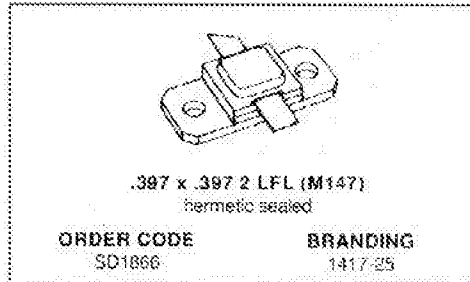


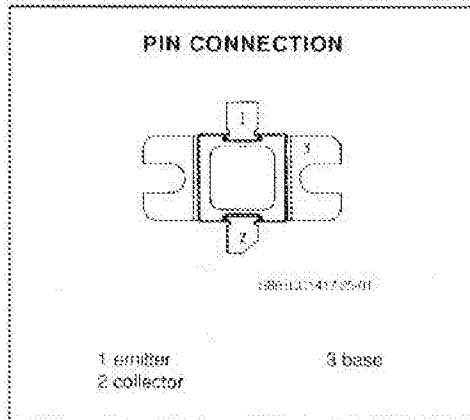
**RF & MICROWAVE TRANSISTORS
 MICROWAVE TELECOMMUNICATION APPLICATIONS**

- FREQUENCY 1.4-1.7GHz
- POWER OUT 25W
- POWER GAIN 8 OdB
- VOLTAGE 24.0V
- HERMETIC PACKAGE
- ALL GOLD METALLIZED SYSTEM
- OVERLAY DIE GEOMETRY
- HIGH RELIABILITY AND RUGGEDNESS
- LOW THERMAL RESISTANCE
- COMMON BASE
- BROADBAND PERFORMANCE



DESCRIPTION

The TCC1417-25 is an internally input and output matched NPN silicon transistor designed for microwave applications. The device utilizes polysilicon site ballasting with gold metallized die to achieve high reliability and ruggedness. The TCC1417-25 is a 24 Volt device designed to provide 25 Watts over the 1.4-1.7GHz band with a minimum gain of 7.5dB.



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

Symbol	Parameter	Value	Unit
V _{CE0}	Collector - Base Voltage	15.0	V
V _{CE0}	Collector - Emitter Voltage	40.0	V
V _{EE0}	Emitter - Base Voltage	3.5	V
I _c	Collector Current (max.)	6.1	A
P _{tot}	Total Device Dissipation at + 25°C	58	W
T _{stg}	Storage Temperature	- 65 to 200	°C
T _j	Junction Temperature	200	°C

THERMAL DATA

R _{th(j-c)}	Junction-case Thermal Resistance	3.0	°C/W
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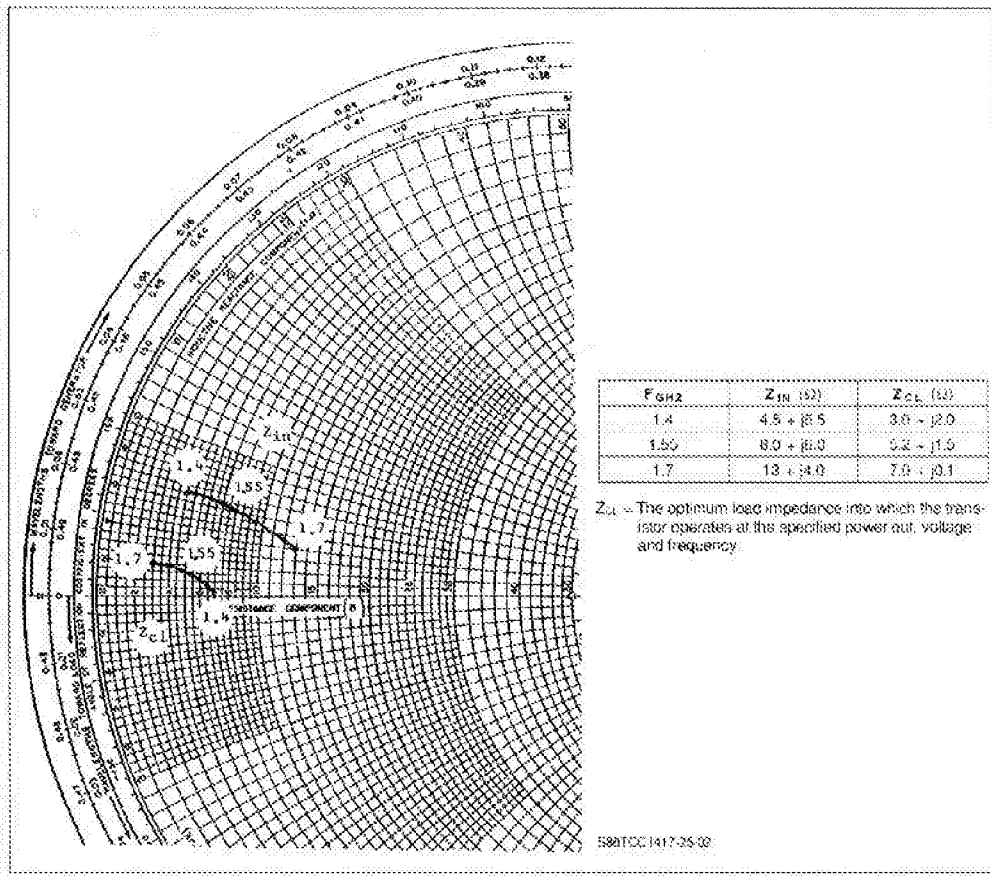
TCC1417-25**ELECTRICAL CHARACTERISTICS** ($T_{case} = 25^{\circ}C$)**STATIC**

