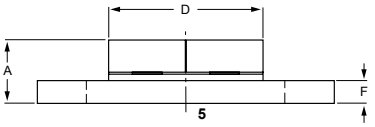
HG Semiconductors

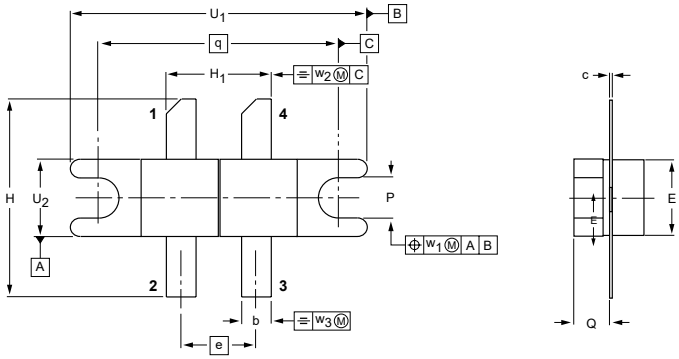
HG RF POWER TRANSISTOR
D2013UK
Silicon MOS N-CHANNEL RF POWER TRANSISTOR

DESCRIPTION

Silicon N-channel enhancement mode vertical D-MOS transistor is designed for 1G PUSH-PULL applications.



1.Drain
2.Gate
3.Gate
4.Drain
5.Source



FEATURES

- Output Power: 20W
- Power Gain: 10 dB Min@1G, 28V
- Efficiency: 40% Min

DIMENSIONS

UNIT	A	b	c	D	E	e	F	H	H_1	p	Q	q	U_1	U_2	w_1	w_2	w_3
mm	4.91 4.19	1.66 1.39	0.13 0.07	12.96 12.44	6.48 6.22	6.45	2.04 1.77	17.02 16.00	8.23 7.72	3.43 3.17	2.67 2.41	18.42	24.90 24.63	6.61 6.35	0.51	1.02	0.26
inches	0.193 0.165	0.065 0.055	0.005 0.003	0.510 0.490	0.255 0.245	0.254	0.080 0.070	0.670 0.630	0.324 0.304	0.135 0.125	0.105 0.095	0.725	0.980 0.970	0.260 0.250	0.02	0.04	0.01

MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	RATINGS	UNITS
Drain–Source Voltage	V_{DSS}	65	V
Gate–Source Voltage	V_{GS}	±20	V
Drain Current — Continuous	I_D	4	A
Total Device Dissipation	P_D	83	W
Junction Temperature	T_J	200	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX	UNITS
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=10mA,V_{GS}=0	65	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS}=0V,V_{DS}=28V	-	-	1	mAdc
Gate–Source Leakage Current	I_{GSS}	V_{GS}=20V,V_{DS}=0V	-	-	1	uAdc
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = 10 V, I_D = 10mA	1.0	-	7.0	V
Forward Transconductance	gfs	V_{DS} = 10 V, I_D = 0.8 A	0.72	-	-	S
Input Capacitance	Ciss	V_{DS} = 28 V,V_{GS} = 0 V, f = 1.0 MHz	-	-	52	pF
Output Capacitance	Coss		-	-	28	pF
Reverse Transfer Capacitance	Crss		-	-	3	pF
Common Source Power Gain	G_{PS}	V_{DD}=28V,P_{OUT}=20W, f=1GHz	10.0	-	-	dB
Drain Efficiency	η_D		40	-	-	%
Load Mismatch Tolerance	VSWR		20:1	-	-	-

Note : Above parameters , ratings , limits and conditions are subject to change.