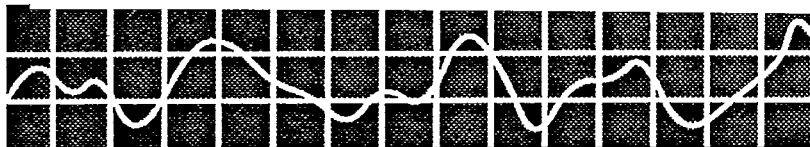


ACRIAN INC

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GENERAL DESCRIPTION

The VMIL20 FT offers many superior characteristics over alternative bipolar devices in the 175 MHz range. Selected input topology allows excellent match over broad bandwidths. ISOFETS have one quarter the feedback capacitance of alternative technologies leading to their high Ft.

ISOFETS have the following additional features:

- * Very simple amplifier design
- * Suitable for broad band applications
- * Have high dynamic range
- * Allows for simple bias circuits
- * Direct control from a logic circuit

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 58 W

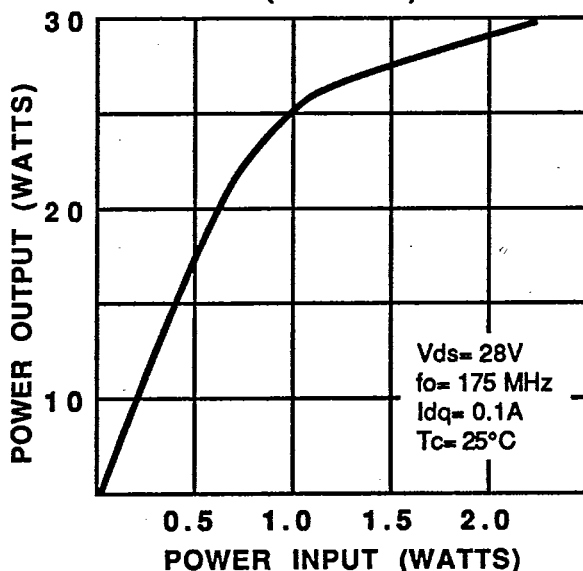
Maximum Voltage and Current

Thermal Resistance, junction to case 3.0°C/W
 Drain - Gate Voltage 70 V
 Drain - Source Voltage 70 V
 Gate - Source Voltage 60 V

Maximum Temperatures

Storage Temperature -65 to +150°C
 Operating Junction Temperature +200°C

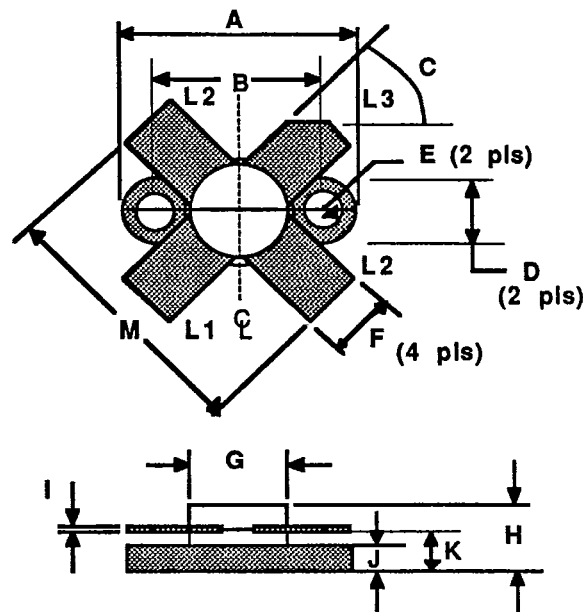
POWER OUTPUT VS POWER INPUT (TYPICAL)