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CE0}	$I_C = 10mA$	$I_B = 0$	15			V
BV_{CEO}	$I_C = 10mA$	$V_{SE} = 0$	40			V
BV_{EBO}	$I_E = 10mA$	$I_C =$	3.5			V
I_{CEO}	$V_{CE} = 24V$	$V_{SE} =$			0.5	mA
η_{FE}	$V_{CE} = 5V$	$I_C = 5A$	15		150	

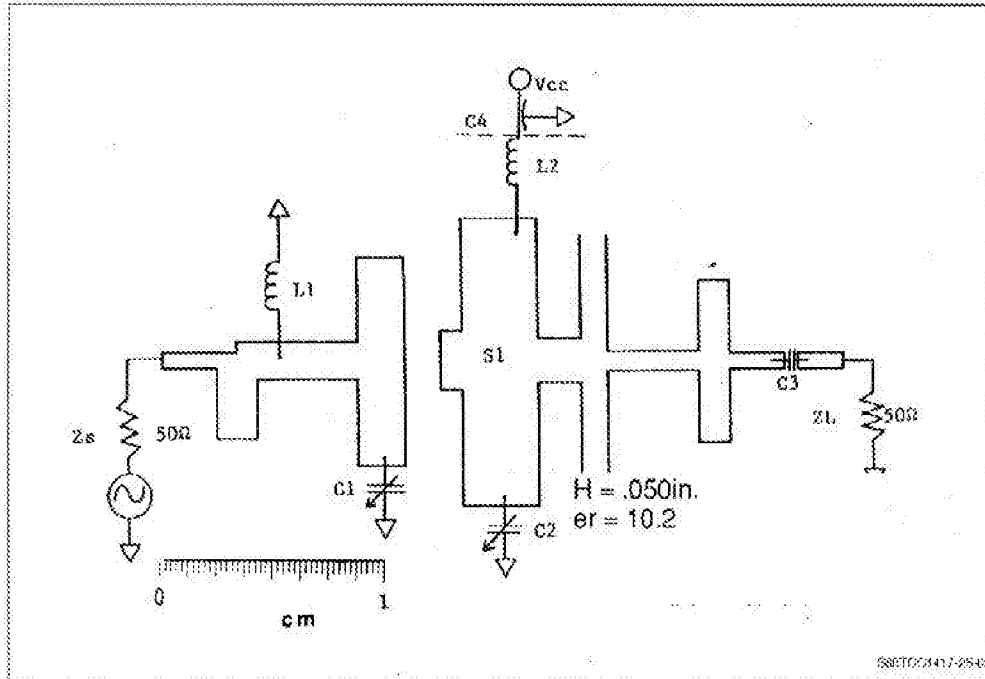
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_D	$f = 1.4 - 1.7GHz$	$V_{CE} = 24V$	$P_{IN} = 4.4W$	25			W
P_S	$f = 1.4 - 1.7GHz$	$V_{CE} = 24V$	$P_{IN} = 4.4W$	8			dB
η_c	$f = 1.4 - 1.7GHz$	$V_{CE} = 24V$	$P_{OUT} = 25W$	40			%

