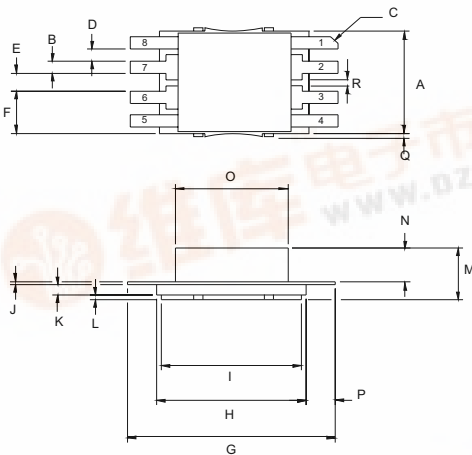


D2253UK

METAL GATE RF SILICON FET

MECHANICAL DATA



DBC4 Package

- PIN 1 Source (Common) PIN 5 Source (Common)
- PIN 2 Drain 1 PIN 6 Gate 2
- PIN 3 Drain 2 PIN 7 Gate 1
- PIN 4 Source (Common) PIN 8 Source (Common)

DIM	mm	Tol.	Inches	Tol.
A	6.47	0.08	.255	.003
B	0.76	0.08	.030	.003
C	45°	5°	45°	5°
D	0.76	0.08	.030	.003
E	1.14	0.08	.045	.003
F	2.67	0.08	.105	.003
G	11.73	0.13	.462	.005
H	8.43	0.08	.332	.003
I	7.92	0.08	.312	.003
J	0.20	0.02	.008	.001
K	0.64	0.02	.025	.001
L	0.30	0.02	.012	.001
M	3.25	0.08	.128	.003
N	2.11	0.08	.083	.003
O	6.35SQ	0.08	.250SQ	.003
P	1.65	0.51	.065	.020
Q	0.13	max	.005	max
R	0.25	0.07	0.010	.003

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

FEATURES

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

APPLICATIONS

- VHF/UHF COMMUNICATIONS
from 1MHz to 1 GHz

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

P _D	Power Dissipation	15W
BV _{DSS}	Drain – Source Breakdown Voltage *	40V
BV _{GSS}	Gate – Source Breakdown Voltage *	±20V
I _{D(sat)}	Drain Current *	2A
T _{stg}	Storage Temperature	-65 to 150°C
T _{op}	Maximum Operating Junction Temperature	200°C



ELECTRICAL CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
PER SIDE					
BV_{DSS} Drain-Source Breakdown Voltage	$V_{\text{GS}} = 0$ $I_{\text{D}} = 10\text{mA}$	40			V
I_{DSS} Zero Gate Voltage Drain Current	$V_{\text{DS}} = 12.5\text{V}$ $V_{\text{GS}} = 0$			1	mA
I_{GSS} Gate Leakage Current	$V_{\text{GS}} = 20\text{V}$ $V_{\text{DS}} = 0$			1	μA
$V_{\text{GS(th)}}$ Gate Threshold Voltage*	$I_{\text{D}} = 10\text{mA}$ $V_{\text{DS}} = V_{\text{GS}}$	1		7	V
g_{fs} Forward Transconductance*	$V_{\text{DS}} = 10\text{V}$ $I_{\text{D}} = 0.2\text{A}$	0.18			S
TOTAL DEVICE					
G_{PS} Common Source Power Gain	$P_{\text{O}} = 5\text{W}$	10			dB
η Drain Efficiency	$V_{\text{DS}} = 12.5\text{V}$ $I_{\text{DQ}} = 0.2\text{A}$	40			%
VSWR Load Mismatch Tolerance	$f = 1\text{GHz}$	20:1			—
PER SIDE					
C_{iss} Input Capacitance	$V_{\text{DS}} = 0$ $V_{\text{GS}} = -5\text{V}$ $f = 1\text{MHz}$			12	pF
C_{oss} Output Capacitance	$V_{\text{DS}} = 12.5\text{V}$ $V_{\text{GS}} = 0$ $f = 1\text{MHz}$			10	pF
C_{rss} Reverse Transfer Capacitance	$V_{\text{DS}} = 12.5\text{V}$ $V_{\text{GS}} = 0$ $f = 1\text{MHz}$			1	pF

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

THERMAL DATA

$R_{\text{THj-case}}$	Thermal Resistance Junction – Case	Max. 12.0°C / W
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