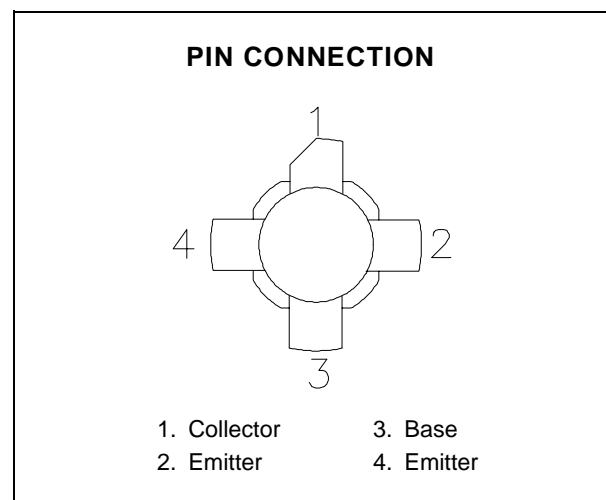
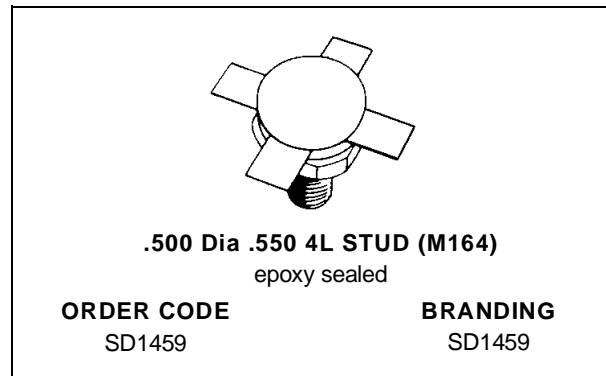


**RF & MICROWAVE TRANSISTORS
TV/LINEAR APPLICATIONS**

- 170 - 230 MHz
- 28 VOLTS
- COMMON EMITTER
- GOLD METALLIZATION
- HIGH SATURATED POWER CAPABILITY
- DIFFUSED EMITTER BALLAST RESISTORS
- P_{OUT} = 20 W MIN. WITH 7.5 dB GAIN


DESCRIPTION

The SD1459 is a gold metallized epitaxial silicon NPN planar transistor using diffused emitter ballast resistors for high linearity Class A operation in VHF and Band III television transmitters and transposers.

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	30	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Device Current	16	A
P _{DISS}	Power Dissipation	150	W
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	- 65 to +150	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance	1.2	°C/W
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ELECTRICAL SPECIFICATIONS ($T_{\text{case}} = 25^{\circ}\text{C}$)

