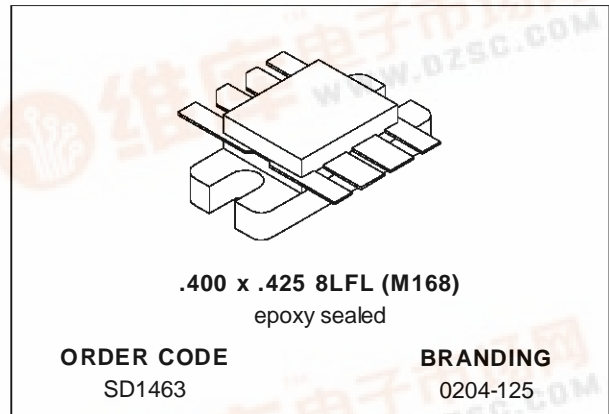




**SD1463
(TCC0204-125)**

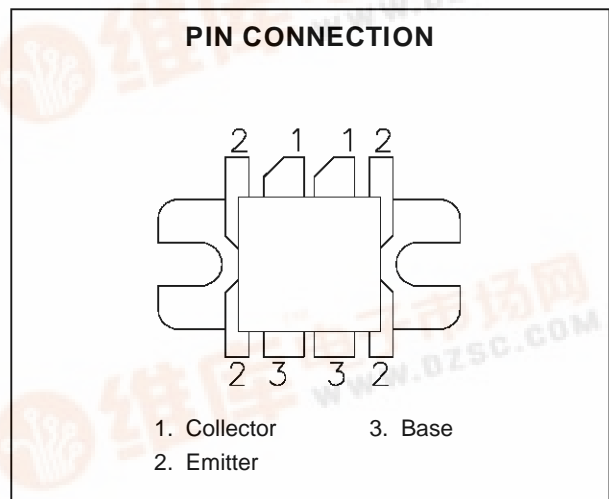
**RF & MICROWAVE TRANSISTORS
VHF/UHF APPLICATIONS**

- 400 MHz
- 28 VOLTS
- EFFICIENCY 60%
- COMMON EMITTER
- GOLD METALLIZATION
- P_{OUT} = 125 W MIN. WITH 7.0 dB GAIN



DESCRIPTION

The SD1463 is a 28 V Class C gold metallized epitaxial silicon NPN planar transistor designed for UHF military and commercial equipment. The SD1463 is an internally matched, broadband device optimized for operation within the 225 - 400 MHz frequency range. This device utilizes diffused emitter resistors to achieve 10:1 VSWR load mismatch capability at rated operating conditions.



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°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	15	A
P _{DISS}	Power Dissipation	270	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	0.65	°C/W
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SD1463 (TCC0204-125)

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

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 100\text{ mA}$	$I_E = 0\text{ mA}$	60	—	—	V
BV_{CES}	$I_C = 80\text{ mA}$	$V_{BE} = 0\text{ V}$	60	—	—	V
BV_{CEO}	$I_C = 50\text{ mA}$	$I_B = 0\text{ mA}$	30	—	—	V
BV_{EBO}	$I_E = 20\text{ mA}$	$I_C = 0\text{ mA}$	4.0	—	—	V
I_{CBO}	$V_{CB} = 30\text{ V}$	$I_E = 0\text{ mA}$	—	—	10	mA
h_{FE}	$V_{CE} = 5\text{ V}$	$I_C = 1\text{ A}$	20	—	200	—

DYNAMIC

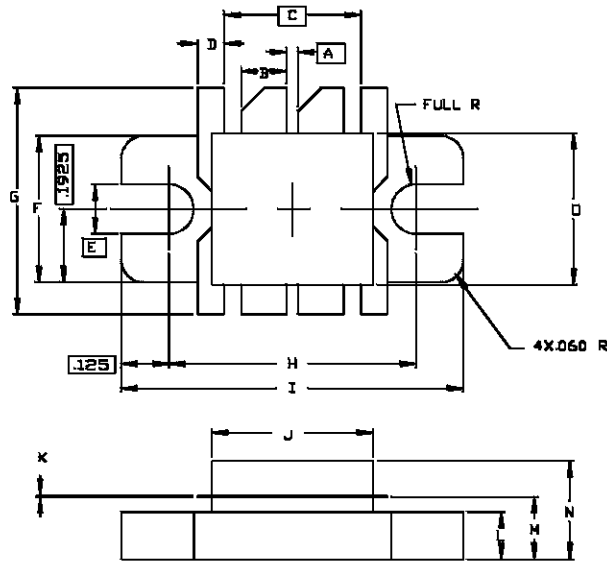
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{IN}	$f = 400\text{ MHz}$	$P_{OUT} = 125\text{ W}$	$V_{CC} = 28\text{ V}$	—	—	25	W
G_P	$f = 400\text{ MHz}$	$P_{OUT} = 125\text{ W}$	$V_{CC} = 28\text{ V}$	7.0	—	—	dB
η_C	$f = 400\text{ MHz}$	$P_{OUT} = 125\text{ W}$	$V_{CC} = 28\text{ V}$	60	—	—	%

IMPEDANCE DATA

FREQ.	$Z_{IN} (\Omega)$	$Z_{CL} (\Omega)$
225 MHz	$0.5 + j\ 2.5$	$8.8 + j\ 3.5$
400 MHz	$1.5 + j\ 1.7$	$5.0 + j\ 0.0$

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0168 rev. A
UDCS Doc. No. 1010993



SGS-THOMSON MICROELECTRONICS		CONT'D			
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.030/0,76		K	.003/0,08	.007/0,18
B	.115/2,92	.125/3,18	L	.120/3,05	.130/3,30
C	.360/9,14		M	.159/4,04	.175/4,45
D	.065/1,65	.075/1,91	N		.280/7,11
E	.130/3,30		O	.395/10,03	.405/10,29
F	.380/9,65	.390/9,91			
G	.735/18,67	.765/19,43			
H	.645/16,38	.655/16,64			
I	.895/22,73	.905/22,99			
J	.420/10,67	.430/10,92			

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