

**125W - 28V - 400MHz**  
**GOLD METALLISED MULTI-PURPOSE**  
**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  
from DC to 400 MHz

**ABSOLUTE MAXIMUM RATINGS**

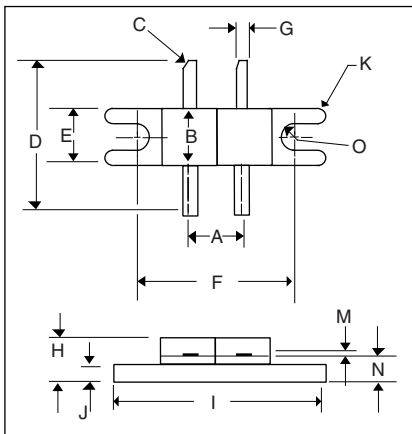
( $T_{CASE} = 25^{\circ}C$  unless otherwise stated)

$P_D$	Power Dissipation	350W
$BV_{DSS}$	Drain-source breakdown voltage	70V
$V_{GSS}$	Gate-source voltage	$\pm 20V$
$I_D$	Drain Current	20A
$T_{stg}$	Storage temperature	65 to $150^{\circ}C$
$T_j$	Maximum operating junction temperature	$200^{\circ}C$
$R_{THj-case}$	Thermal resistance junction-case	Max. $0.5^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS ( $T_{CASE} = 25^{\circ}C$  unless otherwise stated)**

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
<u>PER SIDE</u>					
$BV_{DSS}$	Breakdown voltage, drain source $V_{GS}=0$ $I_D=100mA$	70			Vdc
$I_{DSS}$	Drain leakage current $V_{DS}=28V$ $V_{GS}=0$			4	mAdc
$I_{GSS}$	Gate leakage current $V_{GS}=20V$ $V_{DS}=0$			1	$\mu Adc$
$V_{GS(th)}$	Gate threshold voltage $I_D=10mA$ $V_{DS}=V_{GS}$	1		7	Vdc
gfs	Transconductance (300 $\mu s$ pulse) $V_{DS}=10V$ $I_D=4A$	3.2			Mhos
<u>TOTAL DEVICE</u>					
$G_{PS}$	Common source power gain $P_O=125W$	13			dB
$\eta$	Drain efficiency $V_{DS}=28V$ $I_{DQ}=1.6A$	50			%
VSWR	Load mismatch tolerance $f=400MHz$	20:1			
<u>PER SIDE</u>					
$C_{iss}$	Input capacitance $V_{DS}=0V$ $V_{GS}=-5V$ $f=1MHz$			240	pF
$C_{oss}$	Output capacitance $V_{DS}=28V$ $V_{GS}=0$ $f=1MHz$			120	pF
$C_{rss}$	Reverse transfer capacitance $V_{DS}=28V$ $V_{GS}=0$ $f=1MHz$			10	pF

**DIMENSIONS**

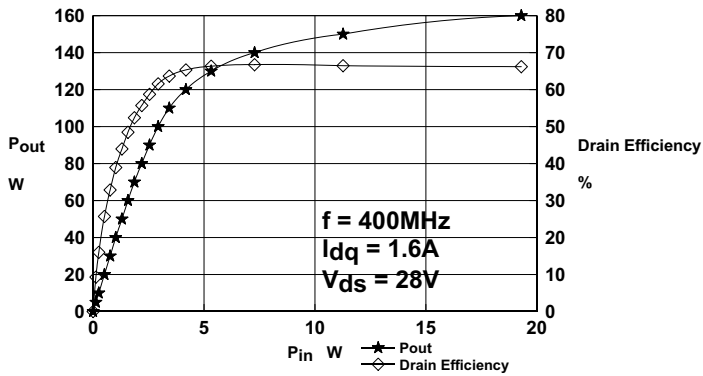


DM	Millimeter	TOL	Inches	TOL
A	6.45	.13	.254	.005
B	6.35	.13	.250	.005
C	45°	5°	45°	5°
D	16.51	.76	.650	.030
E	6.48	.13	.255	.005
F	18.42	.13	.725	.005
G	1.52	.13	.060	.005
H	4.06	.25	.160	.010
I	24.77	.13	.975	.005
J	1.52	.13	.060	.001
K	0.81R	.13	.032R	.005
M	.010	.03	.004	.001
N	2.16	.13	.085	.005
O	1.65R	.03	.065R	.005

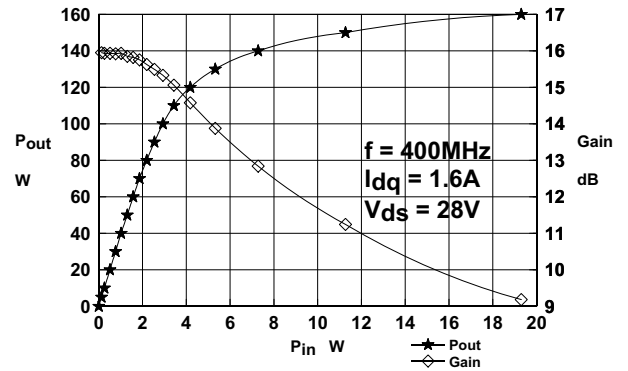
**HAZARDOUS MATERIAL WARNING**

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.

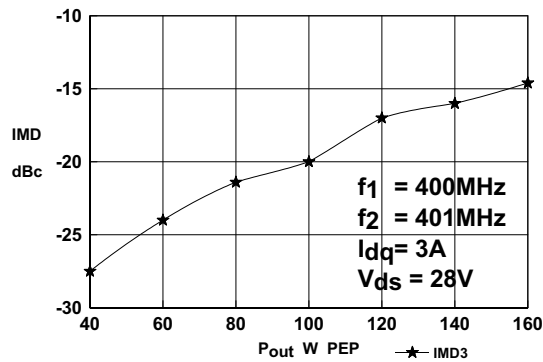
U.S. PATENTS 5,121,176 & 5,179,032  
GLOBAL PATENTS PENDING



**Figure 1.**  
Power Output and Efficiency vs. Input Power



**Figure 2.**  
Power Output and Gain vs. Input Power



**Figure 3**  
IMD vs. Power Output





