

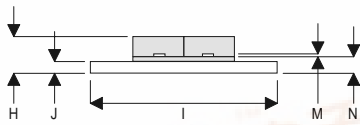
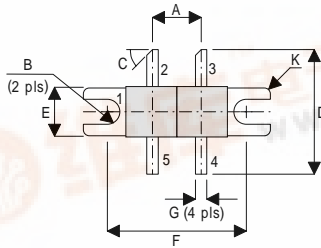


D2213UK

METAL GATE RF SILICON FET

MECHANICAL DATA

**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
20W – 12.5V – 1GHz
PUSH-PULL**



DK

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

FEATURES

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

DIM	mm	Tol.	Inches	Tol.
A	6.45	0.13	0.254	0.005
B	1.65R	0.13	0.065R	0.005
C	45°	5°	45°	5°
D	16.51	0.76	0.650	0.03
E	6.47	0.13	0.255	0.005
F	18.41	0.13	0.725	0.005
G	1.52	0.13	0.060	0.005
H	4.82	0.25	0.190	0.010
I	24.76	0.13	0.975	0.005
J	1.52	0.13	0.060	0.005
K	0.81R	0.13	0.032R	0.005
M	0.13	0.02	0.005	0.001
N	2.16	0.13	0.085	0.005

APPLICATIONS

- HF/VHF/UHF COMMUNICATIONS
from 1MHz to 2 GHz

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

P_D	Power Dissipation	83W
BV_{DSS}	Drain – Source Breakdown Voltage *	40V
BV_{GSS}	Gate – Source Breakdown Voltage *	±20V
$I_{D(sat)}$	Drain Current *	8A
T_{stg}	Storage Temperature	-65 to 150°C
	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 = 10mA	40			V
I _{DSS}	Zero Gate Voltage Drain Current V _{DS} = 12.5V V _{GS} = 0			4	mA
I _{GSS}	Gate Leakage Current V _{GS} = 20V V _{DS} = 0			4	μA
V _{GS(th)}	Gate Threshold Voltage * I _D = 10mA V _{DS} = V _{GS}	0.5		7	V
g _{fs}	Forward Transconductance * V _{DS} = 10V I _D = 0.8A	0.72			S
TOTAL DEVICE					
G _{PS}	Common Source Power Gain P _O = 20W	10			dB
η	Drain Efficiency V _{DS} = 12.5V I _{DQ} = 0.8A	40			%
VSWR	Load Mismatch Tolerance f = 1GHz	20:1			—
PER SIDE					
C _{iss}	Input Capacitance V _{DS} = 0 V _{GS} = -5V f = 1MHz			48	pF
C _{oss}	Output Capacitance V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			40	pF
C _{rss}	Reverse Transfer Capacitance V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			4	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. 2.1°C / W
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