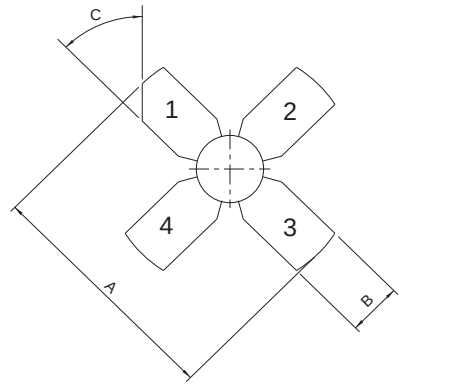
D2025UK

METAL GATE RF SILICON FET

MECHANICAL DATA



DW

PIN 1	DRAIN	PIN 2	SOURCE
PIN 3	GATE	PIN 4	SOURCE

DIM	mm	Tol.	Inches	Tol.
A	26.16	0.38	1.030	0.015
B	5.72	0.13	0.225	0.005
C	45°	5°	45°	5°
D	7.11	0.13	0.280	0.005
E	0.13	0.03	0.005	0.001
F	1.52	0.13	0.055	0.005
G	0.43	0.20	0.060	0.008
H	7.67	REF	0.120	REF

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 2.5W – 28V – 400MHz SINGLE ENDED

FEATURES

- **SIMPLIFIED AMPLIFIER DESIGN**
- **SUITABLE FOR BROAD BAND APPLICATIONS**
- **LOW C_{rss}**
- **SIMPLE BIAS CIRCUITS**
- **LOW NOISE**
- **HIGH GAIN – 13 dB MINIMUM**

APPLICATIONS

- VHF/UHF COMMUNICATIONS from DC to 1GHz

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

P_D	Power Dissipation	17.5W
BV_{DSS}	Drain – Source Breakdown Voltage	65V
BV_{GSS}	Gate – Source Breakdown Voltage	±20V
$I_{D(sat)}$	Drain Current	1A
T_{stg}	Storage Temperature	–65 to 150°C
T_j	Maximum Operating Junction Temperature	200°C

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

Parameter		Test Conditions			Min.	Typ.	Max.	Unit
BV_{DSS}	Drain–Source Breakdown Voltage	V_{GS} = 0	I_D = 10mA		65			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = 28V	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}		1		7	V
g_{fs}	Forward Transconductance*	V_{DS} = 10V	I_D = 0.2A		0.18			S
G_{PS}	Common Source Power Gain	P_O = 2.5W			13			dB
η	Drain Efficiency	V_{DS} = 28V	I_{DQ} = 0.1A		40			%
VSWR	Load Mismatch Tolerance	f = 400MHz			20:1			—
C_{iss}	Input Capacitance	V_{DS} = 28V	V_{GS} = –5V	f = 1MHz			12	pF
C_{oss}	Output Capacitance	V_{DS} = 28V	V_{GS} = 0	f = 1MHz			6	pF
C_{rss}	Reverse Transfer Capacitance	V_{DS} = 28V	V_{GS} = 0	f = 1MHz			0.5	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. 10°C / W