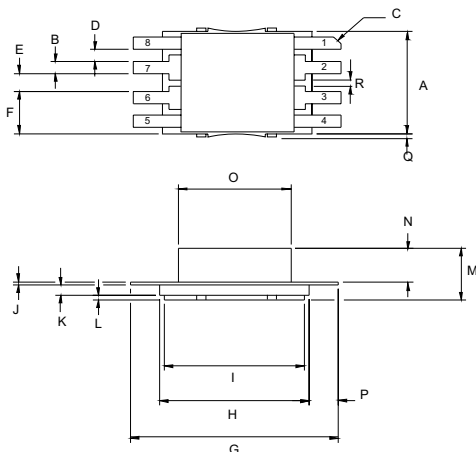


MECHANICAL DATA



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

$P_D$	Power Dissipation	15W
$BV_{DSS}$	Drain – Source Breakdown Voltage *	40V
$BV_{GSS}$	Gate – Source Breakdown Voltage *	$\pm 20V$
$I_{D(sat)}$	Drain Current *	2A
$T_{stg}$	Storage Temperature	-65 to 150°C
$T_j$	Maximum Operating Junction Temperature	200°C

\* Per Side

## ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
<b>PER SIDE</b>						
B <sub>V</sub> DSS	Drain–Source Breakdown Voltage	V <sub>GS</sub> = 0	I <sub>D</sub> = 10mA	40	V	
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 12.5V	V <sub>GS</sub> = 0	1	mA	
I <sub>GSS</sub>	Gate Leakage Current	V <sub>GS</sub> = 20V	V <sub>DS</sub> = 0	1	μA	
V <sub>GS(th)</sub>	Gate Threshold Voltage*	I <sub>D</sub> = 10mA	V <sub>DS</sub> = V <sub>GS</sub>	1	7	V
g <sub>fs</sub>	Forward Transconductance*	V <sub>DS</sub> = 10V	I <sub>D</sub> = 0.2A	0.18	S	
<b>TOTAL DEVICE</b>						
G <sub>PS</sub>	Common Source Power Gain	P <sub>O</sub> = 5W		10	dB	
η	Drain Efficiency	V <sub>DS</sub> = 12.5V	I <sub>DQ</sub> = 0.2A	40	%	
V <sub>SWR</sub>	Load Mismatch Tolerance	f = 1GHz		20:1	—	
<b>PER SIDE</b>						
C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> = 0	V <sub>GS</sub> = -5V f = 1MHz		12	pF
C <sub>oss</sub>	Output Capacitance	V <sub>DS</sub> = 12.5V	V <sub>GS</sub> = 0 f = 1MHz		10	pF
C <sub>rss</sub>	Reverse Transfer Capacitance	V <sub>DS</sub> = 12.5V	V <sub>GS</sub> = 0 f = 1MHz		1	pF

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

## THERMAL DATA

R <sub>THj-case</sub>	Thermal Resistance Junction – Case	Max. 12.0°C / W
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