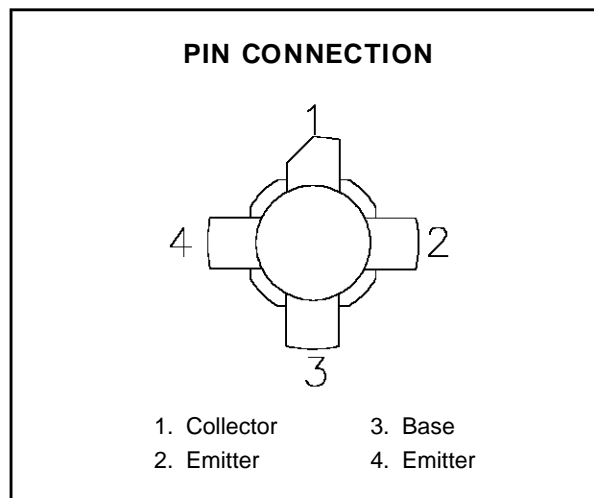
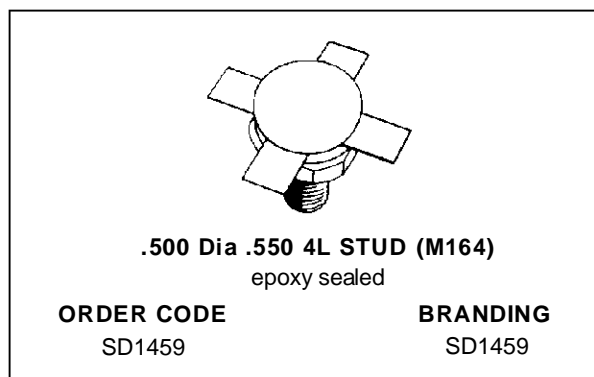


**RF & MICROWAVE TRANSISTORS  
TV/LINEAR APPLICATIONS**

- 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

www.DataSheet4U.com


**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** ( $T_{case} = 25^{\circ}C$ )

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	$^{\circ}C$
$T_{STG}$	Storage Temperature	- 65 to +150	$^{\circ}C$

**THERMAL DATA**

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	1.2	$^{\circ}C/W$
---------------	----------------------------------	-----	---------------

ELECTRICAL SPECIFICATIONS ( $T_{\text{case}} = 25^{\circ}\text{C}$ )

## STATIC

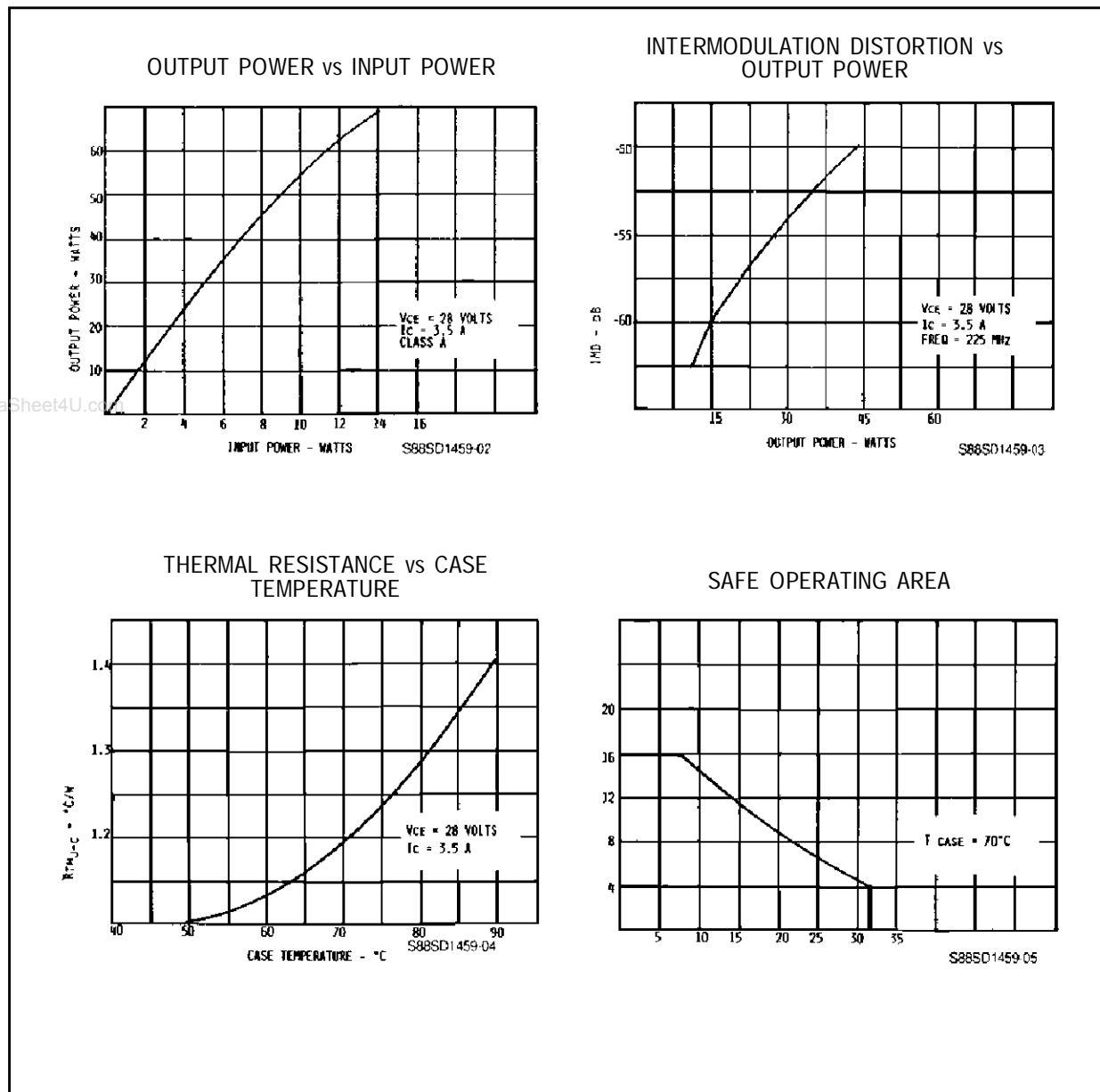
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{\text{CBO}}$	$I_{\text{C}} = 100 \text{ mA}$	$I_{\text{E}} = 0 \text{ mA}$	60	—	—	V
$BV_{\text{CEO}}$	$I_{\text{C}} = 100 \text{ mA}$	$I_{\text{B}} = 0 \text{ mA}$	30	—	—	V
$BV_{\text{CER}}$	$I_{\text{C}} = 100 \text{ mA}$	$R_{\text{BE}} =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

