POINT NINE
Technologies, Inc.

D4014 TetraFET

55W - 28V - 1GHz
GOLD METALIZED SILICON DMOS RF FET

FEATURES

- **METAL GATE**
- **EXTRA LOW C_{rss}**
- **BROAD BAND**
- **SIMPLE BIAS CIRCUITS**
- **LOW NOISE**
- **HIGH GAIN**

APPLICATIONS

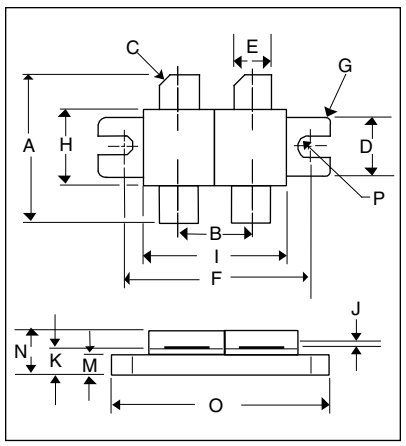
- **HF/VHF/UHF COMMUNICATIONS**

ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 25°C unless otherwise stated)		
P_D	Power Dissipation	185W
BV_{DSS}	Drain-source breakdown voltage	60V
V_{GSS}	Gate-source voltage	±20V
I_D	Drain Current	14A
T_{stg}	Storage temperature	-65 to 150°C
T_j	Maximum operating junction temperature	200°C
$R_{\emptyset j\text{-}c}$	Thermal resistance junction-case	Max. .95°C/W

ELECTRICAL CHARACTERISTICS (T_{CASE} = 25°C unless otherwise stated)

Parameter		Test Conditions	Min.	Typ.	Max.	Unit
		PER SIDE				
BV_{DSS}	Breakdown voltage, drain source	V_{GS}=0 I_D=100mA	60	60	60	Vdc
I_{DSS}	Drain leakage current	V_{DS}=28V V_{GS}=0			1	mAdc
I_{GSS}	Gate leakage current	V_{GS}=20V V_{DS}=0			1	µAdc
$V_{GS(th)}$	Gate threshold voltage	I_D=10mA V_{DS}=V_{GS}	1		5	Vdc
gfs	Transconductance (300µs pulse)	V_{DS}=10V I_D=1.4A	1.4			Mhos
C_{iss}	Input capacitance	V_{DS}=0 V_{GS}=-0 f=1MHz			84	pF
C_{oss}	Output capacitance	V_{DS}=0 V_{GS}=0 f=1MHz			35	pF
C_{rss}	Reverse transfer capacitance	V_{DS}=0 V_{GS}=0 f=1MHz			3.5	pF
		TOTAL DEVICE				
G_{PS}	Common source power gain	P_O=55W	10			dB
η	Drain efficiency	V_{DS}=28V I_{DQ}=1.4A	40			%
VSWR	Load mismatch tolerance	f=1GHz	20:1			

DIMENSIONS



DM	Millimeter	TOL	Inches	TOL
A	15.24	.50	.750	.020
B	10.77	.13	.424	.005
C	45°	.05	45°	5°
D	9.78	.13	.385	.005
E	5.71	.13	.255	.005
F	27.94	.13	1.100	.005
G	1.52R	.13	.060R	.005
H	10.16	.13	.400	.005
I	22.22	MAX	.875	MAX
J	0.13	.02	.005	.001
K	2.16	.13	.l07	.005
M	1.52	.13	.060	.005
N	5.08	.50	.200	.020
O	34.04	.13	1.340	.005
P	1.57R	.08	.062R	.003

HAZARDOUS MATERIAL WARNING

The ceramic portion of the device between leads and metal flange is beryllium oxide. Beryllium oxide dust is highly toxic and care must be taken during handling and mounting to avoid damage to this area. THESE DEVICES MUST NEVER BE THROWN AWAY WITH GENERAL INDUSTRIAL OR DOMESTIC WASTE.

U.S. PATENTS 5,121,176 & 5,179,032
GLOBAL PATENTS PENDING

2697 Lavery Court #8 • Newbury Park, CA 91320 • (805) 375-6600 • Fax: (805) 375-6602 • www.point9.com • www.rfmosfet.com