



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



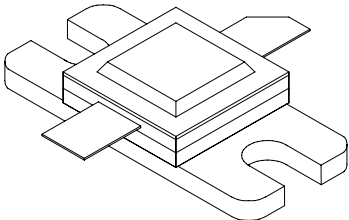
Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



<p>GENERAL DESCRIPTION</p> <p>The MDS150 is a high power COMMON BASE bipolar transistor. It is designed for MODE-S systems in the 1030 - 1090 MHz frequency band. The transistor includes input prematch for broadband performance. The device has gold thin-film metallization and diffused ballasting in a hermetically sealed package for proven highest MTTF.</p>	<p style="text-align: center;">CASE OUTLINE 55AW Style 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation Device Dissipation @25°C¹ 350 W</p> <p>Maximum Voltage and Current Collector to Emitter Voltage (BV_{ces}) 60 V Emitter to Base Voltage (BV_{ebo}) 3.5 V Peak Collector Current (I_c) 4 A</p> <p>Maximum Temperatures Storage Temperature -65 to +150 °C Operating Junction Temperature +200 °C</p>	

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 1030, 1090 MHz	150			W
P _{in}	Power Input	V _{cc} = 50 Volts			20	W
P _g	Power Gain	PW = Note 2	10			dB
η _c	Collector Efficiency	DF = Note 2		34		%
VSWR ¹	Load Mismatch Tolerance				3:1	
Pd ¹	Pulse Droop				0.5	dB
Trise ¹	Rise Time				100	nSec

FUNCTIONAL CHARACTERISTICS @ 25°C

BV _{ebo}	Emitter to Base Breakdown	I _e = 5 mA	3.5			V
BV _{ces}	Collector to Emitter Breakdown	I _c = 25 mA	60			V
BV _{cbo}	Collector to Base Breakdown	I _c = 25 mA	60			V
h _{FE}	DC – Current Gain	V _{ce} = 5V, I _c = 500 mA	20			
θ _{jc} ¹	Thermal Resistance				0.5	°C/W

NOTE 1: AT RATED OUTPUT POWER AND PULSE CONDITIONS

NOTE 2: Burst: 0.5uS ON, 0.5uS OFF x 120, repeated every 6.4mS

Initial Release - August 2007 Rev. A

TEST FIXTURE LAYOUT AND SCHEMATIC

- COMPONENTS
 C1=220uF electrolytic cap, 63V
 C2=100pF ATC Chip
 C3=47pF ATC Chip
 C4=1.3pF ATC Chip
 C5=C7=C9=1pF ATC Chip
 C6=3.6pF ATC Chip
 C8=2.2pF ATC Chip
 C10=1.5pF ATC Chip
 L1=#21AWGj Length=1"
 L2=#21AWGj 6 turn; I.D.=0.1"
 R1=22kOhm

