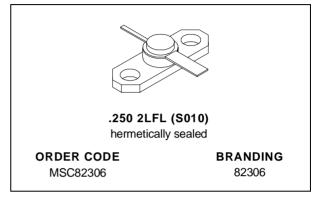


MSC82306

RF & MICROWAVE TRANSISTORS GENERAL PURPOSE AMPLIFIER APPLICATIONS

PRELIMINARY DATA

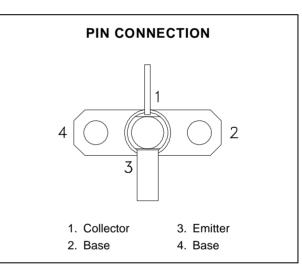
- REFRACTORY\GOLD METALLIZATION
- VSWR CAPABILITY 20:1 @ RATED CONDITIONS
- HERMETIC STRIPAC® PACKAGE
- Pout = 5.5 W MIN. WITH 9.6 dB GAIN



DESCRIPTION

The MSC82306 is a common base hermetically sealed silicon NPN microwave power transistor utilizing a rugged overaly die geometry. This device is capable of withstanding 20:1 load VSWR at any phase angle under rated conditions.

The MSC82306 was designed for Class C Amplifier/Oscillator applications in the 1.5 - 2.3 GHz frequency range.



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

		1	
Symbol	Parameter	Value	Unit
P _{DISS}	Power Dissipation* (T _C ≤ 50°C)	16.7	W
Ic	Device Current*	900	mA
Vcc	Collector-Supply Voltage*	26	V
TJ	Junction Temperature	200	°C
T _{STG}	Storage Temperature	- 65 to +200	°C

THERMAL DATA

			0000
R _{TH(j-c)}	Junction-Case Thermal Resistance*	9.0	°C/W

^{*}Applies only to rated RF amplifier operation

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MSC82306

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

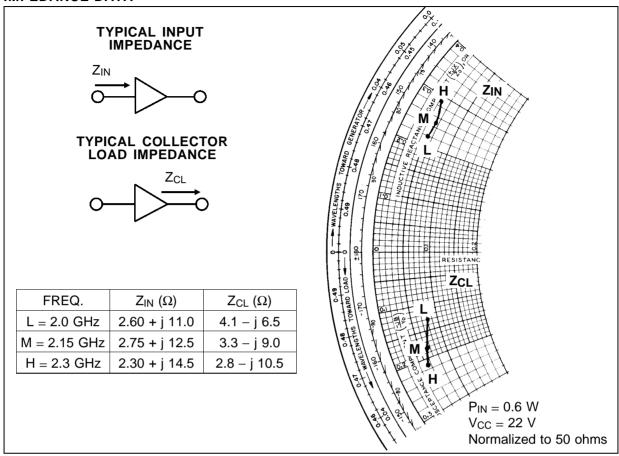
STATIC

Symbol	Test Conditions	Value			1111		
		Min.	Тур.	Max.	Unit		
ВУсво	$I_C = 1mA$	$I_E = 0mA$		44	_	_	V
BV _{EBO}	I _E = 1mA	I _C = 0mA		3.5	_	_	V
BVcer	IC = 5mA	$R_{BE} = 10\Omega$		44	_	_	V
Ісво	V _{CB} = 22V			_	_	0.5	mA
hFE	V _{CE} = 5V	I _C = 400mA		30	_	300	_

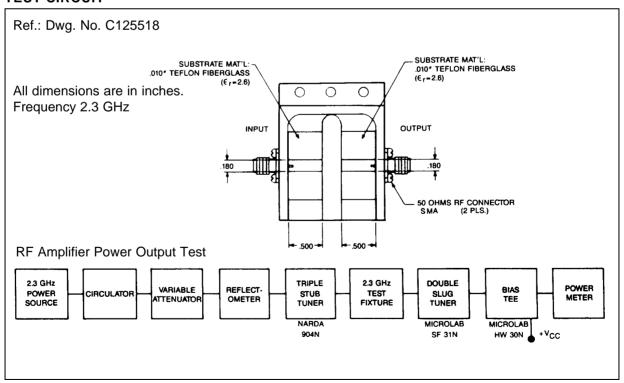
DYNAMIC

Cumbal	Test Conditions			Value			
Symbol	rest Conditions			Min.	Тур.	Max.	Unit
Pout	f = 2.3 GHz	$P_{IN} = 0.6 W$	$V_{CC} = 22 V$	5.5	6.3	_	W
ης	f = 2.3 GHz	$P_{IN} = 0.6 W$	$V_{CC} = 22 \text{ V}$	40	45	_	%
G _P	f = 2.3 GHz	P _{IN} = 0.6 W	V _{CC} = 22 V	9.6	10.2	_	dB
СОВ	f = 1 MHz	$V_{CB} = 22 \text{ V}$				7.0	pF

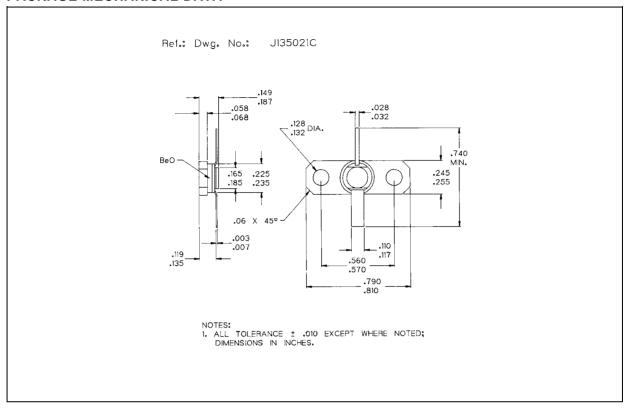
IMPEDANCE DATA



TEST CIRCUIT



PACKAGE MECHANICAL DATA



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