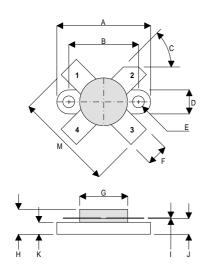


D5050UK

METAL GATE RF SILICON FET

MECHANICAL DATA



DMX

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

DIM	mm	Tol.	Inches	Tol.	
Α	28.83	0.13	1.135	0.005	
В	21.97	0.13	0.865	0.005	
С	45°	5°	45°	5°	
D	6.86	0.13	0.27	0.005	
E	3.43 Dia.	0.13	0.135 Dia.	0.005	
F	5.84	0.13	0.230	0.005	
G	13.97 Dia.	0.13	0.550 Dia.	0.005	
Н	6.60	REF	0.260	REF	
I	0.13	0.02	0.005	0.001	
J	3.81	0.25	0.15	0.01	
K	2.54	0.13	0.100	0.005	
М	27.94	0.51	1.10	0.02	

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 300W - 50V - 30MHzSINGLE ENDED

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN 20 dB MINIMUM

APPLICATIONS

 HF/VHF/UHF COMMUNICATIONS from 1 MHz to 175 MHz

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

$\overline{P_D}$	Power Dissipation	500W
BV_DSS	Drain – Source Breakdown Voltage	125V
BV_{GSS}	Gate – Source Breakdown Voltage	±20V
I _{D(sat)}	Drain Current	36A
T _{stg}	Storage Temperature	–65 to 150°C
Tj	Maximum Operating Junction Temperature	200°C

Semelab PIc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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D5050UK

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

Parameter		Test Conditions		Min.	Тур.	Max.	Unit
BV-00	Drain-Source	V _{GS} = 0	I _D = 100mA	125			V
BV _{DSS}	Breakdown Voltage	VGS - 0	ID = 100111X	123			
I _{DSS}	Zero Gate Voltage	\/ - 50\/	V _{GS} = 0			12	mA
	Drain Current	$V_{DS} = 50V$				12	IIIA
I _{GSS}	Gate Leakage Current	V _{GS} = 20V	$V_{DS} = 0$			12	μΑ
V _{GS(th)}	Gate Threshold Voltage*	I _D = 10mA	$V_{DS} = V_{GS}$	1		7	V
9 _{fs}	Forward Transconductance*	V _{DS} = 10V	I _D = 6A	9.6			S
G _{PS}	Common Source Power Gain	P _O = 300W	75 30	20			dB
η	Drain Efficiency	V _{DS} = 50V	$I_{DQ} = 1.2A$	50			%
VSWR	Load Mismatch Tolerance	f = 30MHz	135	20:1			_
C _{iss}	Input Capacitance	$V_{DS} = 50V V_{G}$	S = -5V $f = 1MHz$			720	pF
C _{oss}	Output Capacitance	$V_{DS} = 50 V V_{G}$	S = 0 $f = 1MHz$			300	pF
C _{rss}	Reverse Transfer Capacitance	$V_{DS} = 50V V_{G}$	S = 0 $f = 1MHz$			18	pF

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. 0.35°C / W
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^{*} Pulse Test: Pulse Duration = 300 μs , Duty Cycle ≤ 2%