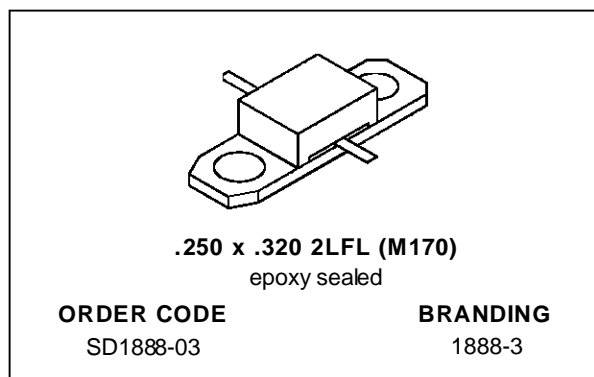
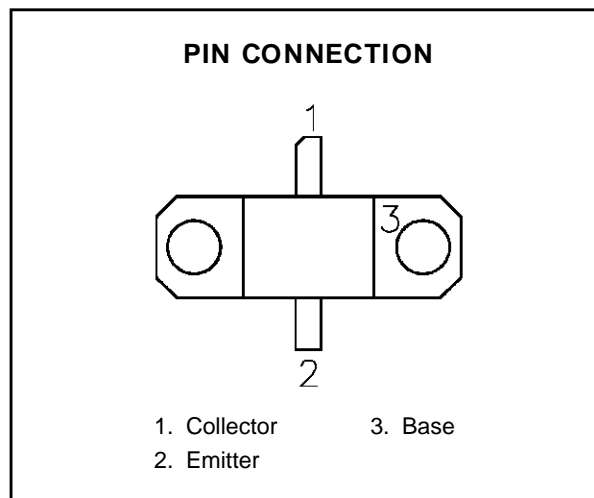


**RF & MICROWAVE TRANSISTORS
1.6 GHz SATCOM APPLICATIONS**

- 1.65 GHz
- 28 VOLTS
- EFFICIENCY 50% MIN.
- CLASS C OPERATION
- COMMON BASE
- INPUT/OUTPUT MATCHING
- P_{OUT} = 24 W MIN. WITH 9.0 dB GAIN


DESCRIPTION

The SD1888-03 is a 28 V Class C silicon NPN transistor designed for INMARSAT and other 1.65 GHz SATCOM applications. A gold metallized emitter-ballasted die geometry is employed providing high gain and efficiency while ensuring long term reliability and ruggedness under severe operating conditions. SD1888-03 is packaged in a cost-effective epoxy sealed housing


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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	45	V
V _{CEO}	Collector-Emitter Voltage	12	V
V _{EBO}	Emitter-Base Voltage	3.0	V
I _c	Device Current	2.6	A
P _{DISS}	Power Dissipation	50	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	3.5	°C/W
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SD1888-03

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

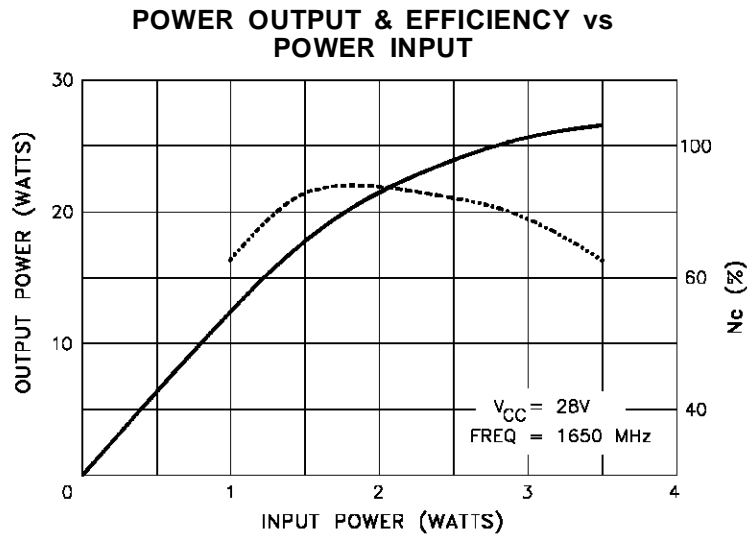
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_{\text{C}} = 6 \text{ mA}$	$I_{\text{E}} = 0 \text{ mA}$	45	—	—	V
BV_{CEO}	$I_{\text{C}} = 6 \text{ mA}$	$I_{\text{B}} = 0 \text{ mA}$	12	—	—	V
BV_{EBO}	$I_{\text{E}} = 6 \text{ mA}$	$I_{\text{C}} = 0 \text{ mA}$	3.0	—	—	V
h_{FE}	$V_{\text{CE}} = 5 \text{ V}$	$I_{\text{C}} = 1.2 \text{ A}$	15	—	150	—

