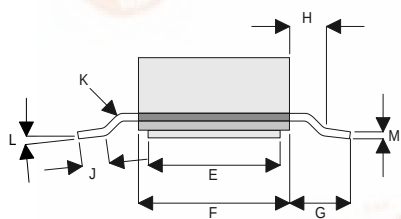
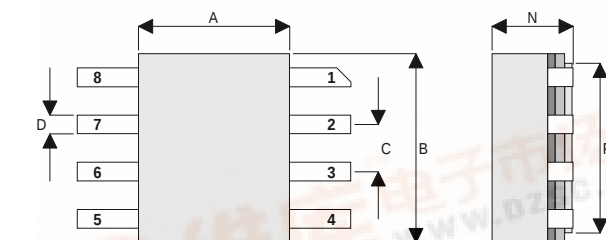


D2225UK

METAL GATE RF SILICON FET

MECHANICAL DATA

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 5W – 12.5V – 1GHz PUSH-PULL



SO8 PACKAGE

PIN 1 – SOURCE PIN 5 – SOURCE
 PIN 2 – DRAIN 1 PIN 6 – GATE 2
 PIN 3 – DRAIN 2 PIN 7 – GATE 1
 PIN 4 – SOURCE PIN 8 – SOURCE

Dim.	mm	Tol.	Inches	Tol.
A	4.06	±0.08	0.160	±0.003
B	5.08	±0.08	0.200	±0.003
C	1.27	±0.08	0.050	±0.003
D	0.51	±0.08	0.020	±0.003
E	3.56	±0.08	0.140	±0.003
F	4.06	±0.08	0.160	±0.003
G	1.65	±0.08	0.065	±0.003
H	0.76	+0.25 -0.00	0.030	+0.010 -0.000
J	0.51	Min.	0.020	Min.
	1.02	Max.	0.040	Max.
K	45°	Max.	45°	Max.
L	0°	Min.	0°	Min.
	7°	Max.	7°	Max.
M	0.20	±0.08	0.008	±0.003
N	2.18	Max.	0.086	Max.
P	4.57	±0.08	0.180	±0.003

FEATURES

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

APPLICATIONS

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

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

P_D	Power Dissipation	17.5W
BV_{DSS}	Drain – Source Breakdown Voltage	40V
BV_{GSS}	Gate – Source Breakdown Voltage	±20V
$I_D(sat)$	Drain Current	4A
T_{stg}	Storage Temperature	–65 to 150°C
T_{jop}	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			1	mA
I _{GSS}	Gate Leakage Current	V _{GS} = 20V	V _{DS} = 0			1	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 = 0.2A	0.18			S
TOTAL DEVICE							
G _{PS}	Common Source Power Gain	P _O = 5W		10			dB
η	Drain Efficiency	V _{DS} = 12.5V I _{DQ} = 0.2A		40			%
VSWR	Load Mismatch Tolerance	f = 1GHz		20:1			—
PER SIDE							
C _{iss}	Input Capacitance	V _{DS} = 0V	V _{GS} = −5V f = 1MHz			12	pF
C _{oss}	Output Capacitance	V _{DS} = 12.5V	V _{GS} = 0 f = 1MHz			10	pF
C _{rss}	Reverse Transfer Capacitance	V _{DS} = 12.5V	V _{GS} = 0 f = 1MHz			1	pF

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

THERMAL DATA

R _{THj-case}	Thermal Resistance Junction – Case	Max. 6°C / W
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