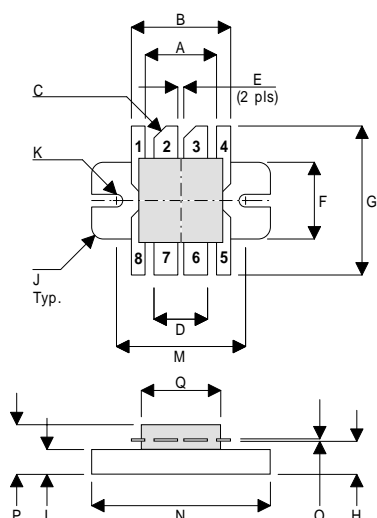


MECHANICAL DATA



DD

PIN 1	SOURCE (COMMON)	PIN 2	DRAIN 1
PIN 3	DRAIN 2	PIN 4	SOURCE (COMMON)
PIN 5	SOURCE (COMMON)	PIN 6	GATE 2
PIN 7	GATE 1	PIN 8	SOURCE (COMMON)

DIM	mm	Tol.	Inches	Tol.
A	9.14	0.13	0.360	0.005
B	12.70	0.13	0.500	0.005
C	45°	5°	45°	5°
D	6.86	0.13	0.270	0.005
E	0.76	0.13	0.030	0.005
F	9.78	0.13	0.385	0.005
G	19.05	0.25	0.750	0.010
H	4.19	0.13	0.165	0.005
I	3.17	0.13	0.125	0.005
J	1.52R	0.13	0.060R	0.005
K	1.65R	0.13	0.065R	0.005
M	16.51	0.13	0.650	0.005
N	22.86	0.13	0.900	0.005
O	0.13	0.02	0.005	0.001
P	6.35	0.64	0.250	0.025
Q	10.77	0.13	0.424	0.005

**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
40W – 12.5V – 500MHz
PUSH-PULL**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN – 10 dB MINIMUM

APPLICATIONS

- HF/VHF/UHF COMMUNICATIONS
from 1 MHz to 500 MHz

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

P_D	Power Dissipation	175W
BV_{DSS}	Drain – Source Breakdown Voltage	40V
BV_{GSS}	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	20A
T_{stg}	Storage Temperature	-65 to 150°C
T_j	Maximum Operating Junction Temperature	200°C

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	40	V	
I _D DSS	Zero Gate Voltage Drain Current	V _{DS} = 12.5V	V _{GS} = 0	2	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	5.5	V
g _{fs}	Forward Transconductance*	V _{DS} = 10V	I _D = 2A	1.6	S	
TOTAL DEVICE						
G _{PS}	Common Source Power Gain	P _O = 40W		10	dB	
η	Drain Efficiency	V _{DS} = 12.5V	I _{DQ} = 1.6A	50	%	
VSWR	Load Mismatch Tolerance	f = 400MHz		20:1	—	
PER SIDE						
C _i SS	Input Capacitance	V _{DS} = 0V	V _{GS} = -5V f = 1MHz		120	pF
C _o SS	Output Capacitance	V _{DS} = 12.5V	V _{GS} = 0 f = 1MHz		80	pF
C _r SS	Reverse Transfer Capacitance	V _{DS} = 12.5V	V _{GS} = 0 f = 1MHz		8	pF

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

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.

THERMAL DATA

R _{THj-case}	Thermal Resistance Junction – Case	Max. 1.0°C / W
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