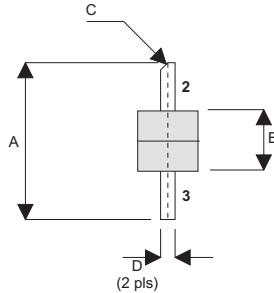
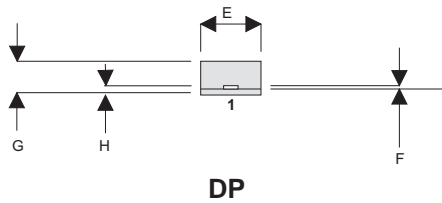


MECHANICAL DATA



GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 20W – 12.5V – 1GHz SINGLE ENDED



FEATURES

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

APPLICATIONS

- VHF/UHF COMMUNICATIONS
from DC to 1 GHz

PIN 1 SOURCE PIN 2 DRAIN
PIN 3 GATE

DIM	mm	Tol.	Inches	Tol.
A	16.51	0.25	0.650	0.010
B	6.35	0.13	0.250	0.005
C	45°	5°	45°	5°
D	1.52	0.13	0.060	0.005
E	6.35	0.13	0.250	0.005
F	0.13	0.03	0.005	0.001
G	3.56	0.51	0.140	0.020
H	0.64	0.13	0.024	0.005

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}\text{C}$ 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°C
T_j	Maximum Operating Junction Temperature	200°C

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
B _V DSS Drain–Source Breakdown Voltage	V _{GS} = 0 I _D = 10mA	40			V
I _D DSS Zero Gate Voltage Drain Current	V _{DS} = 12.5V V _{GS} = 0			8	mA
I _G DSS Gate Leakage Current	V _{GS} = 20V V _{DS} = 0			8	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	1.44			S
G _{PS} Common Source Power Gain	P _O = 20W	10			dB
η Drain Efficiency	V _{DS} = 12.5V I _{DQ} = 1.6A	40			%
VSWR Load Mismatch Tolerance	f = 1GHz	20:1			—
C _{iss} Input Capacitance	V _{DS} = 0 V _{GS} = -5V f = 1MHz			96	pF
C _{oss} Output Capacitance	V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			80	pF
C _{rss} Reverse Transfer Capacitance	V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			8	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. 2.5°C / W
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