



**20W Broadband
12.5V
10dB Gain
175MHz**

DV1220S ■ DV1220W

n-channel enhancement-mode RF Power FETs designed for...

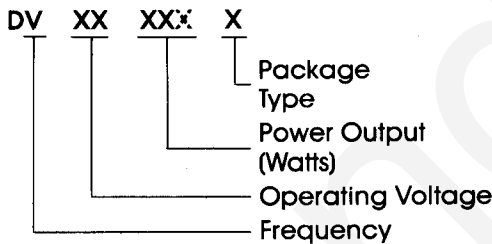
HF/VHF/UHF Amplifiers
Class A, B, or C
High Dynamic Range Amp

Benefits

No Thermal Runaway
Withstands Infinite VSWR
Class A, B, or C Operation
Low Noise Figure
High Dynamic Range
Simple Bias Circuitry

Absolute Maximum Ratings (25°C)

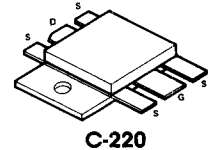
Gate-Source Voltage..... 30 V
Drain-Source Voltage..... 50 V
Drain-Gate Voltage..... 50 V
Drain Current..... 4 A
Total Device Dissipation..... 80 W
@ 25° Case
 θ_{jc} for .380 SOE..... 2.2°C/W
 θ_{jc} for C-220..... 1.76°C/W
Storage Temperature... -65°C to 150°C
Junction Temperature..... 200°C



DV1220S

DV1220W

See page 5-62
for Package
Dimensions



Electrical Characteristics (25°C)

Symbol	Characteristic	Min	Typ	Max	Unit	Test Conditions
$P_{OUT(1)}$	Power Output	18	20		W	$V_{DD}=12.5\text{ V}$, $I_{DQ}=2\text{ A}$ $P_{IN}=2\text{ W Max}$, $F=175\text{ MHz}$
$\eta(1)$	Drain Efficiency	55	60		%	
g_m	Transconductance		0.8		Mho	$V_{DS}=12.5\text{ V}$, $I_D=2\text{ A}$
C_{oss}	Output Capacity		98			
C_{rss}	Reverse Transfer Capacity		15		pF	$V_{DS}=12.5\text{ V}$, $V_{GS}=0\text{ V}$
C_{iss}	Input Capacity		82			
Z_S	Source Impedance		$1.6+j6.5$		Ω	$V_{DS}=12.5\text{ V}$, $P_{IN}=2\text{ W}$ $F=175\text{ MHz}$, $P_{OUT}=20\text{ W}$
Z_L	Load Impedance		$2+j2$			

Note: (1) All devices 100% power tested in Siliconix test fixture No. RF12175 [20]

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