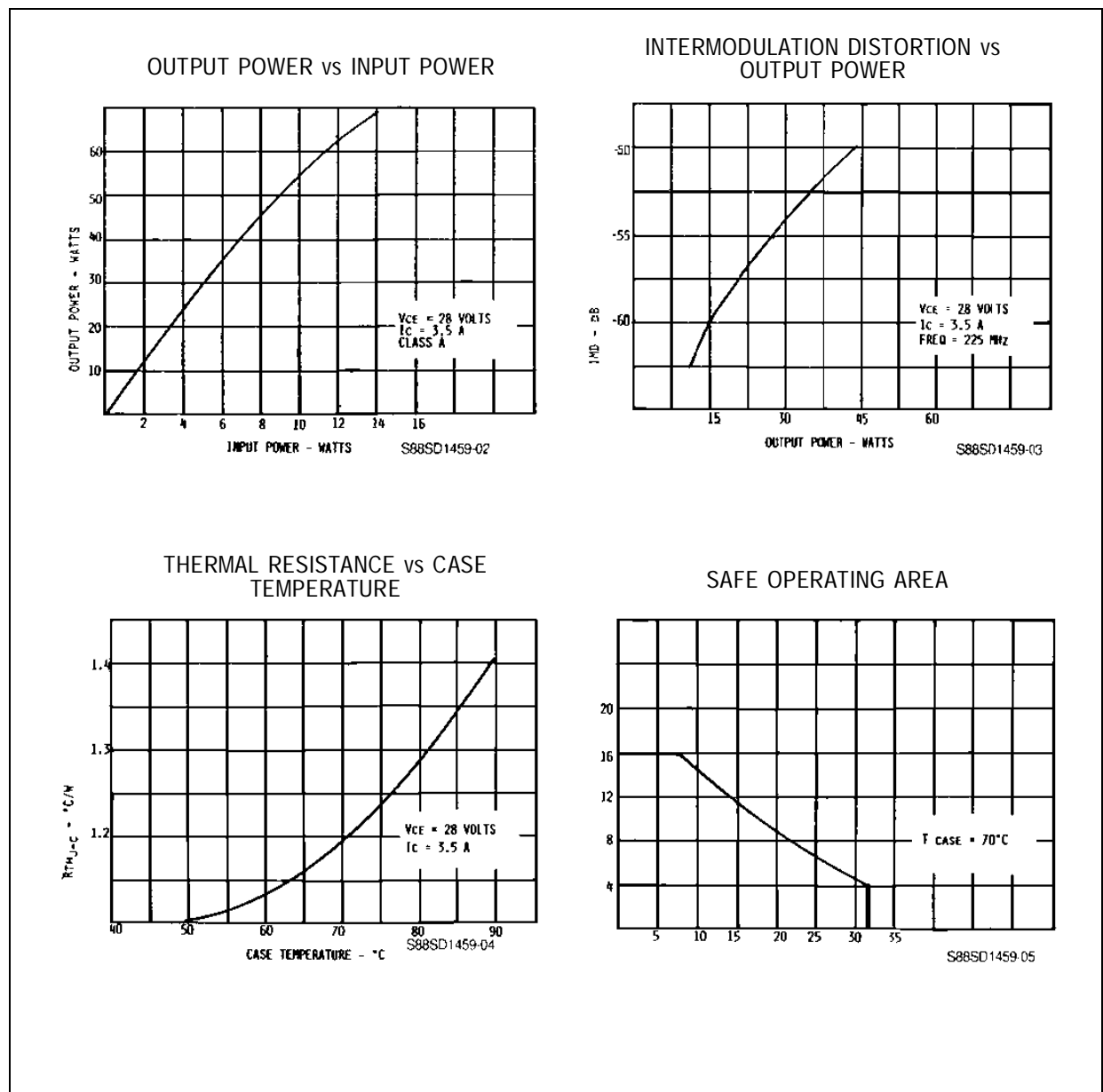
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_{\text{C}} = 100 \text{ mA}$	$I_{\text{E}} = 0 \text{ mA}$	60	—	—	V
BV_{CEO}	$I_{\text{C}} = 100 \text{ mA}$	$I_{\text{B}} = 0 \text{ mA}$	30	—	—	V
BV_{CER}	$I_{\text{C}} = 100 \text{ mA}$	$R_{\text{BE}} = 10\Omega$	60	—	—	V
BV_{EBO}	$I_{\text{E}} = 20 \text{ mA}$	$I_{\text{C}} = 0 \text{ mA}$	4.0	—	—	V
h_{FE}	$V_{\text{CE}} = 5 \text{ V}$	$I_{\text{C}} = 1 \text{ A}$	10	—	120	—