TYPICAL SERIES EQUIVALENT INPUT/OUTPUT IMPEDANCE WORKSHEET



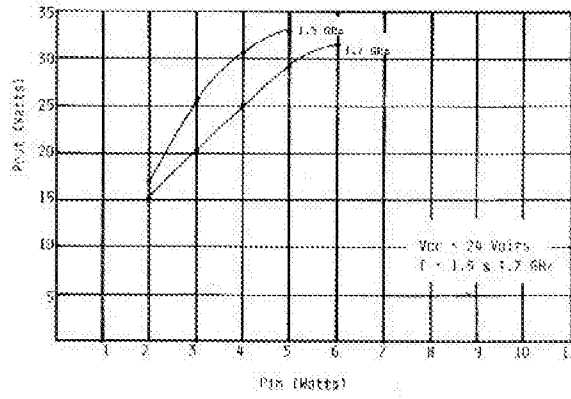
TCC1417-25



PARTS LIST

ITEM REF.	Description of ITEM
L1	4 Turnchoke * 28 Wire .080" Dia
L2	4 Turnchoke * 28 Wire .080" Dia
C1	4 - 2.5pF Jchanson Capacitor
C2	4 - 2.5pF Jchanson Capacitor
C3	100pF Chip Capacitor ATC
C4	15,000pF Emi Filter
S1	Epsitam 10 er = 10.2 T = .050" Ioz Cu
	SMA Launcher C/DI (2 pieces)
	.397 so Fixture Housing
	Heat Sink

TYPICAL DATA CURVES WORKSHEET



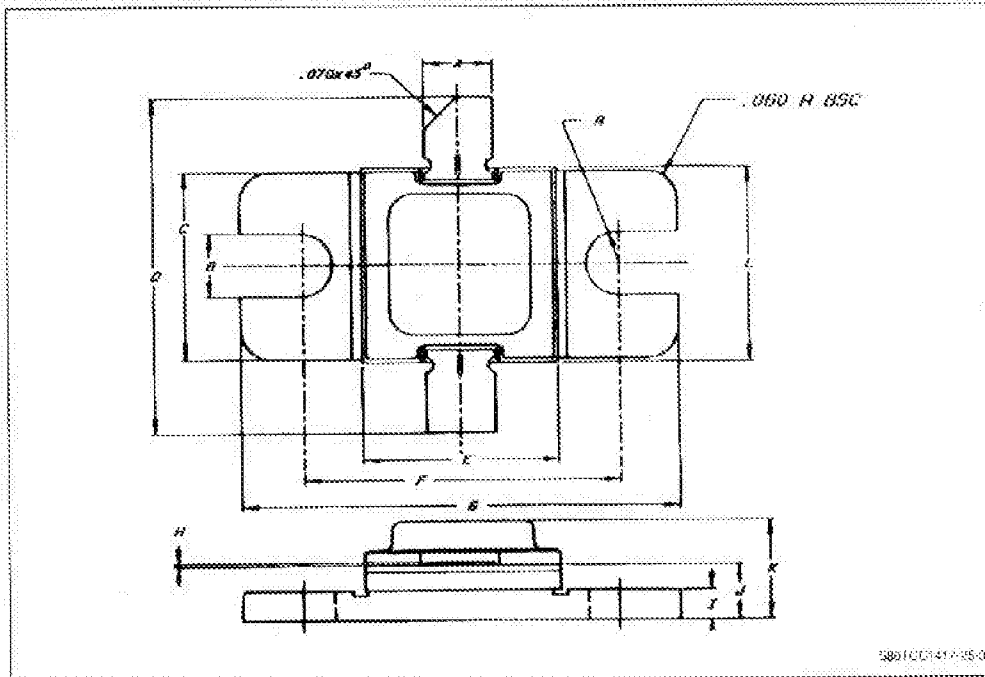
At V_{cc} = 24V
f = 1.5 and 1.7GHz

58TCC1417 25 G4

TCC1417-25

PACKAGE MECHANICAL DATA

.397 x .397 2LFL



	Minimum Inches/mm	Maximum Inches/mm
A	.135/3.43	.145/3.68
B	.125/3.18 BSC	
C	.380/9.65	.390/9.91
D	.685/22.48	
E	.392/9.96	.402/10.29
F	.645/16.38	.655/16.64

	Minimum Inches/mm	Maximum Inches/mm
G	.895/22.73	.905/22.99
H	.002/0.05	.006/0.15
I	.055/1.40	.065/1.65
J	.105/2.67	.125/3.18
K		.230/5.84
L	.392/9.96	.402/10.29