46110

10 WATTS - 28 VOLTS 1000 MHz

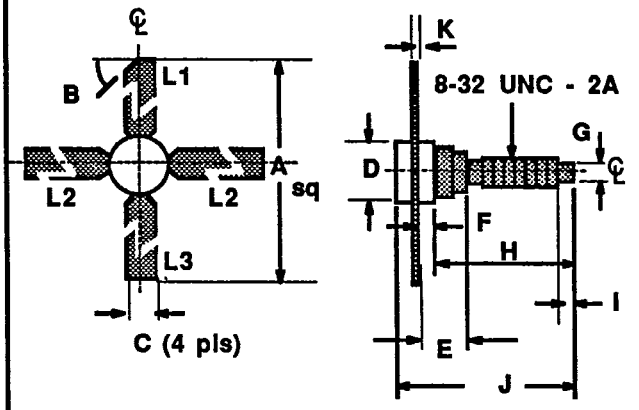
UHF COMMUNICATIONS

GENERAL DESCRIPTION

The 46110 is a stable common emitter transistor capable of providing 10 watts of CW RF output power across the 500-1000 MHz frequency band. This transistor is specifically designed for Class A, AB and C general purpose amplifier applications. It utilizes gold metallization and diffused ballasting to provide high reliability and supreme ruggedness.

ABSOLUTE MAXIMUM RATINGS

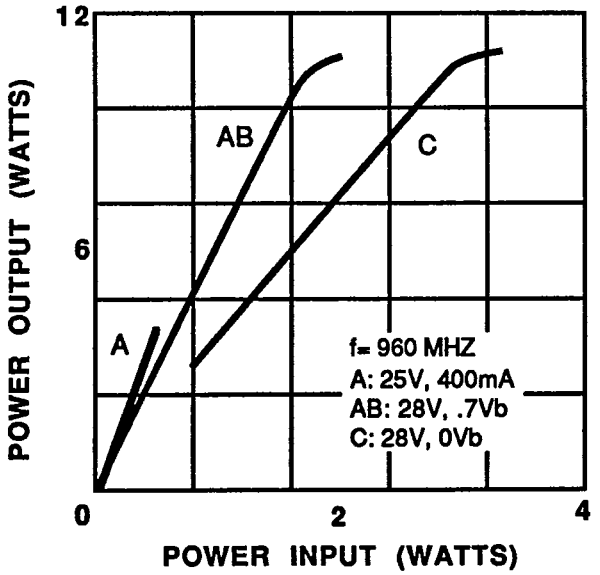
Maximum Power Dissipation @ 25 °C Case Temperature		30 W
Maximum Voltage and Current		
BVces	Collector to Emitter Voltage	50 V
BVebo	Emitter to Base Voltage	4.0 V
Ic	Collector Current	1.0 A
Maximum Temperatures		
Storage Temperature		-65 to +150°C
Operating JunctionTemperature		+200°C



L1 : C
L2 : E
L3 : B

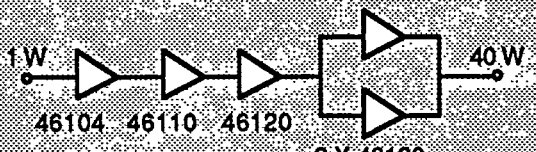
DIM	Millimeter	TOL	Inches	TOL
A	25.40	.25	1.000	.010
B	45°	5°	45°	5°
C	5.71	.13	.225	.005
D	6.99 DIA	.13	.275 DIA	.005
E	4.44	.13	.175	.005
F	1.52	.13	.060	.005
G	3.05	.13	.120	.005
H	12.95	.25	.510	.010
I	3.30	.13	.130	.005
J	16.64	REF	.655	REF
K	0.13	.02	.005	.001

POWER OUTPUT VS POWER INPUT (TYPICAL)



TYPICAL AMPLIFIER LINE UP

Vcc= 28 Volts
Frequency Range= 1000 MHz



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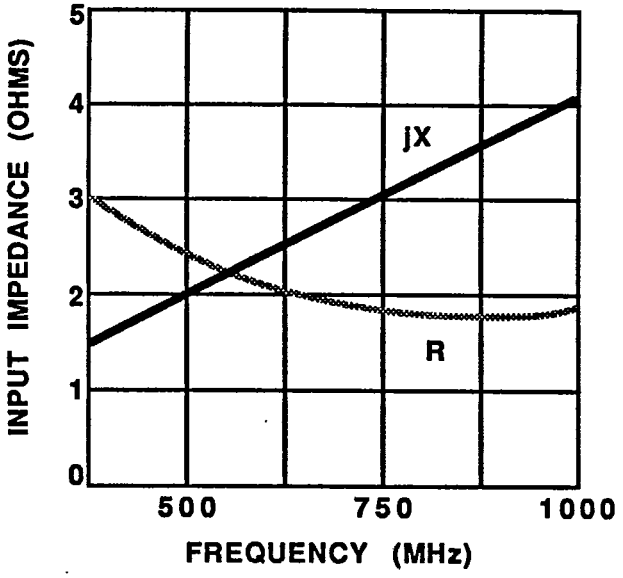
ELECTRICAL CHARACTERISTICS[1]

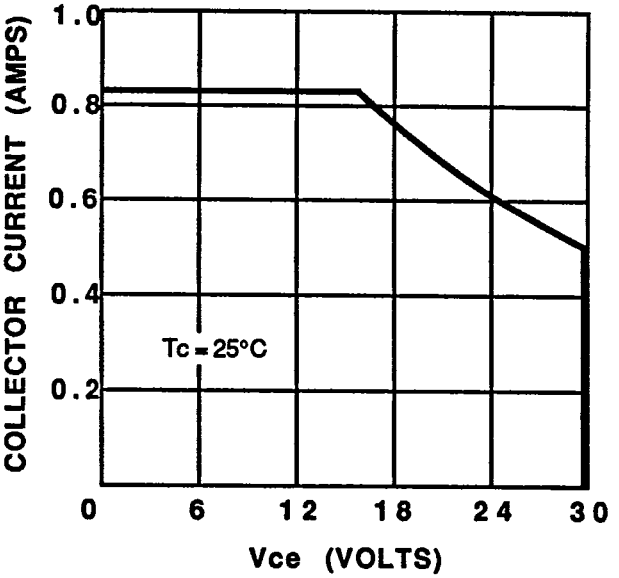
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Pout	Power Output	f= 960 MHz Vcc= 28V Class C	10			Watts
Pin	Power Input				3.0	Watts
Pg	Power Gain		5.2			dB
η_c	Collector Efficiency			60		%
VSWR	Load Mismatch Tolerance				3:1	
BVebo	Breakdown Voltage (Emitter to Base)	Ic= 0A, Ie= 5mA	4.0			Volts
BVces	Breakdown Voltage (Collector to Emitter)	Vbe= 0A, Ic= 10mA	50			Volts
BVceo	Breakdown Voltage (Collector to Emitter)	Ib= 0A, Ic= 50mA	30			Volts
Cob	Capacitance- Collector to Base	Vcb= 28V, f= 1MHz		10		pF
h_{FE}	DC-Current Gain	Vc= 5V, Ic= 300 mA	20			
θ_{jc}	Thermal Resistance	IR Scan; Pd= 10W			6.0	°C/W
Lc	Collector Inductance			1.2		nH

Note 1: Tc = +25°C unless otherwise specified

SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



DC SAFE OPERATING AREA (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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