VMIL20FT

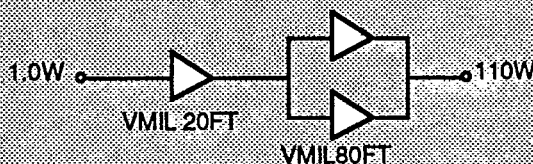
20 WATTS - 28 VOLTS
 1 - 175 MHz

VHF COMMUNICATIONS



DIM	Millimeter	TOL	Inches	TOL	
L1 : G					
L2 : S	A	24.76	.13	.975	.005
L3 : D	B	18.42	.13	.725	.005
	C	45°	5°	45°	5°
	D	6.35	.13	.250	.005
	E	3.17 DIA	.13	.125 DIA	.005
	F	5.71	.13	.225	.005
	G	9.52 DIA	.13	.375 DIA	.005
	H	6.60	REF	.260	REF
	I	.13	.02	.005	.001
	J	4.32	.13	.170	.005
	K	2.54	.13	.100	.005
	M	20.32	.25	.800	.010

TYPICAL AMPLIFIER LINE UP
 $V_{cc} = 28 \text{ Volts}$
 Frequency Range = 1-175 MHz

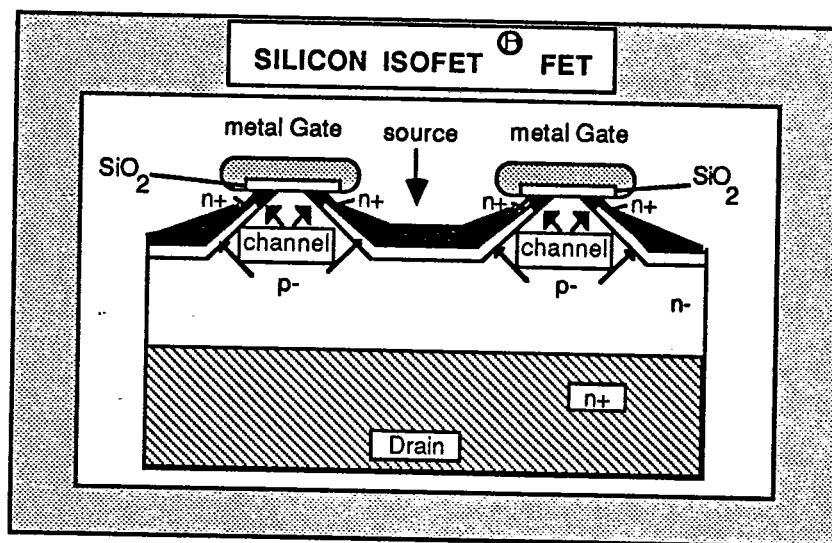


VMIL40FT-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Gps	Common-Source Power Gain	f= 175 MHz Vdd= 28V Po= 40 Idq= 0.2A	13	65	20:1	dB
η_c	Collector Efficiency					
VSWR	Load Mismatch Tolerance					
BVdss	Breakdown Voltage (Drain to Source)	Vgs= 0V, Id= 10mA	70			Volts
Idss	Drain-Source Leakage Current	Vgs= 0V, Vds= 30V			2.0	mA
Igss	Gain-Source Leakage Current	Vgs= 20V, Vds= 0V			1.0	μ A
gm	DC Forward Transconductance ²	Vds= 10V, Id= 2.0A	0.7	1.0		mho
Vgs(th)	Gate Threshold Voltage	Vgs=Vds, Id=200mA	2.0		8.0	Volts
Ciss	Common-Source Input Capacitance	Vgs= 0V, Vds= 30V, f= 1.0MHz		60	80	pF
Coss	Common-Source Output Capacitance	Vgs= 0V, Vds=30V, f= 1.0MHz		80	90	pF
Crss	Reverse Transfer Capacitance	Vgs= 0V, Vds= 30V, f= 1.0 MHz		4	6	pF

