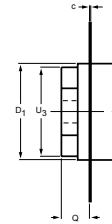
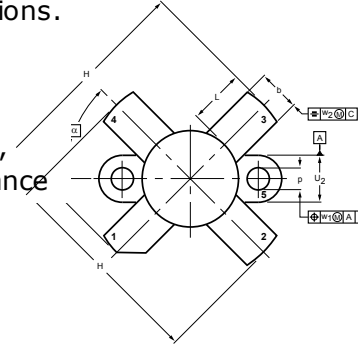
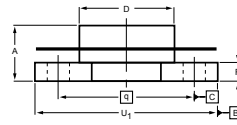


DESCRIPTION

The HG MRF448 is a 50V epitaxial silicon NPN planar transistor designed primarily for SSB communications. This device utilizes emitter ballasting to achieve extreme ruggedness and reliability. The HG 50V-series products offers a 60% improvement in collector-base breakdown voltage, enhancing reliability while maintaining RF performance



1. Collector
2. EMITTER
3. BASE
4. EMITTER
5. FIN

FEATURES

- 30 MHz, 50 Volts
- IMD -30 dB
- $P_o = 250$ W PEP Min. with 14.5 dB Gain
- Improved V_{CBO} : 175 Volts Min

NOTE: ALL ELECTRODES ARE ISOLATED FROM FLANGE.

DIMENSIONS

UNIT	A	b	c	D	D ₁	F	H	L	p	Q	q	U ₁	U ₂	U ₃	w ₁	w ₂	α
mm	7.27	5.82	0.16	12.86	12.83	2.67	28.45	7.93	3.30	4.45	18.42	24.90	6.48	12.32	0.51	1.02	45°
	6.17	5.56	0.10	12.59	12.57	2.41	25.52	6.32	3.05	3.91		24.63	6.22	12.06			
inches	0.286	0.229	0.006	0.506	0.505	0.105	1.120	0.312	0.130	0.175	0.725	0.98	0.255	0.485	0.02	0.04	
	0.243	0.219	0.004	0.496	0.495	0.095	1.005	0.249	0.120	0.154		0.97	0.245	0.475			

MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	RATINGS	UNITS
Collector-Base Voltage	V_{CBO}	175	V
Collector-Emitter Voltage	V_{CES}	175	V
Collector-Emitter Voltage	V_{CEO}	55	V
Collector Current	I_C	40	A
Emitter-Base Voltage	V_{EBO}	4	V
Collector Power Dissipation	P_{DISS}	330	W
Junction Temperature	T_J	-65 to 175	°C
Storage Temperature Range	T_{STG}	-65 to 175	°C

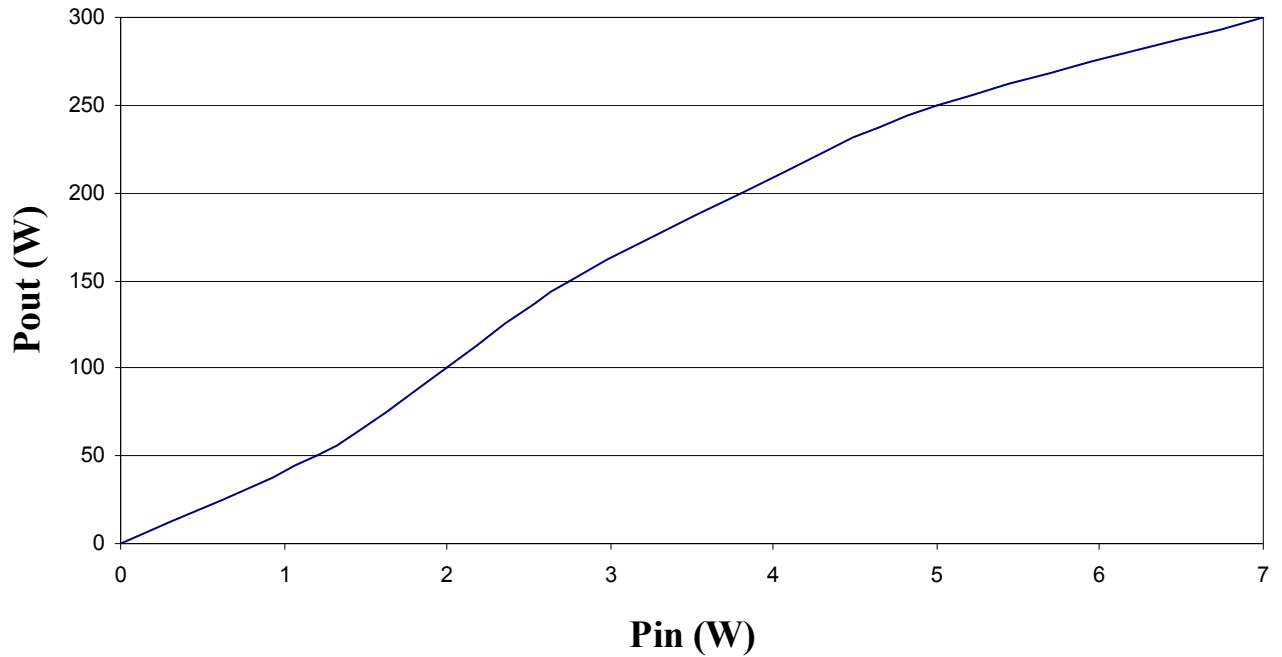
ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=200mA, I_B=0$	55	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C=200mA, V_{EB}=0$	175	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=20mA, I_C=0$	4	-	-	V
Collector Cutoff Current	I_{CEO}	$(V_{CE} = 30 V, I_E = 0)$			10	mA
DC Current Gain	h_{FE}	$V_{CE}=6V, I_C=10A$	15	-	80	
Collector Output Capacitance	C_{ob}	$V_{CB}=50V, I_E=0$ $f=1MHz$	-	-	360	pF
Power Gain	G_P	$V_{CC}=50V, P_{OUT}=250W,$	14.5	-	-	dB
Collector Efficiency	η_C	$f=30MHz$	37%	-	-	%