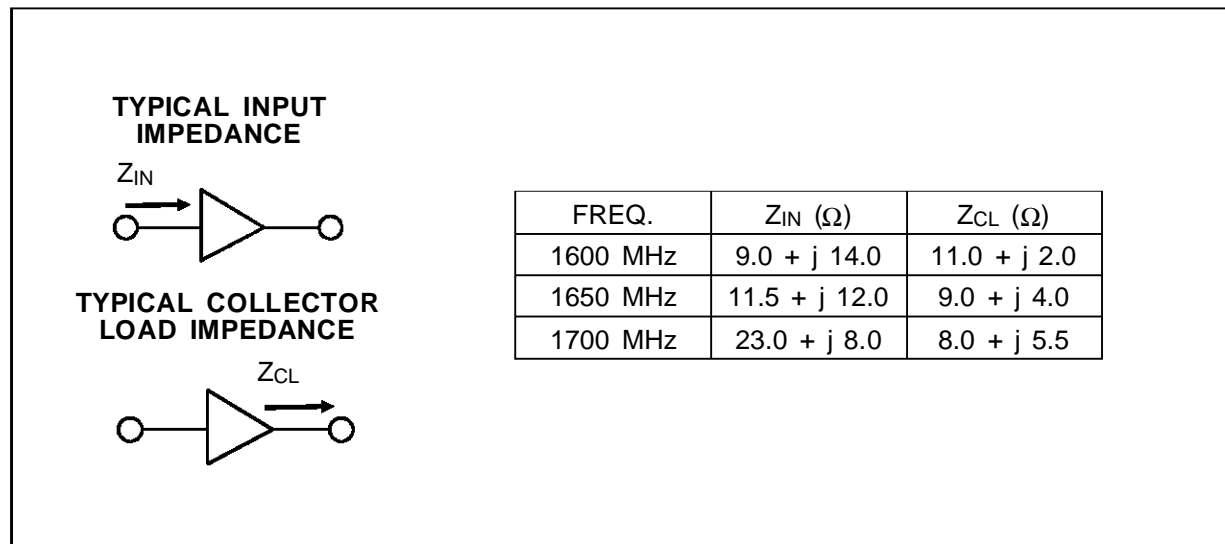
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 1.65 \text{ GHz}$	$P_{\text{IN}} = 3.0 \text{ W}$	$V_{\text{CE}} = 28 \text{ V}$	24	—	—	W
G_{P}	$f = 1.65 \text{ GHz}$	$P_{\text{IN}} = 3.0 \text{ W}$	$V_{\text{CE}} = 28 \text{ V}$	9.0	—	—	dB
η_{c}	$f = 1.65 \text{ GHz}$	$P_{\text{IN}} = 3.0 \text{ W}$	$V_{\text{CE}} = 28 \text{ V}$	50	—	—	%

