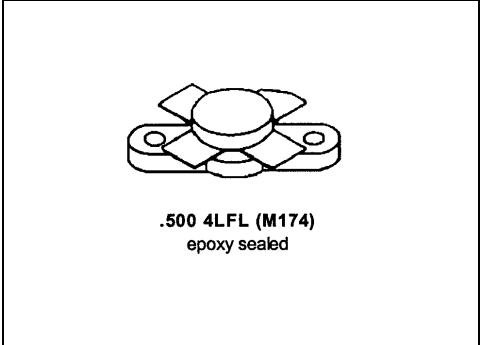


MS1281

RF & MICROWAVE TRANSISTORS FM BROADCAST APPLICATIONS

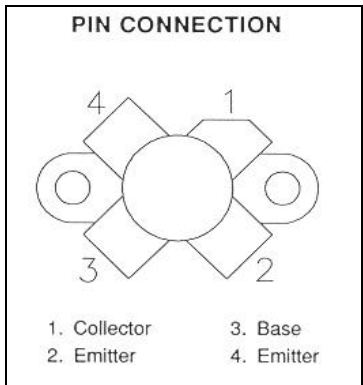
Features

- 108 MHz
- 28 VOLTS
- GOLD METALLIZATION
- $P_{OUT} = 150$ WATTS
- $G_P = 9.2$ dB MINIMUM
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

The MS1281 is a 28V silicon NPN planar transistor designed primarily for VHF FM broadcast transmitters. Diffused emitter ballast provide infinite VSWR capability under rated operating conditions.



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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	25	V
V _{CES}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Device Current	16	A
P _D	Power Dissipation	230	W
T _j	Junction Temperature	200	°C
T _{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

R _{TH(J-C)}	Thermal Resistance Junction-case	0.75	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 100 mA	I_E = 0 mA	60	---	---	V
BV_{CES}	I_C = 100 mA	R_{BE} = 10 Ω	55	---	---	V
BV_{CEO}	I_C = 100 mA	I_B = 0 mA	25	---	---	V
BV_{EBO}	I_E = 20 mA	I_C = 0 mA	4.0	---	---	V
h_{FE}	V_{CE} = 5 V	I_C = 1 A	20	---	150	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 108MHz	P_{IN} = 18W	V_{CE} = 28V	150	---	---	W
G_p	f = 108MHz	P_{IN} = 18W	V_{CE} = 28V	9.2	---	---	dB
η	f = 108MHz	P_{IN} = 18W	V_{CE} = 28V	70	---	---	%
C_{OB}	f = 1 MHz	V_{CB} = 28V		---	---	150	pF

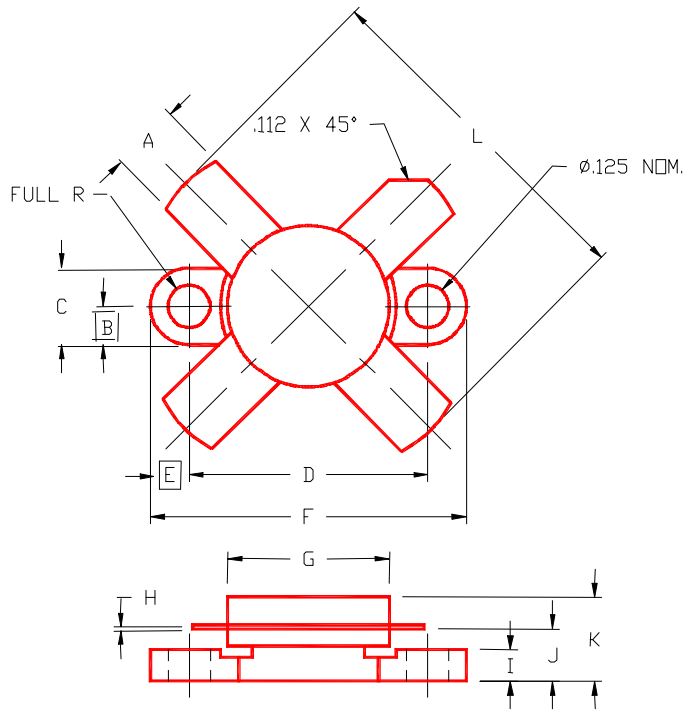
IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
88 MHz	1.0 - j0.2	3.6 + j2.4
100 MHz	0.7 + j0.0	3.9 + j3.0
108 MHz	1.0 - j0.5	4.4 + j1.2

P_{OUT} = 150 W
V_{CC} = 28 V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M174



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.220/5,59	.230/5,84	I	.090/2,29	.110/2,79
B	.125/3,18		J	.160/4,06	.175/4,45
C	.245/6,22	.255/6,48	K	.280/7,11	
D	.720/18,28	.730/18,54	L	1.050/26,67	
E	.125/3,18				
F	.970/24,64	.980/24,89			
G	.495/12,57	.505/12,83			
H	.003/0,08	.007/0,18			