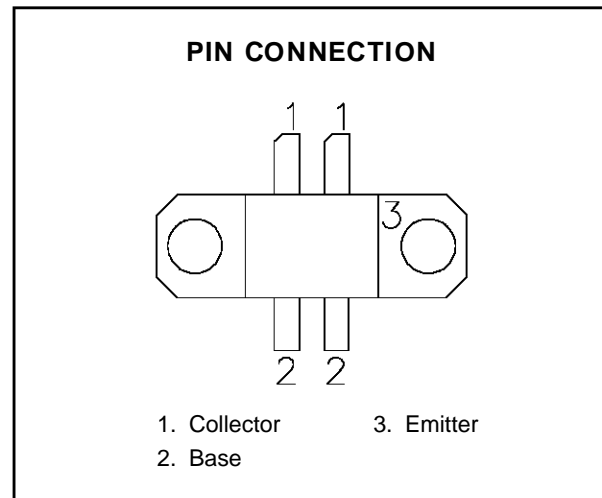
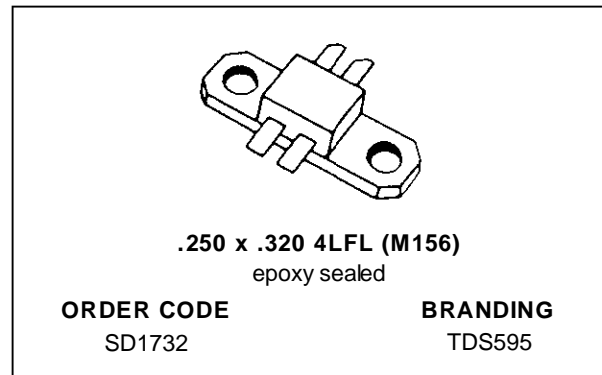


RF & MICROWAVE TRANSISTORS TV LINEAR APPLICATIONS

- 470 - 860 MHz
- 25 VOLTS
- CLASS A PUSH PULL
- DESIGNED FOR HIGH POWER LINEAR OPERATION
- HIGH SATURATED POWER CAPABILITY
- GOLD METALLIZATION
- DIFFUSED EMITTER BALLAST RESISTORS
- COMMON EMITTER CONFIGURATION
- INTERNAL INPUT MATCHING
- $P_{OUT} = 14.0 \text{ W MIN. WITH } 8.5 \text{ dB GAIN}$



DESCRIPTION

The SD1732 is a gold metallized epitaxial silicon NPN planar transistor using diffused emitter ballast resistors for high linearity Class A operation in UHF and Band IV, V television transmitters and transposers.

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	2 x 2.6	A
P_{DISS}	Power Dissipation	65	W
T_J	Junction Temperature	+200	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 65 to +150	$^{\circ}\text{C}$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	2.5	$^{\circ}\text{C/W}$
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SD1732 (TDS595)

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

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 20mA$	$I_E = 0mA$	45	—	—	V
BV_{CEO}	$I_C = 40mA$	$I_B = 0mA$	25	—	—	V
BV_{EBO}	$I_E = 5mA$	$I_C = 0mA$	3.0	—	—	V
h_{FE}	$V_{CE} = 20V$	$I_C = 0.5A$	10	—	—	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 845 MHz$	$V_{CE} = 25 V$	$I_{CQ} = 2 \times 850 mA$	14	—	—	W
G_P	$P_{OUT} = 14 W$	$V_{CE} = 25 V$	$I_{CQ} = 2 \times 850 mA$	8.5	—	—	dB
IMD_3^*	$P_{OUT} = 14 W$	$V_{CE} = 25 V$	$I_{CQ} = 2 \times 850 mA$	—	-47	—	dBc
CMD^{**}	$P_{OUT} = 14 W$	$V_{CE} = 25 V$	$I_{CQ} = 2 \times 850 mA$	—	20	—	%
C_{OB}	$f = 1 MHz$	$V_{CB} = 25 V$		—	—	20	pF

