, class 1B.

Ordering information

UHF High-Power Amplifier R&S VD 6530 6087.6010.02

Certified Environmental System
ISO 14001
REG. NO 1954

Certified Quality System
ISO 9001
DQS REG. NO 1954



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