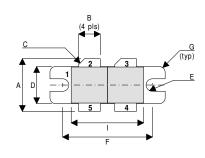
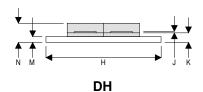


D5012UK

METAL GATE RF SILICON FET

MECHANICAL DATA





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

PIN 5 GATE 1

DIM	mm	Tol.	Inches	Tol.	
Α	13.97	0.26	0.550	0.010	
В	5.72	0.13	0.225	0.005	
С	45°	5°	5° 45°		
D	9.78	0.13	0.13 0.385		
Е	1.65R	0.13	0.065R	0.005	
F	23.75	0.13	0.935	0.005	
G	1.52R	0.13	0.060R	0.005	
Н	30.48	0.13	1.200	0.005	
- 1	19.17	0.26	0.755	0.010	
J	0.13	0.02	0.005	0.001	
K	2.54	0.13	0.100	0.005	
М	1.52	0.13	0.060	0.005	
N	5.08	0.50	0.200	0.020	

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 100W - 50V - 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°C unless otherwise stated)

$\overline{P_D}$	Power Dissipation	290W
BV_{DSS}	Drain – Source Breakdown Voltage *	125V
BV_{GSS}	Gate – Source Breakdown Voltage *	±20V
I _{D(sat)}	Drain Current *	9A
T _{stg}	Storage Temperature	−65 to 150°C
T_{j}^{T}	Maximum Operating Junction Temperature	200°C

Per Side

Semelab PIc 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.



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

	Parameter	Test	Conditions	Min.	Тур.	Max.	Unit
	PER SIDE						
BV	Drain-Source	V _{GS} = 0	l 100mΛ	125			V
BV _{DSS}	Breakdown Voltage	V _{GS} = 0	I _D = 100mA	123			\ \ \
	Zero Gate Voltage	V 50V	v V _{GS} = 0			3	m A
I _{DSS}	Drain Current	$V_{DS} = 50V$				3	mA
I _{GSS}	Gate Leakage Current	V _{GS} = 20V	V _{DS} = 0			1	μΑ
V _{GS(th)}	Gate Threshold Voltage*	I _D = 10mA	$V_{DS} = V_{GS}$	1		7	V
9 _{fs}	Forward Transconductance*	V _{DS} = 10V	I _D = 1.5A	2.4			S
	TOTAL DEVICE						•
G _{PS}	Common Source Power Gain	P _O = 100W		10			dB
η	Drain Efficiency	$V_{DS} = 50V$	I _{DQ} = 0.6A	50			%
VSWR	Load Mismatch Tolerance	f = 500MHz		20:1			_
PER SIDE							
C _{iss}	Input Capacitance	$V_{DS} = 50V$	$V_{GS} = -5V f = 1MHz$			180	pF
C _{oss}	Output Capacitance	$V_{DS} = 50V$	$V_{GS} = 0$ $f = 1MHz$			75	pF
C _{rss}	Reverse Transfer Capacitance	$V_{DS} = 50V$	$V_{GS} = 0$ $f = 1MHz$			4.5	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. 0.6°C/W
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