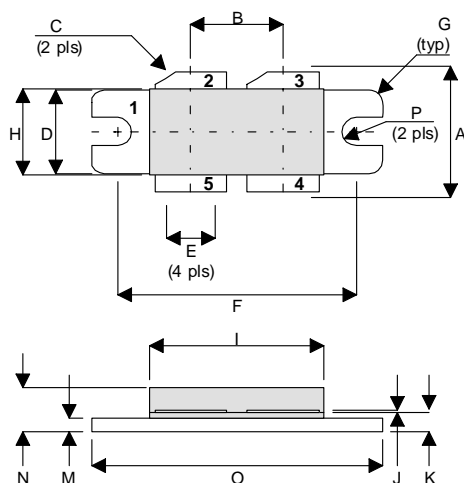


MECHANICAL DATA



D1

PIN 1	SOURCE (COMMON)	PIN 2	DRAIN 1
PIN 3	DRAIN 2	PIN 4	GATE 2
PIN 5	GATE 1		

DIM	Millimetres	Tol.	Inches	Tol.
A	15.24	0.50	0.600	0.020
B	10.80	0.13	0.425	0.005
C	45°	5°	45°	5°
D	9.78	0.13	0.385	0.005
E	8.38	0.13	0.330	0.005
F	27.94	0.13	1.100	0.005
G	1.52R	0.13	0.060R	0.005
H	10.16	0.15	0.400	0.006
I	21.84	0.23	0.860	0.009
J	0.10	0.02	0.004	0.001
K	1.96	0.13	0.077	0.005
M	1.02	0.13	0.040	0.005
N	4.45	0.38	0.175	0.015
O	34.04	0.13	1.340	0.005
P	1.63R	0.13	0.064R	0.005

GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
125W – 50V – 400MHz
PUSH-PULL

FEATURES

- SUITABLE FOR BROAD BAND APPLICATIONS
- SIMPLE BIAS CIRCUITS
- ULTRA-LOW THERMAL RESISTANCE
- BeO FREE
- LOW Crss
- HIGH GAIN – 13 dB MINIMUM

APPLICATIONS

- VHF/UHF COMMUNICATIONS
from 1 MHz to 500 MHz

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

P_D	Power Dissipation	648W (389W -A Version)
BV_{DSS}	Drain – Source Breakdown Voltage *	125V
BV_{GSS}	Gate – Source Breakdown Voltage*	±20V
$I_{D(sat)}$	Drain Current*	12A
T_{stg}	Storage Temperature	-65 to 150°C
T_j	Maximum Operating Junction Temperature	200°C

* Per Side

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
PER SIDE					
B _V DSS	Drain-Source Breakdown Voltage	V _{GS} = 0	I _D = 100mA	125	V
I _D DSS	Zero Gate Voltage Drain Current	V _{DS} = 50V	V _{GS} = 0		4 mA
I _G DSS	Gate Leakage Current	V _{GS} = 20V	V _{DS} = 0		1 μA
V _{GS(th)}	Gate Threshold Voltage*	I _D = 10mA	V _{DS} = V _{GS}	1	7 V
g _{fs}	Forward Transconductance*	V _{DS} = 10V	I _D = 2A	3.2	mhos
V _{GS(th)match}	Gate Threshold Voltage Matching Between Sides	I _D = 10mA	V _{DS} = V _{GS}		0.1 V
TOTAL DEVICE					
G _{PS}	Common Source Power Gain	P _O = 125W		13	dB
η	Drain Efficiency	V _{DS} = 50V	I _{DQ} = 1.4A	60	%
VSWR	Load Mismatch Tolerance	f = 400MHz		20:1	—
PER SIDE					
C _{iss}	Input Capacitance	V _{DS} = 50V	V _{GS} = -5V f = 1MHz		240 pF
C _{oss}	Output Capacitance	V _{DS} = 50V	V _{GS} = 0 f = 1MHz		100 pF
C _{rss}	Reverse Transfer Capacitance	V _{DS} = 50V	V _{GS} = 0 f = 1MHz		6 pF

* Pulse Test: Pulse Duration = 300 μs , Duty Cycle ≤ 2%

THERMAL DATA

R _{THj-case}	Thermal Resistance Junction – Case	Max. 0.27°C / W 0.45 °C / W -A Version
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