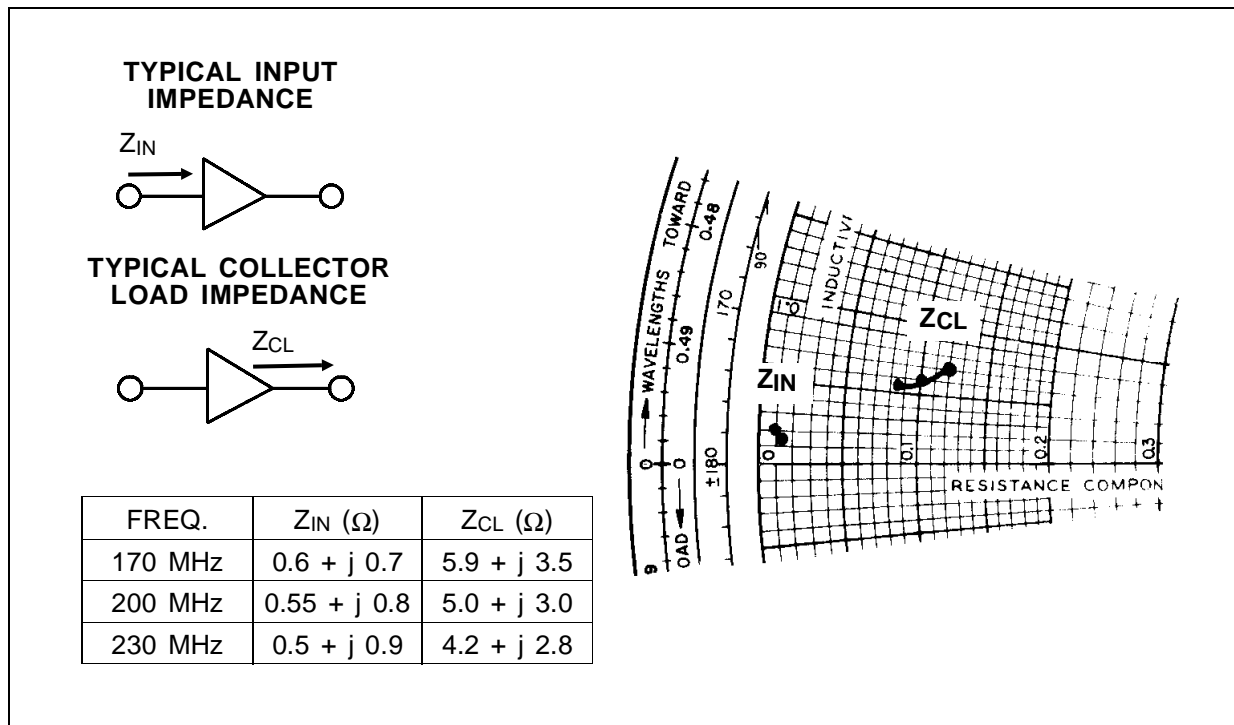
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 225 \text{ MHz}$	$V_{\text{CE}} = 28 \text{ V}$	$I_{\text{C}} = 3.5 \text{ A}$	20	—	—	W
G_{P}	$f = 225 \text{ MHz}$	$V_{\text{CE}} = 28 \text{ V}$	$I_{\text{C}} = 3.5 \text{ A}$	7.5	—	8.0	dB
C_{OB}	$f = 1 \text{ MHz}$	$V_{\text{CB}} = 30 \text{ V}$		—	—	150	pf
Load Mismatch	$f = 225 \text{ MHz}$	$V_{\text{CE}} = 28 \text{ V}$	$I_{\text{C}} = 3.5 \text{ A}$	$\infty:1$	—	—	VSWR