Note 1: Tc = +25°C unless otherwise specified

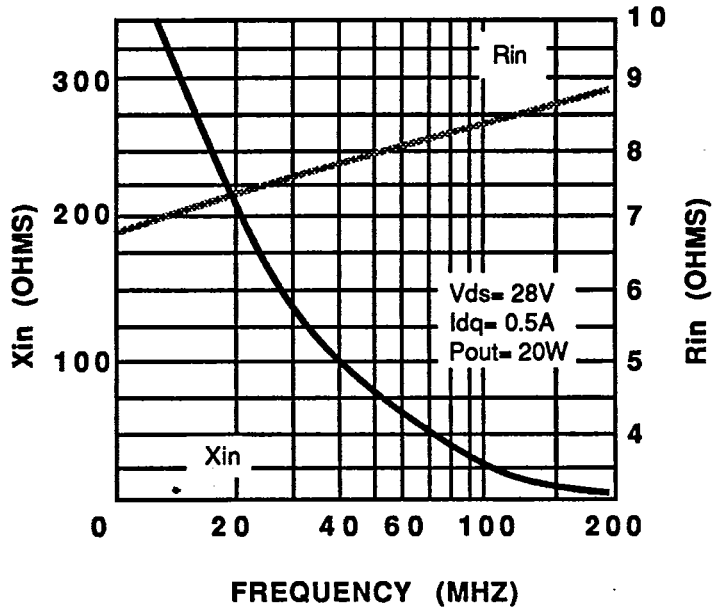
Note 2: Pulse Test - 80 μ sec to 300 μ sec, 1% duty cycle

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

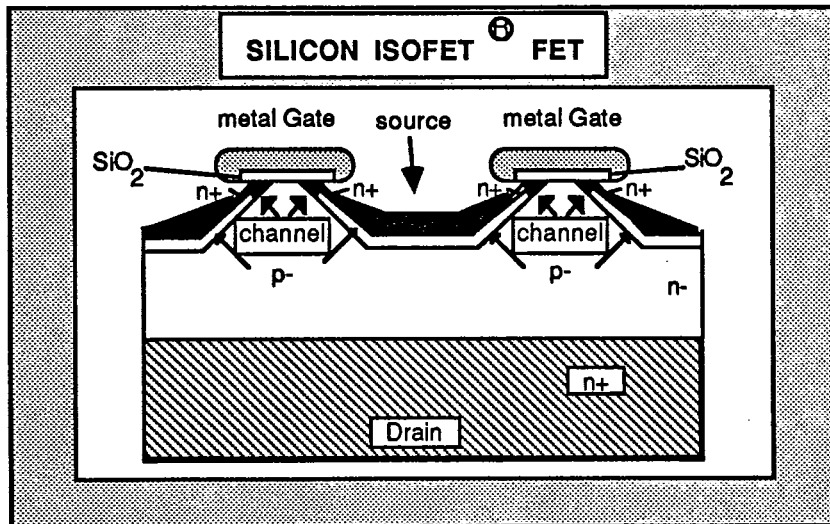
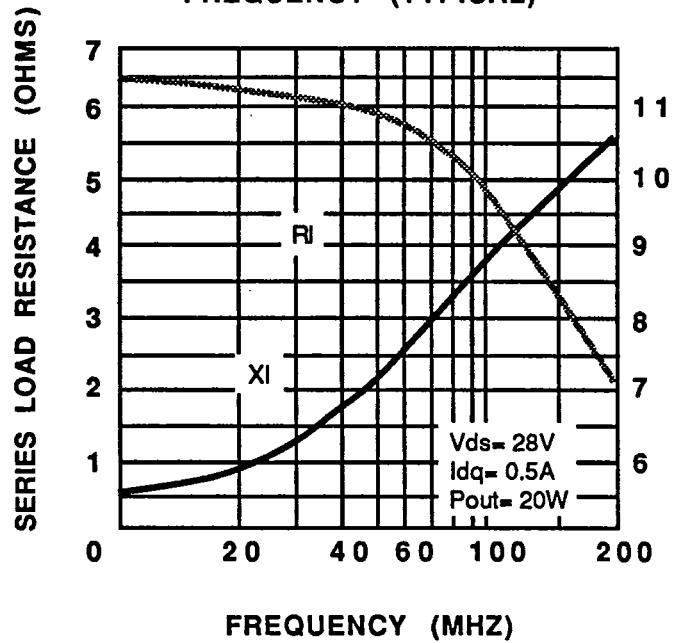
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SERIES EQUIVALENT INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)



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