Note: *IMD 3 Tone Testing

Vision Carrier -8 dB ref

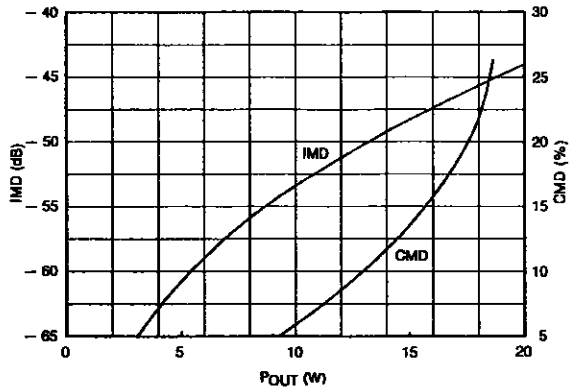
Sound Carrier -7 dB ref

Sideband Carrier -16 dB ref

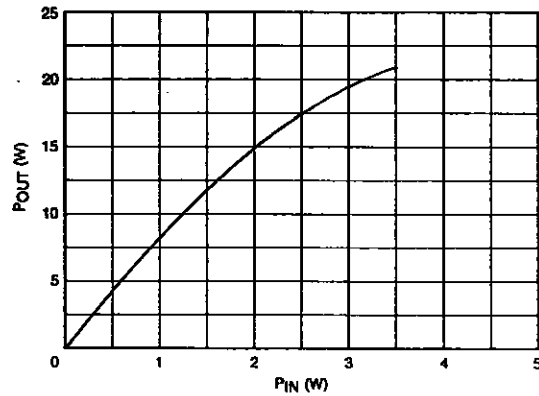
** CMD: Cross Modulation Distortion of the Voltage Variation (%) of Sound Carrier When Vision Carrier is Switched from 0 to -20 dB

TYPICAL PERFORMANCE

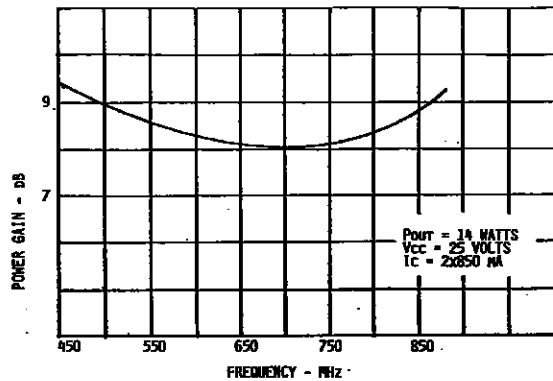
INTERMODULATION DISTORTION & CROSS MODULATION DISTORTION vs POWER OUTPUT