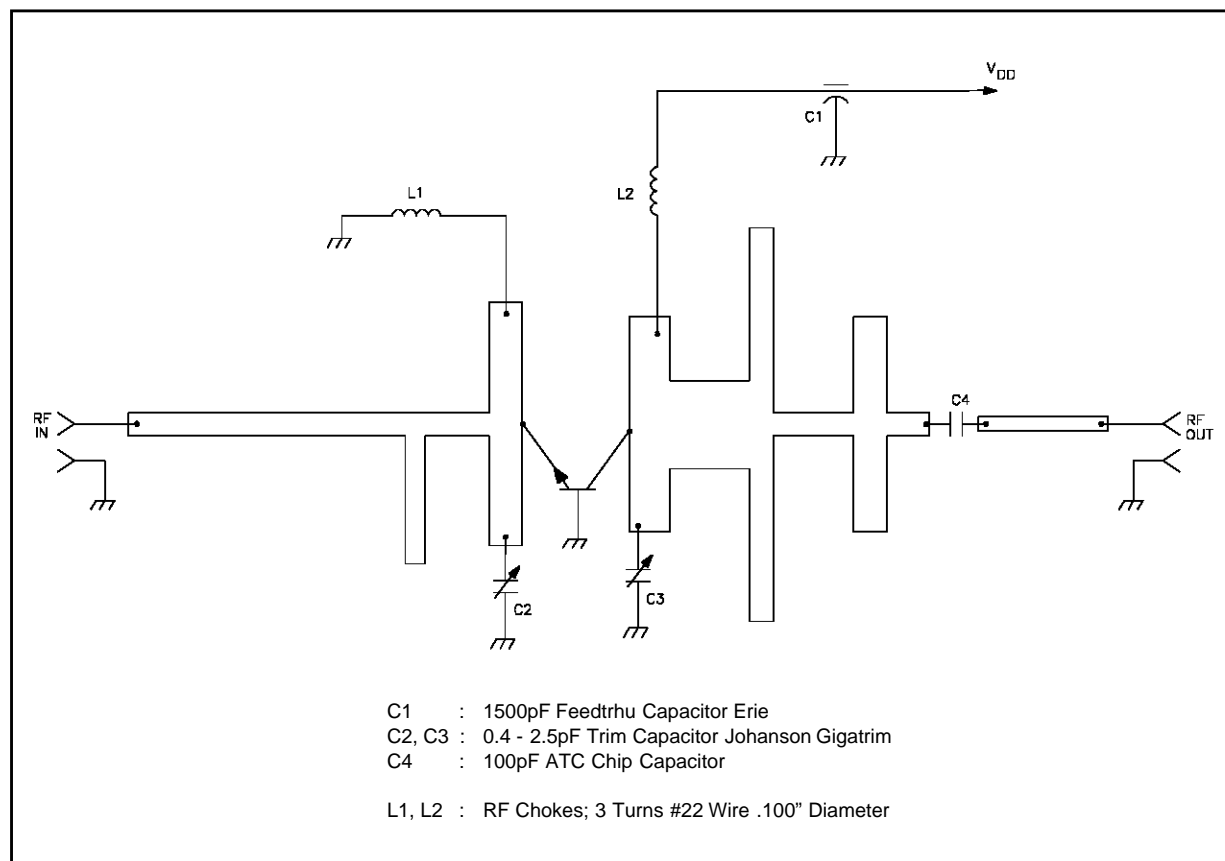
TYPICAL PERFORMANCE



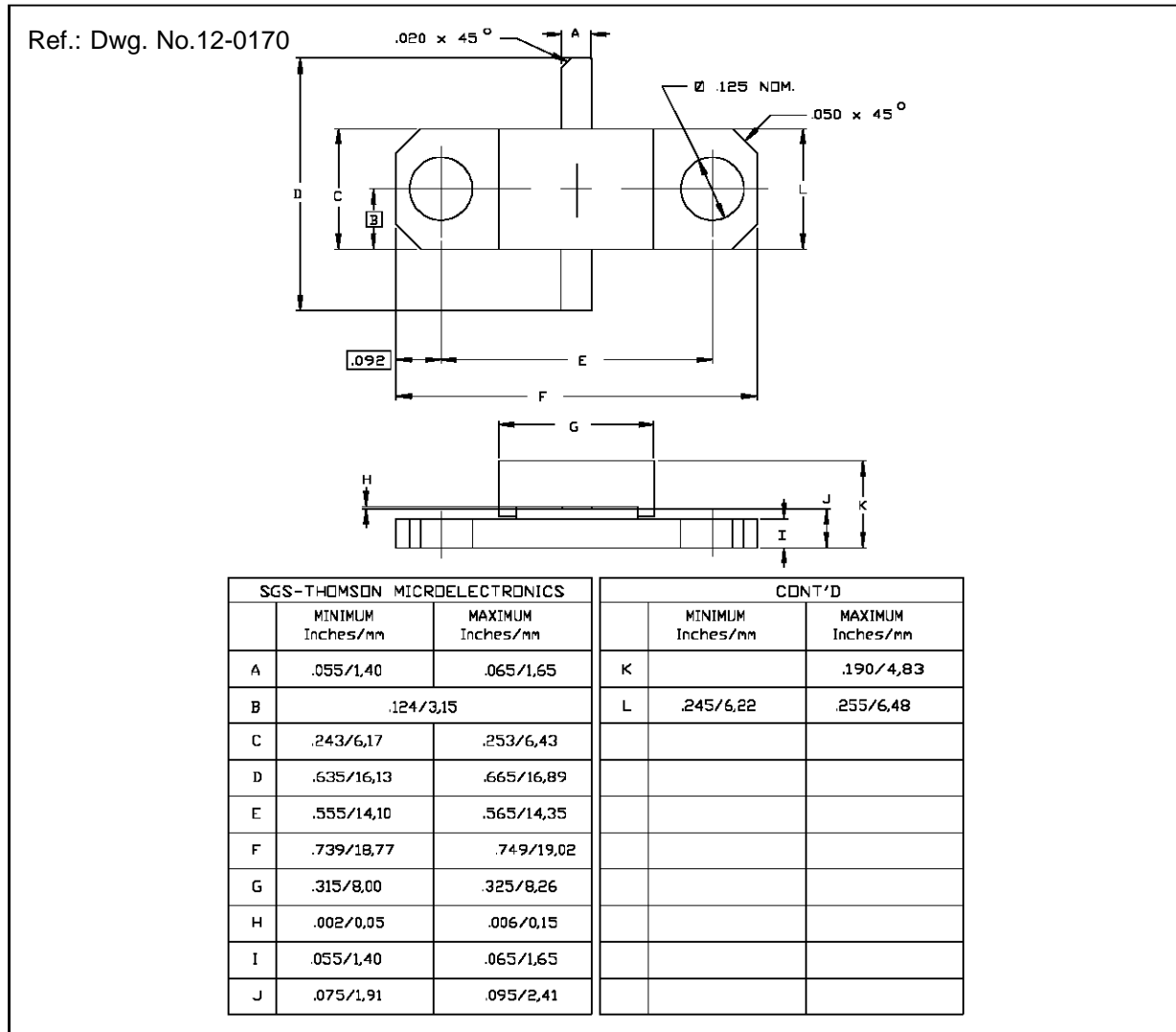
IMPEDANCE DATA



TEST CIRCUIT



PACKAGE MECHANICAL DATA



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