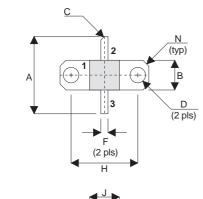
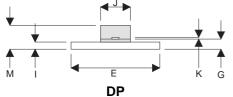


D2205UK

ROHS COMPLIANT METAL GATE RF SILICON FET

MECHANICAL DATA





PIN 2 PIN 1 SOURCE DRAIN

PIN₃ **GATE**

DIM	mm	Tol.	Inches	Tol.
Α	16.51	0.25	0.650	0.010
В	6.35	0.13	0.250	0.005
С	45°	5°	45°	5°
D	3.30	0.13	0.130	0.005
E	18.92	0.08	0.745	0.003
F	1.52	0.13	0.060	0.005
G	2.16	0.13	0.085	0.005
Н	14.22	0.08	0.560	0.003
1	1.52	0.13	0.060	0.005
J	6.35	0.13	0.250	0.005
K	0.13	0.03	0.005	0.001
М	5.08	0.51	0.200	0.020
N	1.27 x 45°	0.13	0.050 x 45°	0.005

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 7.5W - 12.5V - 1GHz SINGLE ENDED

FEATURES

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

APPLICATIONS

 VHF/UHF COMMUNICATIONS from 1 MHz to 1GHz

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

$\overline{P_D}$	Power Dissipation	35W
BV_DSS	Drain – Source Breakdown Voltage	40V
BV_{GSS}	Gate – Source Breakdown Voltage	±20V
I _{D(sat)}	Drain Current	6A
T _{stg}	Storage Temperature	–65 to 150°C
Tj	Maximum Operating Junction Temperature	200°C

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.

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

Parameter		Test Conditions		Min.	Тур.	Max.	Unit
R\/	Drain-Source	V _{GS} = 0	I_ = 10mΛ	40			V
BV _{DSS}	Breakdown Voltage	VGS - 0	I _D = 10mA	40			V
I _{DSS}	Zero Gate Voltage	\/ 10.5\/	V V 0			2	A
	Drain Current	V _{DS} = 12.5V	$V_{GS} = 0$			2	mA
I _{GSS}	Gate Leakage Current	V _{GS} = 20V	V _{DS} = 0			1	μА
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 =0.6A	0.54			S
G _{PS}	Common Source Power Gain	P _O = 7.5W		10			dB
η	Drain Efficiency	V _{DS} = 12.5V	$I_{DQ} = 0.6A$	40			%
VSWR	Load Mismatch Tolerance	f = 1GHz		20:1			_
C _{iss}	Input Capacitance	$V_{DS} = 0$ V_{G}	_S = -5V f = 1MHz			36	pF
C _{oss}	Output Capacitance	$V_{DS} = 12.5V V_{G}$	S = 0 $f = 1MHz$			30	pF
C _{rss}	Reverse Transfer Capacitance	$V_{DS} = 12.5V V_{G}$	S = 0 $f = 1MHz$			3	pF

^{*} Pulse Test: Pulse Duration = 300 μs , Duty Cycle $\leq 2\%$

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. 5°C / W
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