



COMMUNICATIONS TRANSISTOR CORPORATION

CF4-28

ampliment

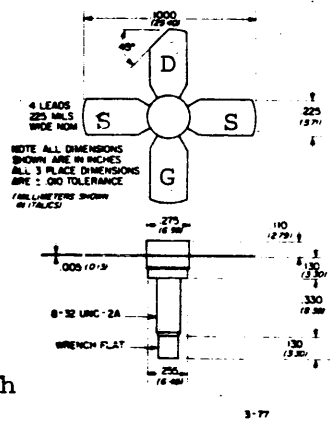
June, 1979

GENERAL DESCRIPTION - The CF4-28 is an N-channel silicon field effect transistor designed for driver and output applications at frequencies to 400 MHz. Capable of infinite VSWR at all phase angles at rated output power at 175MHz and 28 volt supply.

PACKAGE

Maximum Power Dissipation (Note 1)
Total Power Dissipation at 25°C
Case Temperature
Thermal Impedance (θ_{jc})

25
7°C/W



Maximum Voltage and Current
BV_{CES} Drain to Source Voltage
BV_{EBO} Gate to Source Voltage
I_C Drain Current

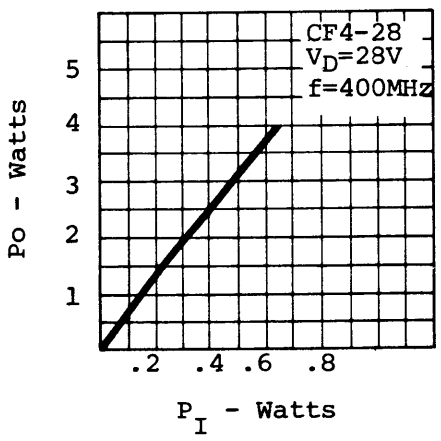
65
25
1.6A

Note: 1. Measured under pulsed condition with pulse width 80μs and duty cycle ≤5%.

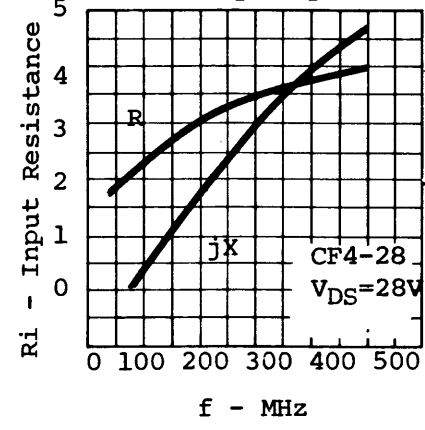
ELECTRICAL CHARACTERISTICS (25°C unless otherwise specified)

Symbol	Characteristics	Min.	Typ.	Max.	Units	Test Conditions
P _{OUT}	Power Output	4			W	f=400MHz, V _{DS} =28V, I _O =20mA
P _{IN}	Power Input			.8	W	f=400MHz, V _{DS} =28V, I _O =20mA
η	Drain Efficiency		55		%	f=400MHz, V _{DS} =28V, I _O =20mA
I _D (ON) (1)	On-State Drain Current		1.0		A	V _{DS} =15V, V _{GS} =10V
g _M	Small Signal Forward Transconductance (1)		.2		MHO	V _{DS} =10V, I _{DS} =.6A
C _{DS}	Drain-Source Capacitance		16		pF	f=1MHz, V _{DS} =28V, V _{GS} =0
BV _{DSS}	Drain-Source Break-down Voltage	65			V	I _{DS} =25mA

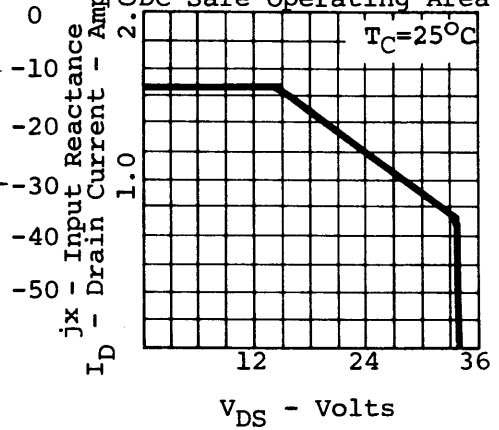
Power Out vs Power In



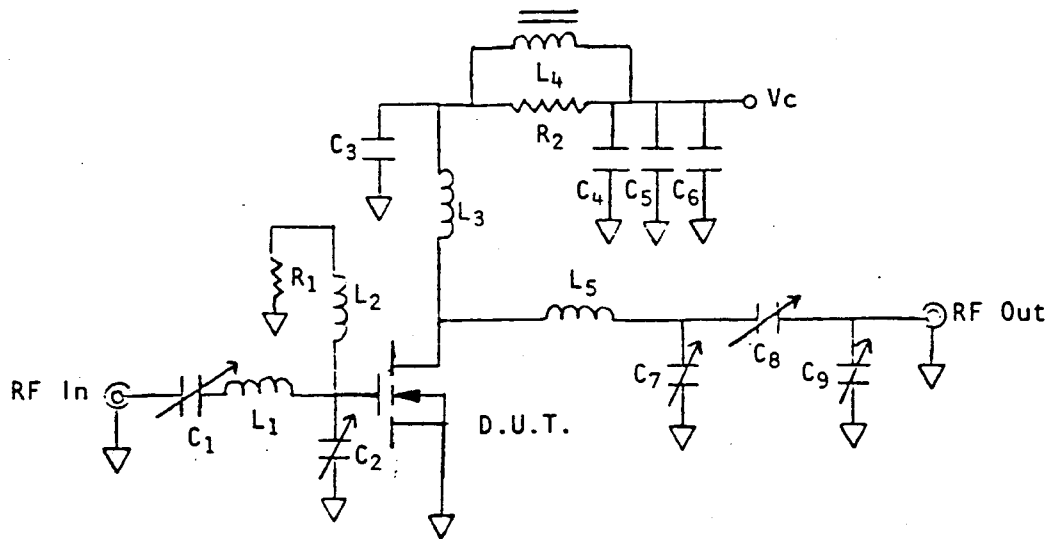
Input Impedance vs Frequency



DC Safe Operating Area



CF4-28 Test Circuit



C₁ = 7-100pF Compression Mica

C₂ = 4-40pF Compression Mica

C₃ = 1000pF Mica

C₄ = .1 μ F Ceramic

C₅ = .01 μ F Mica

C₆ = 10 μ F Electrolytic

C₇ = 2-20pF Compression Mica

C₈ = 2-20pF Compression Mica

C₉ = 2-20pF Compression Mica

L₁ = 1 loop, #20 AWG, 1" long

L₂ = .15 μ H Molded Inductor

L₃ = 6 turns #20 AWG, $\frac{1}{2}$ " I.D.

L₄ = 12 turns #22 AWG on F624-19, H material

L₅ = 1 loop, #20 AWG, $\frac{3}{4}$ " long

R₁ = 150 Ω , $\frac{1}{2}$ watt

R₂ = 15 Ω , 1 watt