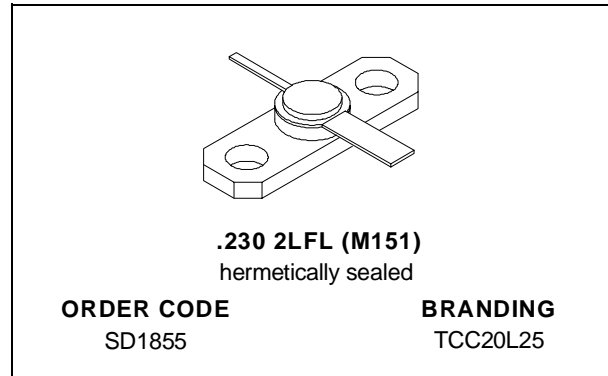


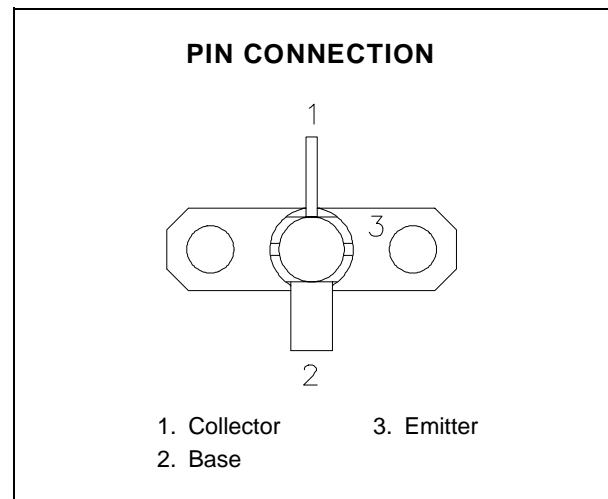
RF & MICROWAVE TRANSISTORS GENERAL PURPOSE LINEAR APPLICATIONS

- 2.0 GHz
- 20 VOLTS
- CLASS A
- OVERLAY GEOMETRY
- GOLD METALLIZED DIE
- COMMON EMITTER CONFIGURATION
- P_{OUT} = 2.5W MIN. WITH 6.0 dB GAIN



DESCRIPTION

The SD1855 is a silicon NPN planar transistor designed for high gain linear performance at 2.0 GHz. This part uses gold metallized die and poly-silicon site ballasting to achieve high reliability and ruggedness. The SD1855 can be used for applications such as telecommunications, radar, ECM, space and other commercial and military systems.



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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	40	V
V _{CES}	Collector-Emitter Voltage	25	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Device Current	0.5	A
P _{DISS}	Power Dissipation	20.6	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	8.5	°C/W
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SD1855 (TCC20L25)

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

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 2mA$	$I_E = 0mA$	40	—	—	V
BV_{CEO}	$I_C = 5mA$	$I_B = 0mA$	25	—	—	V
BV_{EBO}	$I_E = 2mA$	$I_C = 0mA$	3.5	—	—	V
h_{FE}	$V_{CE} = 5V$	$I_C = 400mA$	15	—	150	—

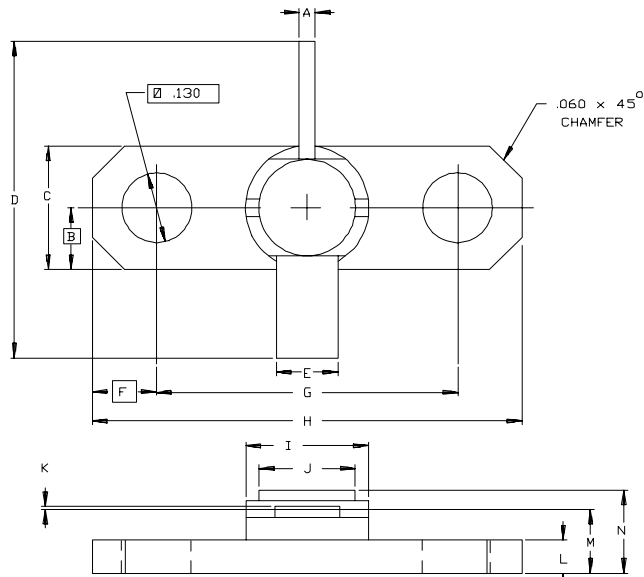
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}^*	$f = 2.0 GHz$	$V_{CE} = 20 V$	$I_{CQ} = 440 mA$	2.5	—	—	W
G_P^*	$f = 2.0 GHz$	$V_{CE} = 20 V$	$I_{CQ} = 440 mA$	6.0	—	—	dB

Note: * 1dB Compression

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0151



SGS-THOMSON MICROELECTRONICS			CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.025/0,64	.035/0,89	K	.003/0,08	.007/0,18
B	.115/2,92	NDM.	L	.055/1,40	.067/1,70
C	.225/5,72	.235/5,97	M	.120/3,18	.140/3,56
D	.710/18,03	.750/19,05	N		.170/4,32
E	.110/2,79	.120/3,05			
F	.120/3,05	NDM.			
G	.555/14,10	.565/14,35			
H	.795/20,19	.805/20,45			
I	.222/5,64	.236/5,99			
J	.165/4,19	.185/4,70			

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