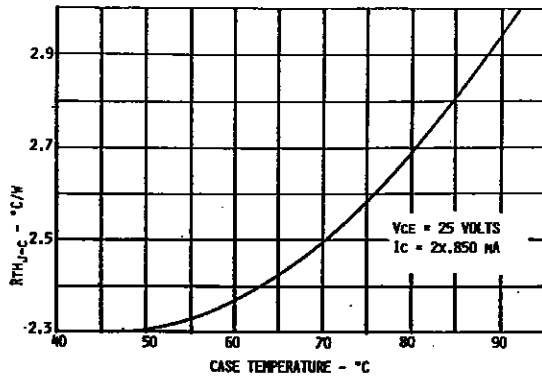
POWER OUTPUT vs POWER INPUT



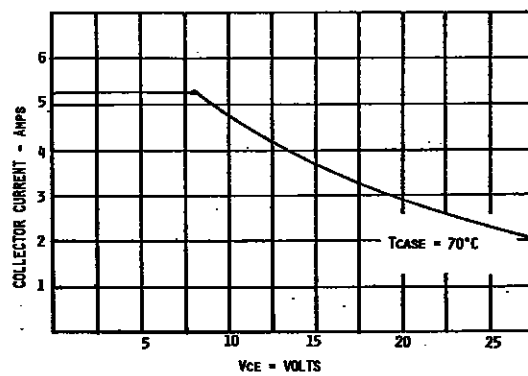
BROADBAND POWER GAIN vs FREQUENCY



THERMAL RESISTANCE vs CASE TEMPERATURE

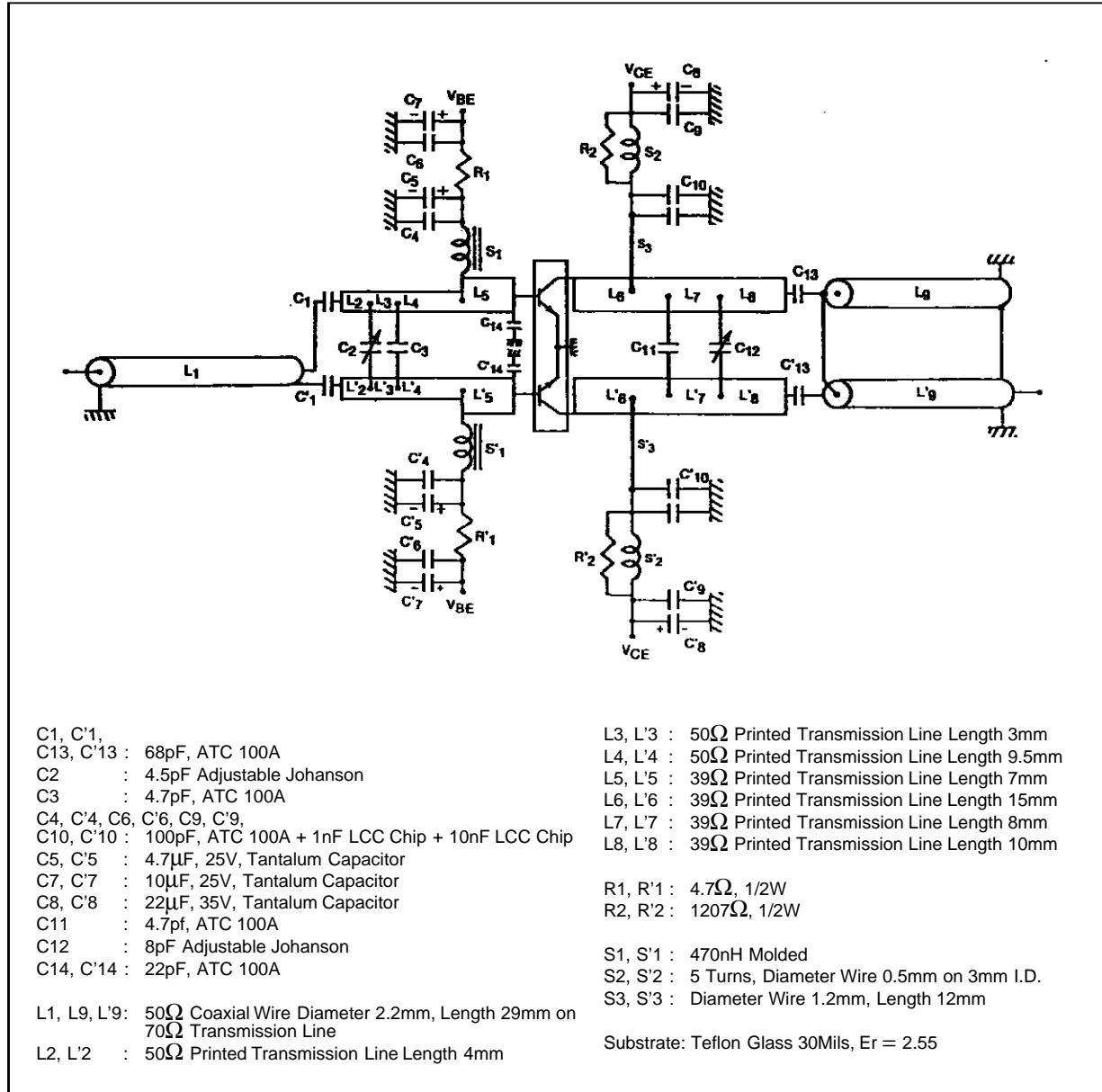


SAFE OPERATING AREA

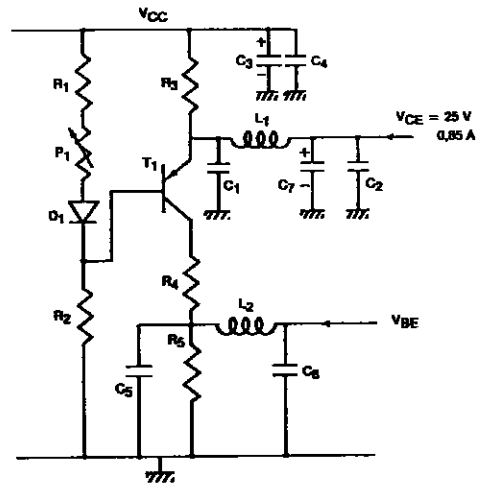


SD1732 (TDS595)

