

GENERAL DESCRIPTION

The 46100 is a common emitter transistor capable of providing 1 Watt of CW RF output power at 960 MHz. This transistor is specifically designed for upper UHF communications amplifier applications. It utilizes gold metallization and diffused ballasting to provide high reliability and supreme ruggedness. It is also available in a stud package version as part # 46101.

46100/46101
1 WATTS - 28 VOLTS
960 MHz

UHF COMMUNICATIONS

DIM	Millimeter	TOL	Inches	TOL
A	5.71	.13	.225	.005
B	7.11 DIA	.13	.280 DIA	.005
C	0.13	.02	.005	.001
D	1.40	.13	.055	.005
E	25.40	.25	1.000	.010
F	45°	5°	45°	5°
G	3.94	REF	.155	REF

L1 : C
 L2 : E
 L3 : B

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature **5.5 W**

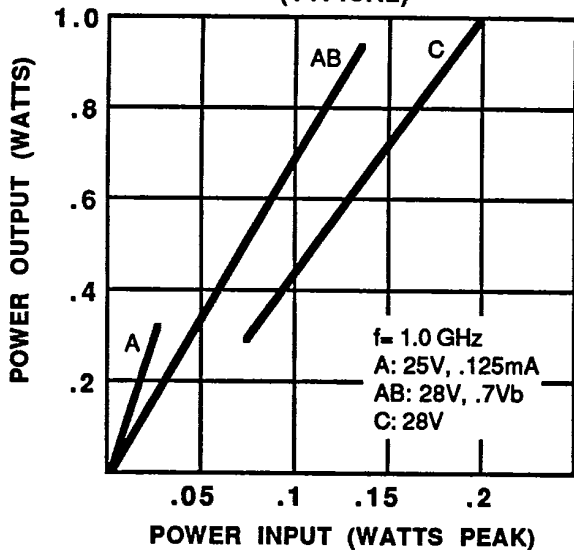
Maximum Voltage and Current

BVces Collector to Emitter Voltage **60 V**
 BVebo Emitter to Base Voltage **4.0 V**
 Ic Collector Current **0.4 A**

Maximum Temperatures

Storage Temperature **-65 to +150 °C**
 Operating Junction Temperature **+200 °C**

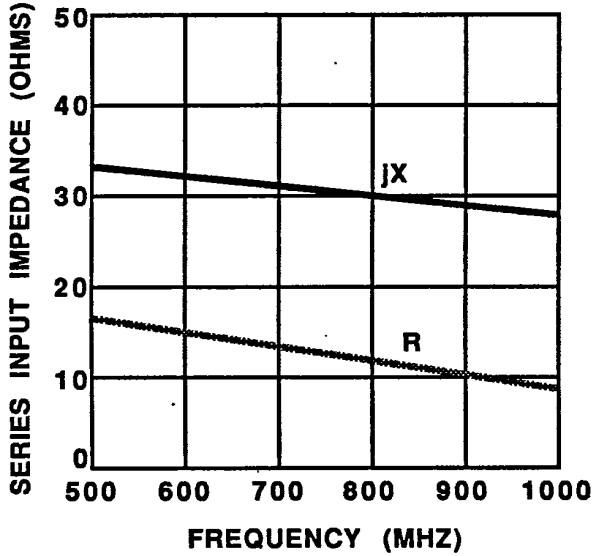
POWER OUTPUT VS POWER INPUT (TYPICAL)



