



MDS400
 400 Watts Pk, 45 Volts, 32μs, 2%
 Avionics 1030-1090 MHz

<p>GENERAL DESCRIPTION The MDS400 is a COMMON BASE transistor capable of providing 400 Watts Peak, Pulsed, RF Output Power over the band 1030-1090 MHz. The transistor includes double input prematching for full broadband capability. Gold Metalization and Diffused Ballasting are used to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55KT, STYLE 1</p>																
<p>ABSOLUTE MAXIMUM RATINGS</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Maximum Power Dissipation @ 25°C</td> <td style="text-align: right;">1450 Watts</td> </tr> <tr> <td colspan="2">Maximum Voltage and Current</td> </tr> <tr> <td>BVces Collector to Emitter Voltage</td> <td style="text-align: right;">55 Volts</td> </tr> <tr> <td>BVebo Collector to Base Voltage</td> <td style="text-align: right;">4.0 Volts</td> </tr> <tr> <td>Ic Collector Current</td> <td style="text-align: right;">40 Amps</td> </tr> <tr> <td colspan="2">Maximum Temperatures</td> </tr> <tr> <td>Storage Temperature</td> <td style="text-align: right;">-40 to + 200 °C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+ 200 °C</td> </tr> </table>	Maximum Power Dissipation @ 25°C	1450 Watts	Maximum Voltage and Current		BVces Collector to Emitter Voltage	55 Volts	BVebo Collector to Base Voltage	4.0 Volts	Ic Collector Current	40 Amps	Maximum Temperatures		Storage Temperature	-40 to + 200 °C	Operating Junction Temperature	+ 200 °C	
Maximum Power Dissipation @ 25°C	1450 Watts																
Maximum Voltage and Current																	
BVces Collector to Emitter Voltage	55 Volts																
BVebo Collector to Base Voltage	4.0 Volts																
Ic Collector Current	40 Amps																
Maximum Temperatures																	
Storage Temperature	-40 to + 200 °C																
Operating Junction Temperature	+ 200 °C																

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Po	Power Out	F = 1030/1090 MHz	400			Watts
Pin	Power Input	Vcc = 45 Volts			90	Watts
Pg	Power Gain	Pulse Width = 32μs	6.5			dB
h	Efficiency	Duty Factor = 2 %		35		%
VSWR¹	Load Mismatch Tolerance	At Rated Power			10:1	

BVces	Collector to Emitter Breakdown	Ic = 50 mA	55			Volts
BVebo	Emitter to Base Breakdown	Ie = 30 mA	3.5			Volts
H_{fe}	Current Gain	Vce = 5 V, Ic = 1 A	10			
Rθjc	Thermal Resistance	Tc = 25 °C			0.12	°C/W

Issue September 22, 1995

GHZ TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHZ RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.