

P O I N T N I N E
Technologies, Inc.

D1001

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D1014 TetraFET

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*D1014

*PSPICE MODEL FOR POINT NINE TECHNOLOGIES, Inc RF N-CHANNEL VERTICAL DMOS POWER FET
*PRELIMINARY DATA, SEPTEMBER 1995

*TO GENERATE S PARAMETERS MATCHING DATA SHEET, SET VG=3.2V FOR IDQ=1A

```
*      ____GATE
*      I      ____DRAIN
*      I      I      ____SOURCE
*      I      I      I
.SUBCKT D1014 10 20 30
LG 10 11 1.71N
RGATE 11 12 0.78
CG 10 30 0.05P
CRSS 12 17 2.5P
CISS 12 14 60P
LS 14 30 0.30N
CS 14 30 0.1P
LD 17 20 0.85N
CD 20 30 1.44P
R_RC 16 17 35.73
C_RC 14 16 11.8P
MOS 13 12 14 15 D1014MOS L=0.71U W=0.056332 ;D G S B LEVEL1
JFET 17 14 13 D1014JF ;D G S
DBODY 14 17 D1014DB ;P N

.MODEL D1014MOS NMOS (VTO=2.2 KP=1.8E-5 LAMBDA=0.1 RD=0.25 RS=0.5)
.MODEL D1014JF NJF (VTO=-7.5 BETA=0.04 LAMBDA=1)
.MODEL D1014DB D (CJO=88.5P RS=0.25 VJ=0.7 M=0.33 BV=70)
.ENDS
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D1014.s2p

```
!      Vds=28V, Idq=1A
#      MHz S MA R 50
```

!Freq	S11		S21		S12		S22	
!MHz	mag	ang	mag	ang	mag	ang	mag	ang
100	0.794	-158	14.622	69	0.0115	-7	0.61	-145
200	0.881	-167	5.821	42	0.0061	3	0.794	-156
300	0.923	-171	3.02	28	0.0068	60	0.871	-162
400	0.923	-176	1.82	18	0.117	77	0.902	-167
500	0.937	-179	1.439	15	0.0168	76	0.923	-169
600	0.952	177	1.057	13	0.0234	75	0.945	-171
700	0.966	174	0.676	10	0.0285	74	0.966	-174
800	0.966	171	0.543	5	0.0335	69	0.955	-177
900	0.977	167	0.447	1	0.0394	64	0.966	178
1000	0.966	165	0.359	1	0.0432	64	0.955	178