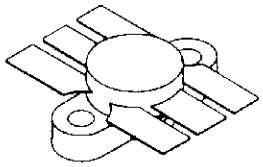
SGS-THOMSON MICROELECTRONICS

SD1458

RF & MICROWAVE TRANSISTORS TV\LINEAR APPLICATIONS

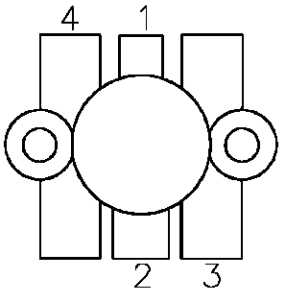
- 170 - 230 MHz
- 28 VOLTS
- IMD –55 dB
- COMMON EMITTER
- GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- HIGH SATURATED POWER CAPABILITY
- DESIGNED FOR HIGH POWER LINEAR OPERATION
- P_{OUT} = 14 W MIN. WITH 14.0 dB GAIN



.500 6LFL (M111)
epoxy sealed

ORDER CODE	BRANDING
SD1458	SD1458

PIN CONNECTION



1. Collector
2. Base
3. Emitter
4. Emitter

DESCRIPTION

The SD1458 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	35	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	10	A
P_{DISS}	Power Dissipation	140	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	1.5	°C/W

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CER}	I_C = 50mA	R_{BE} = 10Ω	60	—	—	V
BV_{CEO}	I_C = 50mA	I_B = 0mA	35	—	—	V
BV_{EBO}	I_E = 10mA	I_C = 0mA	4.0	—	—	V
I_{CES}	V_{CE} = 50V	I_E = 0mA	—	—	5	mA
h_{FE}	V_{CE} = 5V	I_C = 1A	10	—	100	—

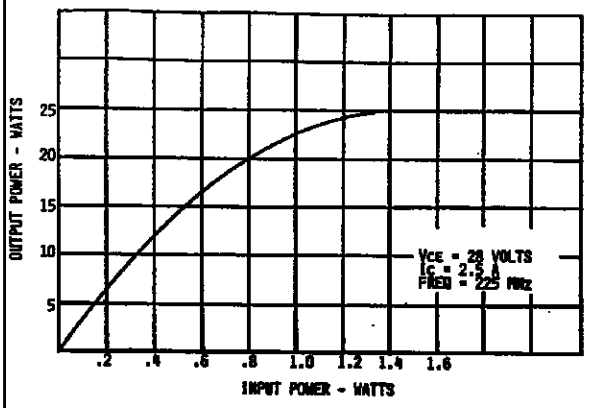
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 225 MHz	V_{CE} = 28 V	I_C = 2.5 A	14	—	—	W
G_P	f = 225 MHz	V_{CE} = 28 V	I_C = 2.5 A	14	—	—	dB
IMD_3	f = 225 MHz	V_{CE} = 28 V	I_C = 2.5 A	—	—	–55	dBc
C_{OB}	f = 1 MHz	V_{CB} = 28 V		—	—	80	pF

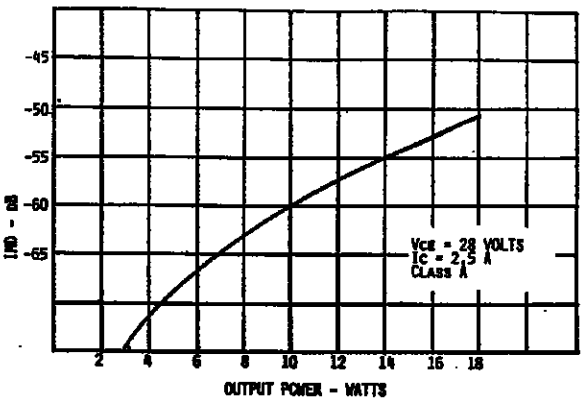
Note: IMD_3
- Vision Carrier - 8dB
- Sound Carrier - 7dB
- Sideband Carrier - 16dB

TYPICAL PERFORMANCE

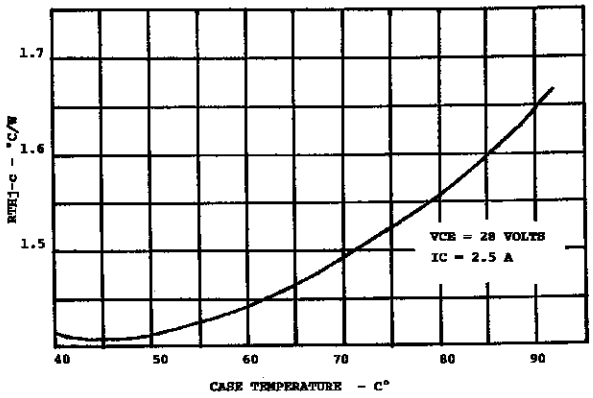
POWER OUTPUT vs POWER INPUT



IMD vs POWER OUTPUT

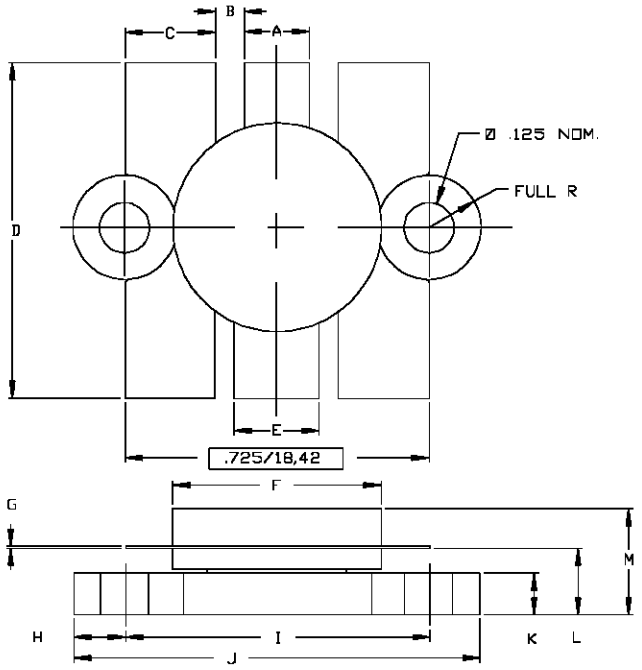


THERMAL RESISTANCE vs CASE TEMPERATURE



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0111



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.150/3,43	.160/4,06
B	.045/1,14	
C	.210/5,33	.220/5,59
D	.835/21,21	.865/21,97
E	.200/5,08	.210/5,33
F	.490/12,45	.510/12,95
G	.003/0,08	.007/0,18
H	.125/3,18	
I	.720/18,29	.730/18,54
J	.970/24,64	.980/24,89

CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
K	.095/2,41	.105/2,67
L	.150/3,81	.170/4,32
M		.280/7,11

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsability for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may results 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 Microelectonics.

© 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