



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

DV1220S ■ DV1220W

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

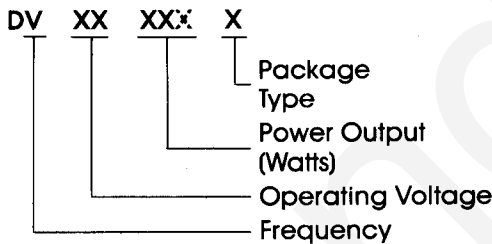
HF/VHF/UHF Amplifiers  
Class A, B, or C  
High Dynamic Range Amp

## 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)

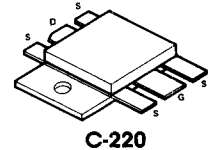
Gate-Source Voltage..... 30 V  
Drain-Source Voltage..... 50 V  
Drain-Gate Voltage..... 50 V  
Drain Current..... 4 A  
Total Device Dissipation..... 80 W  
@ 25° Case  
 $\theta_{jc}$  for .380 SOE..... 2.2°C/W  
 $\theta_{jc}$  for C-220..... 1.76°C/W  
Storage Temperature... -65°C to 150°C  
Junction 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		$1.6+j6.5$		$\Omega$	$V_{DS}=12.5\text{ V}, P_{IN}=2\text{ W}$ $F=175\text{ MHz}, P_{OUT}=20\text{ W}$
$Z_L$	Load Impedance		$2+j2$			

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

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