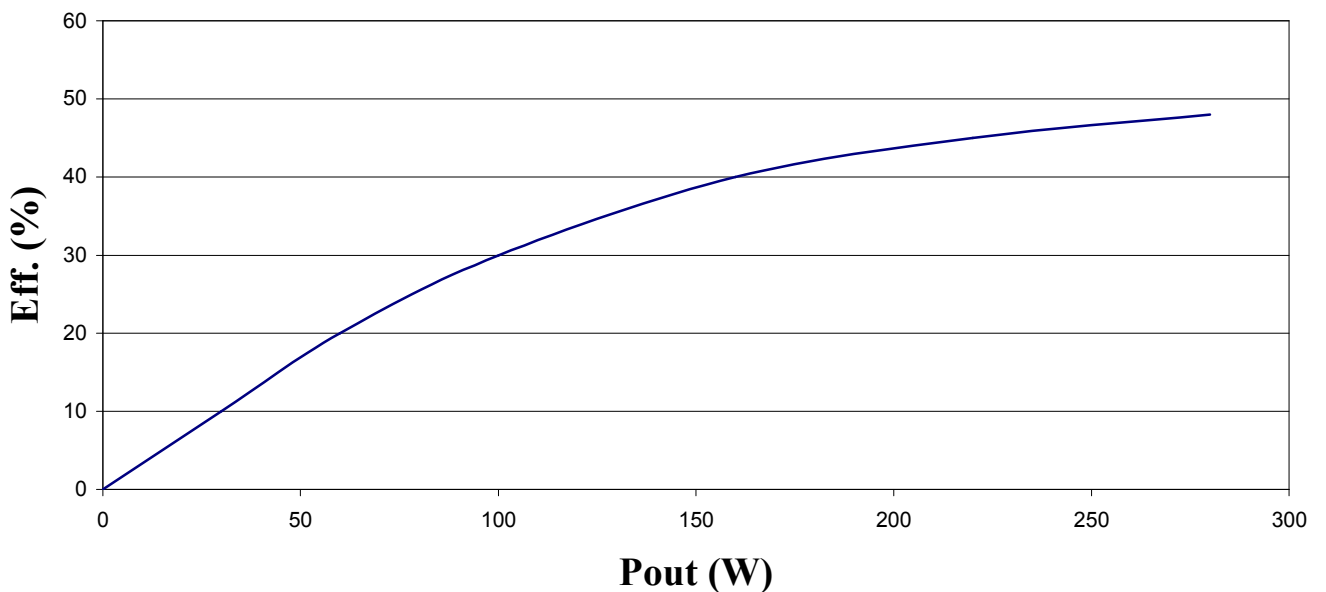
Note : Above parameters , ratings , limits and conditions are subject to change.

TYPICAL PERFORMANCE

Power Output vs Power Input



Collector Efficiency vs. Power Out



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