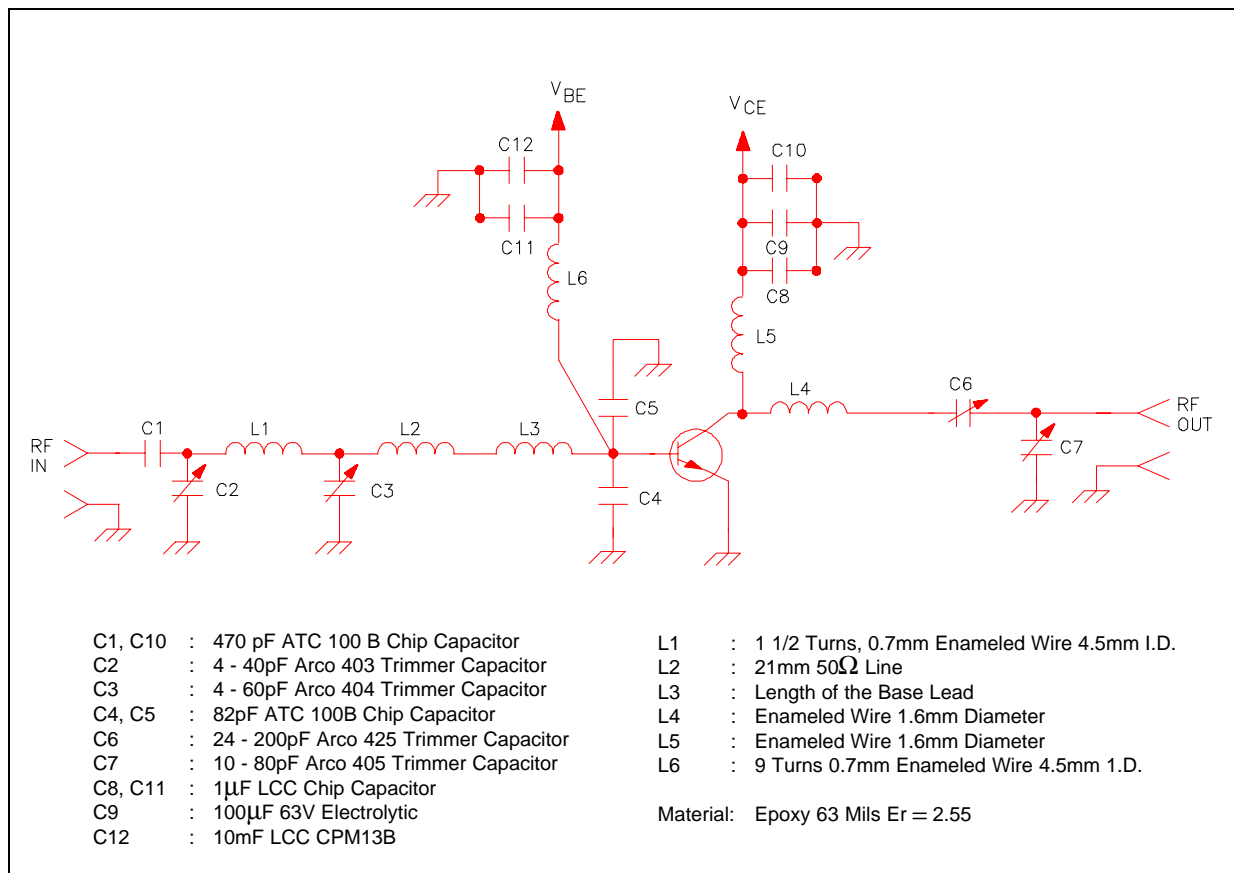
TYPICAL PERFORMANCE



IMPEDANCE DATA

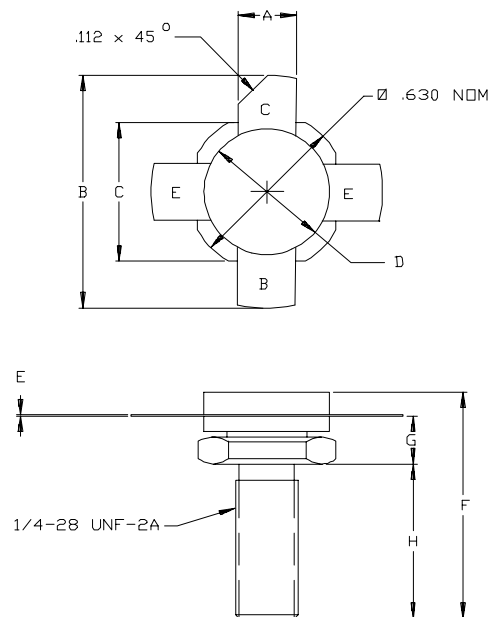


TEST CIRCUIT FOR 225 MHz



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0164



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.220/5,59	.230/5,84
B		1.050/26,67
C	.545/13,84	.555/14,10
D	.495/12,57	.505/12,83
E	.003/0,08	.007/0,18
F		.830/21,08
G	.185/4,70	.198/5,03
H	.497/12,62	.530/13,46

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