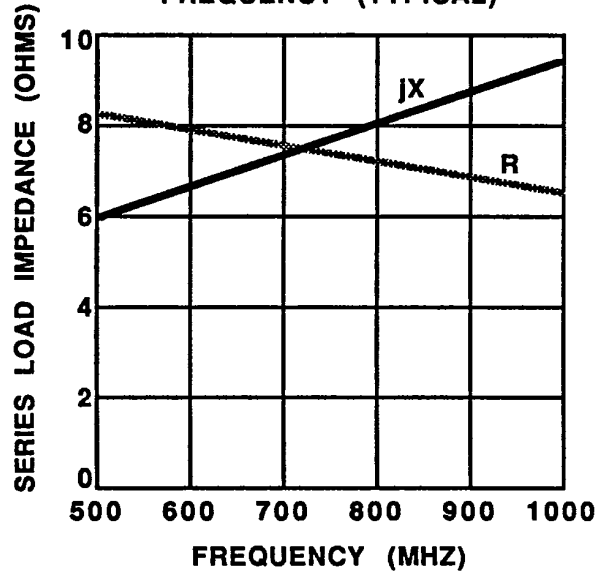
TYPICAL AMPLIFIER LINE UP
 Vcc = 28 Volts
 Frequency Range = 960 MHz

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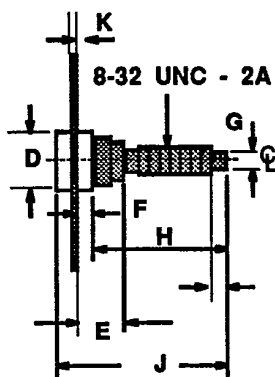
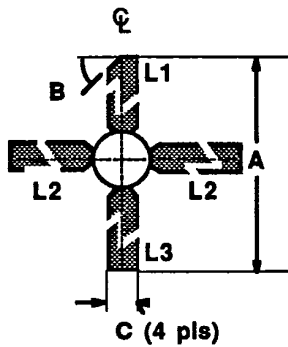
SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)

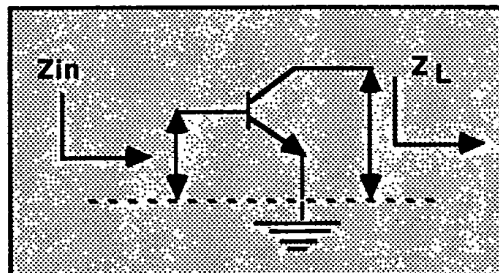


STUD PACKAGE FOR 46101



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



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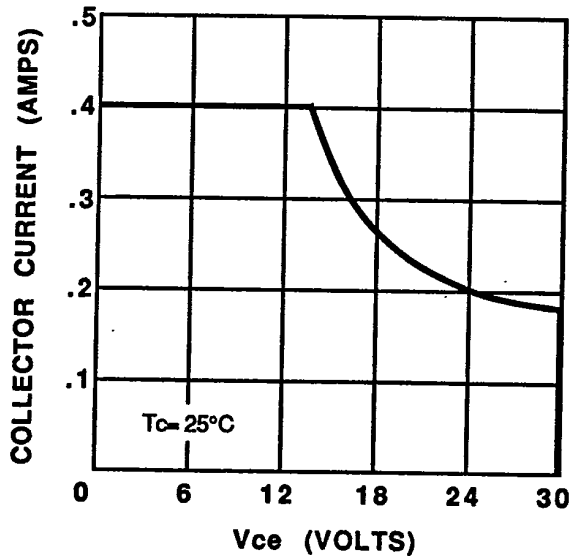
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ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f= 960 MHz V _{cc} = 28 V Class C	1.0			Watts
P _{in}	Power Input				0.2	Watts
P _g	Power Gain		7.0			dB
η _c	Collector Efficiency			50		%
VSWR	Load Mismatch Tolerance				∞:1	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 5mA	4.0			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 20 mA	60			Volts
BV _{ceo}	Breakdown Voltage (Collector to Emitter)	I _b = 0A, I _c = 50mA	30			Volts
C _{ob}	Capacitance-Collector to Base	V _{cb} = 28V, f= 1.0 MHz		3.2		pF
h _{FE}	DC-Current Gain	V _{cc} = 5V, I _c = 100 mA	10			
θ _{jc}	Thermal Resistance				32	°C/W

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

DC SAFE OPERATING AREAS (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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