HG Semiconductors

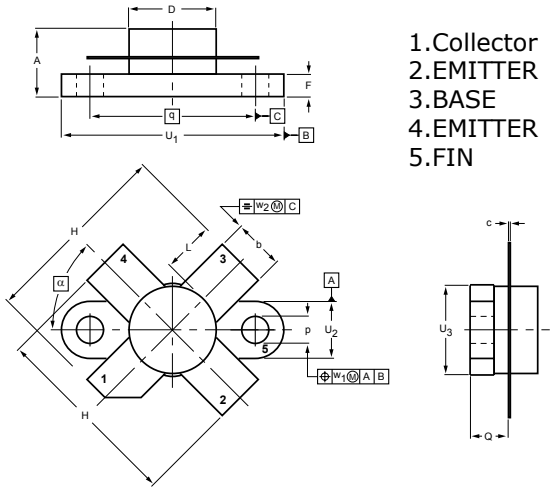
HG RF POWER TRANSISTOR

MRF455

ROHS Compliance,Silicon NPN POWER TRANSISTOR

DESCRIPTION

The MRF455 is a 12.5 V Class C epitaxial silicon NPN planar transistor designed primarily for land mobile transmitter applications. This device utilizes emitter ballasting and is extremely stable and capable of withstanding high VSWR under operating conditions.



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

NOTE: ALL ELECTRODES ARE ISOLATED FROM FLANCE.

FEATURES

- Specified 12.5V, 30MHz Characte
- P_O = 70W
- G_P = 13 dB min. at 70 W/30 MHz
- Omnigold™ Metalization System

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	7.47 6.37	5.82 5.56	0.18 0.10	9.73 9.47	9.63 9.42	2.72 2.31	20.71 19.93	5.61 5.16	3.33 3.04	4.63 4.11	18.42	25.15 24.38	6.61 6.09	9.78 9.39	0.51	1.02	45°
inches	0.294 0.251	0.229 0.219	0.007 0.004	0.383 0.373	0.397 0.371	0.107 0.091	0.815 0.785	0.221 0.203	0.131 0.120	0.182 0.162	0.725	0.99 0.96	0.26 0.24	0.385 0.370	0.02	0.04	

MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	RATINGS	UNITS
Collector-Base Voltage	V_{CBO}	36	V
Collector-Emitter Voltage	V_{CES}	36	V
Collector-Emitter Voltage	V_{CEO}	18	V
Collector Current	I_C	16	A
Emitter-Base Voltage	V_{EBO}	5	V
Collector Power Dissipation	P_{DISS}	183	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 Volta	$V_{(BR)CEO}$	I_C=50mA,I_B=0	18	-	-	V
Collector-Emitter Breakdown Volta	$V_{(BR)CES}$	I_C=100mA,V_{EB}=0	36	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10mA,I_C=0	5	-	-	V
Collector Cutoff Current	I_{CBO}	(V_{CB} = 15 V, I_E = 0)			5	mA
DC Current Gain	h_{FE}	V_{CE}=5V,I_C=5A	10	-	150	
Collector Output Capacitance	C_{ob}	V_{CB}=12.5V,I_E=0 f=1MHz	-	-	260	pF
Power Gain	G_P	V_{CC}=12.5V,P_{OUT}=70W, f=30MHz	13.0	-	-	dB
Collector Efficiency	η_C		-	55.0	-	%

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