TEST CIRCUIT

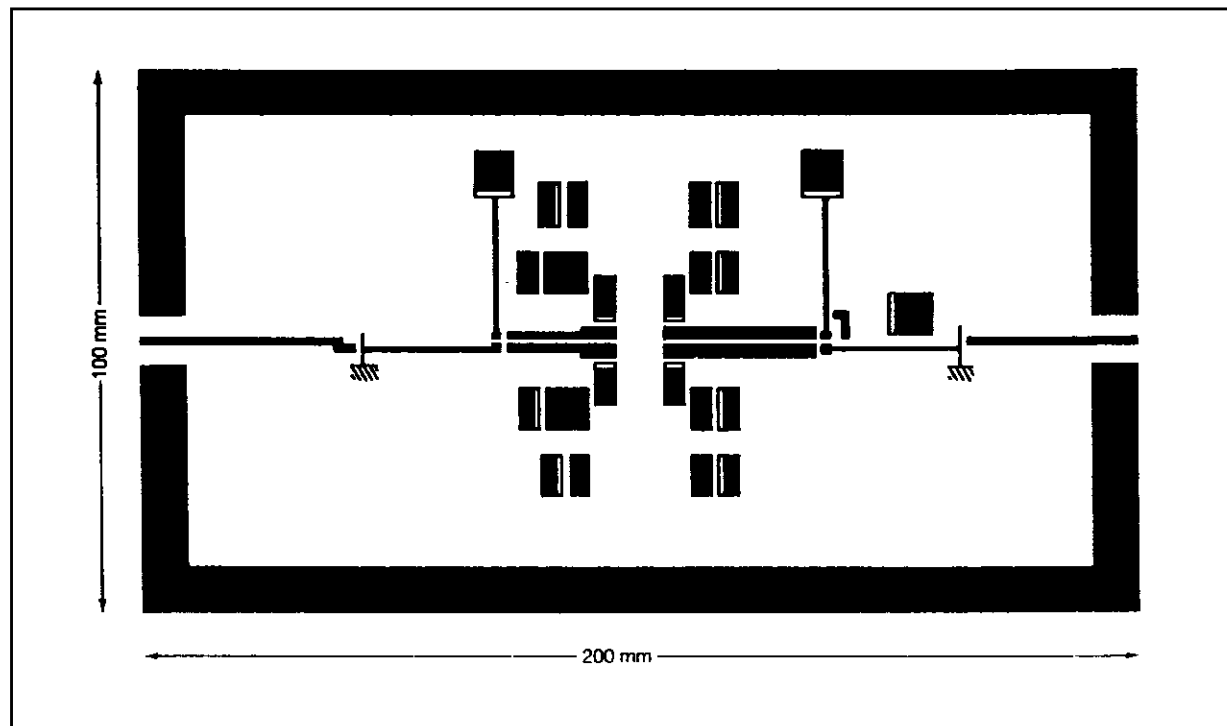


SUPPLY CIRCUIT - CLASS A ADJUSTABLE (per side)



C1, C2, C4,	P1	: 1k Ω
C5, C6	R1	: 56 Ω , 1/2W
C3	R2	: 5600 Ω , 1/2W
C7	R3	: 2.2 Ω , 3W
D1	R4, R5	: 56 Ω , 1W
L1, L2	T1	: BDX 54 B

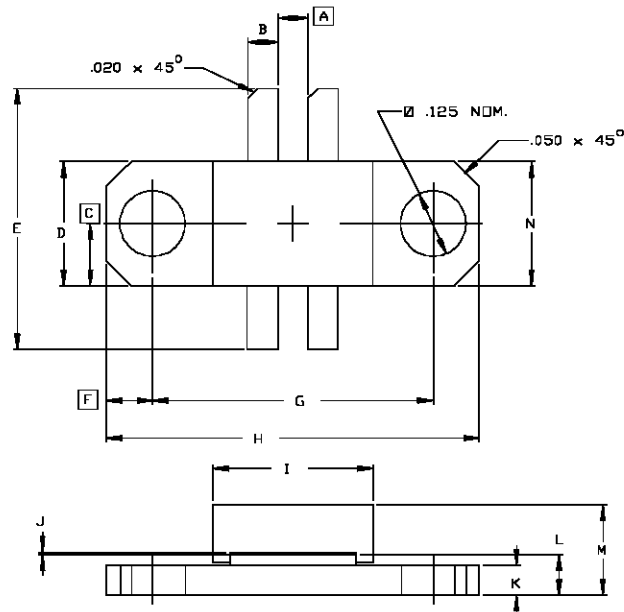
PHOTOMASTER OF TEST CIRCUIT



SD1732 (TDS595)

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0156



SGS-THOMSON MICROELECTRONICS		CONT'D			
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.060/1,52		K	.055/1,40	.065/1,65
B	.055/1,40	.065/1,65	L	.075/1,91	.095/2,41
C	.124/3,15		M	.190/4,83	
D	.243/6,17	.253/6,43	N	.245/6,22	.257/6,53
E	.635/16,13	.665/16,89			
F	.092/2,34				
G	.555/14,10	.565/14,35			
H	.739/18,77	.749/19,02			
I	.315/8,00	.327/8,31			
J	.002/0,05	.006/0,15			

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