## DYNAMIC

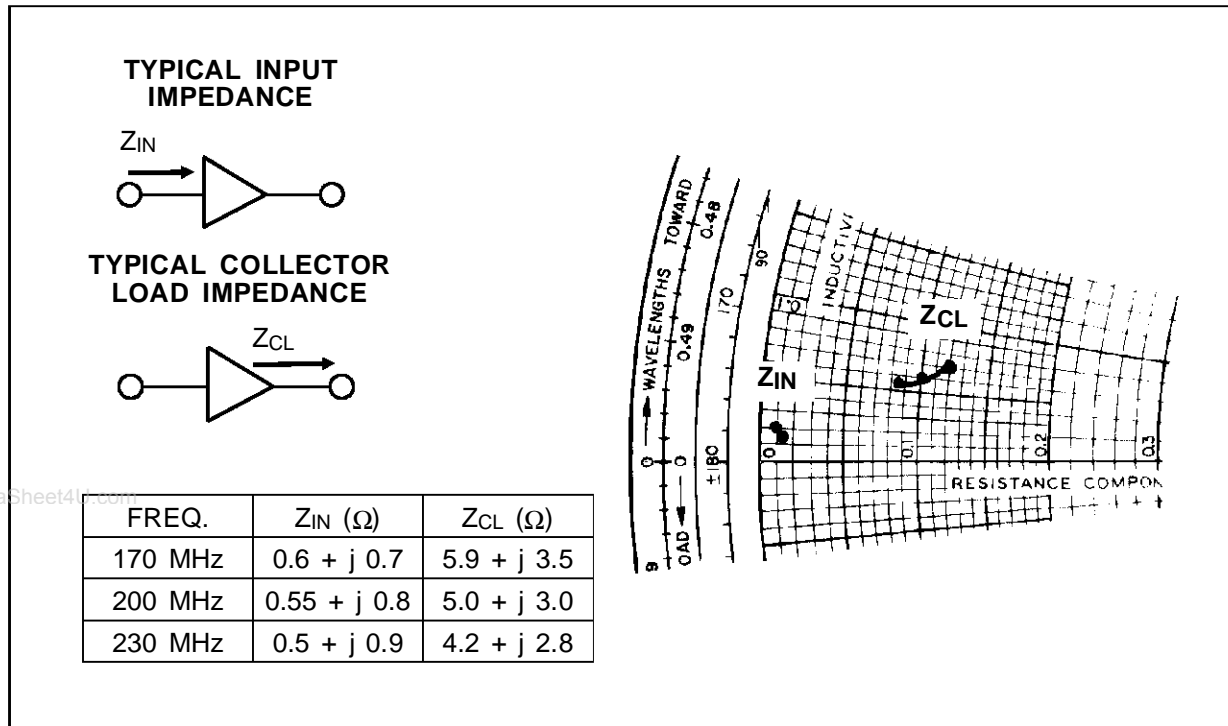
www.DataSheet4U.com

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

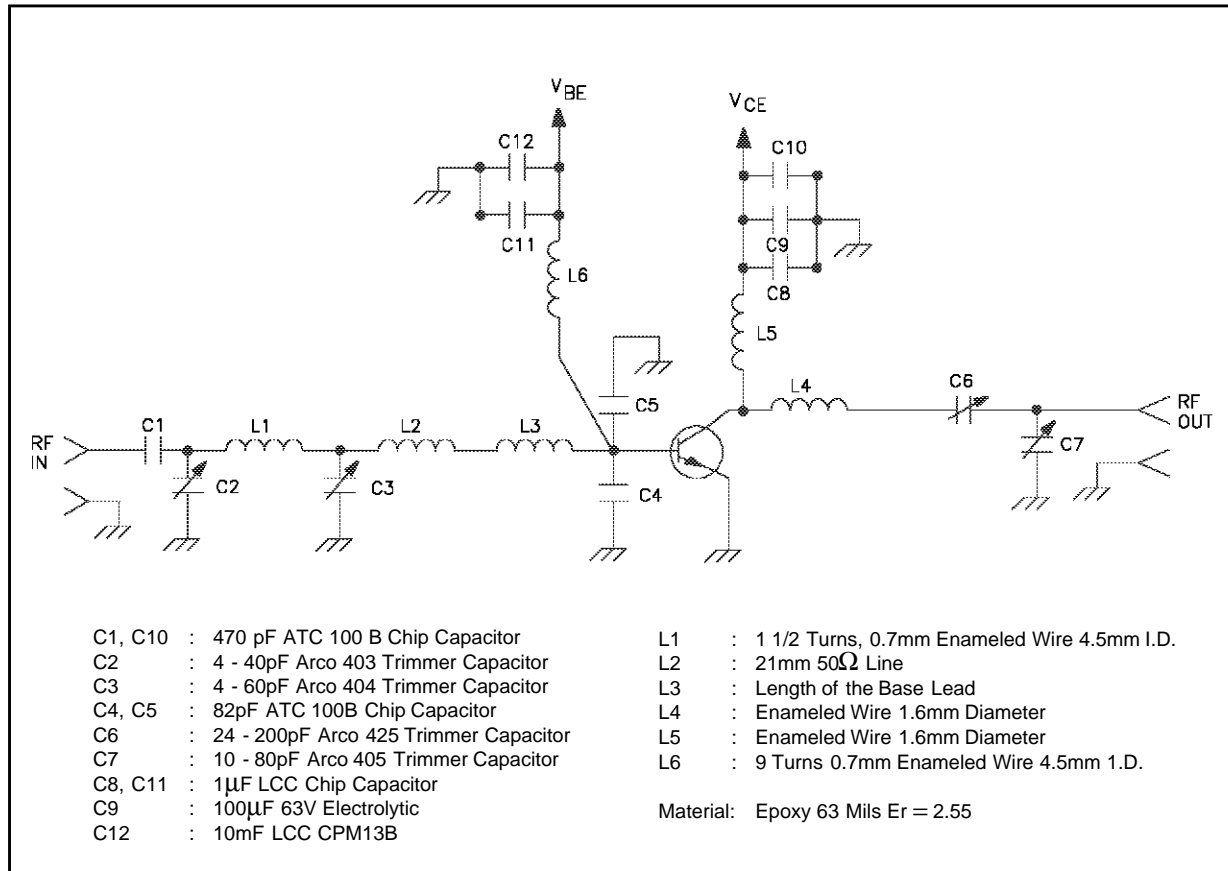
## TYPICAL PERFORMANCE



IMPEDANCE DATA

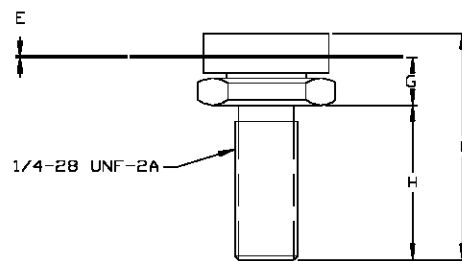
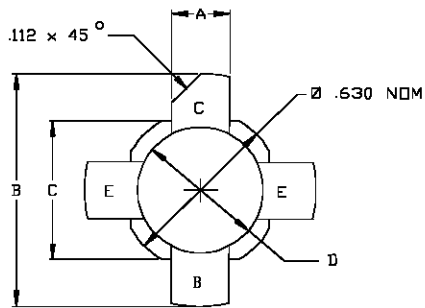


TEST CIRCUIT FOR 225 MHz



## 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

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES  
 Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -  
 Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A