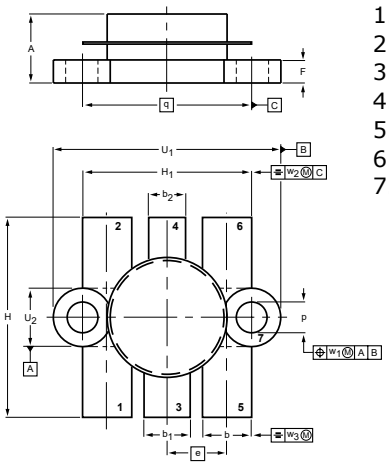
ROHS Compliance, The RF MOSFET Line, Enhancement Mode

HG1023CN

Silicon MOS N-CHANNEL RF POWER TRANSISTOR

DESCRIPTION

Silicon N-channel enhancement mode vertical D-MOS transistor designed for large signal amplifier applications in the HF & VHF frequency range.



1.Source
2.Source
3.Gate
4.Drain
5.Source
6.Source
7.FIN

FEATURES

- Output Power: 60 W
- Power Gain: 16 dB Min@175M, 28V
- Efficiency: 50% Min

DIMENSIONS

NOTE: ALL ELECTRODES ARE ISOLATED FROM FLANCE.

UNIT	A	b	b_1	b_2	c	D	D_1	e	F	H	H_1	p	Q	q	U_1	U_2	U_3	w_1	w_2	w_3
mm	7.39 6.32	5.59 5.33	5.34 5.08	4.07 3.81	0.18 0.07	12.86 12.59	12.83 12.57	6.48	2.54 2.28	22.10 21.08	18.55 18.28	3.31 2.97	4.58 3.98	18.42	25.23 23.95	6.48 6.07	12.76 12.06	0.51	1.02	0.26
inches	0.291 0.249	0.220 0.210	0.210 0.200	0.160 0.150	0.007 0.003	0.505 0.496	0.505 0.495	0.255	0.100 0.090	0.870 0.830	0.730 0.720	0.130 0.117	0.180 0.157	0.725	0.993 0.943	0.255 0.239	0.502 0.475	0.02	0.04	0.01

MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	RATINGS	UNITS
Drain–Source Voltage	V_{DSS}	70	V
Gate–Source Voltage	V_{GS}	±20	V
Drain Current — Continuous	I_D	15	A
Total Device Dissipation	P_D	120	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=100mA,V_{GS}=0	70	-	-	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 = 3 A	2.4	-	-	mhos
Input Capacitance	Ciss	V_{DS} = 28 V,V_{GS} = 0 V, f = 1.0 MHz	-	185	-	pF
Output Capacitance	Coss		-	95	-	pF
Reverse Transfer Capacitance	Crss		-	7.5	-	pF
Common Source Power Gain	G_P	V_{DD}=28V,P_{OUT}=60W, f=175MHz	16.0	-	-	dB
Load Mismatch Tolerance	VSWR		20:1			-
Drain Efficiency	η_D		50	-	-	%

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