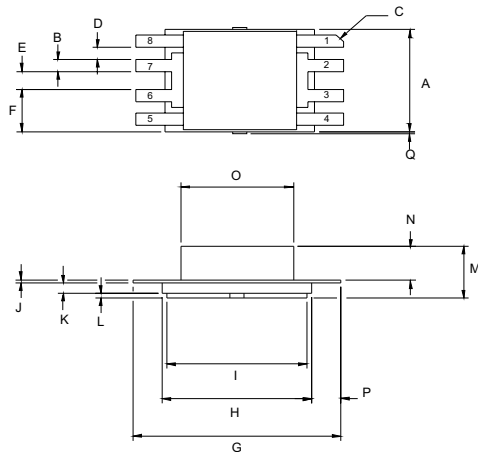


MECHANICAL DATA



DBC1 Package

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

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

**GOLD METALLISED  
MULTI-PURPOSE SILICON  
DMOS RF FET  
10W – 7.2V – 1GHz  
SINGLE ENDED**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW  $C_{rss}$
- LOW NOISE
- HIGH GAIN

APPLICATIONS

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

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

$P_D$	Power Dissipation	70W
$BV_{DSS}$	Drain – Source Breakdown Voltage	40V
$BV_{GSS}$	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	16A
$T_{stg}$	Storage Temperature	$-65$ to $150^{\circ}C$
$T_j$	Maximum Operating Junction Temperature	$200^{\circ}C$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$BV_{DSS}$ Drain–Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 10\text{mA}$	40			V
$I_{DSS}$ Zero Gate Voltage Drain Current	$V_{DS} = 12.5\text{V}$ $V_{GS} = 0$			8	mA
$I_{GSS}$ Gate Leakage Current	$V_{GS} = 20\text{V}$ $V_{DS} = 0$			8	$\mu\text{A}$
$V_{GS(th)}$ Gate Threshold Voltage*	$I_D = 10\text{mA}$ $V_{DS} = V_{GS}$	1		7	V
$g_{fs}$ Forward Transconductance*	$V_{DS} = 10\text{V}$ $I_D = 0.8\text{A}$	1.44			S
$G_{PS}$ Common Source Power Gain	$P_O = 10\text{W}$	7			dB
$\eta$ Drain Efficiency	$V_{DS} = 7.2\text{V}$ $I_{DQ} = 0.8\text{A}$	40			%
VSWR Load Mismatch Tolerance	$f = 1\text{GHz}$	20:1			—
$C_{iss}$ Input Capacitance	$V_{DS} = 0$ $V_{GS} = -5\text{V}$ $f = 1\text{MHz}$			96	pF
$C_{oss}$ Output Capacitance	$V_{DS} = 12.5\text{V}$ $V_{GS} = 0$ $f = 1\text{MHz}$			80	pF
$C_{rss}$ Reverse Transfer Capacitance	$V_{DS} = 12.5\text{V}$ $V_{GS} = 0$ $f = 1\text{MHz}$			8	pF

\* Pulse Test: Pulse Duration = 300  $\mu\text{s}$  , Duty Cycle  $\leq 2\%$

**THERMAL DATA**

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. 2.5 $^{\circ}\text{C} / \text{W}$
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