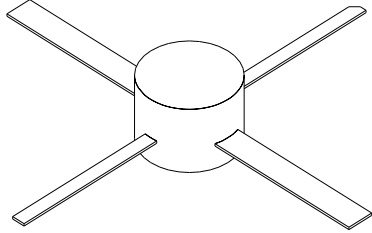


# 2A8

0.5 Watts, 20 Volts, Class A  
Linear to 2000 MHz

<p><b>GENERAL DESCRIPTION</b></p> <p>The 2A8 is a COMMON EMITTER transistor capable of providing 0.5 Watts of Class A, RF output power at 2000 MHz. This transistor is specifically designed for general Class A amplifier applications. It utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness.</p>	<p><b>CASE OUTLINE</b> <b>55EU, STYLE 2</b></p> 													
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C <span style="float: right;">5.3 Watts</span></p> <p><b>Maximum Voltage and Current</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">BVces</td> <td style="width: 55%;">Collector to Emitter Voltage</td> <td style="width: 30%; text-align: right;">50 Volts</td> </tr> <tr> <td>BVebo</td> <td>Emitter to Base Voltage</td> <td style="text-align: right;">3.5 Volts</td> </tr> <tr> <td>Ic</td> <td>Collector Current</td> <td style="text-align: right;">300 mA</td> </tr> </table> <p><b>Maximum Temperatures</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Storage Temperature</td> <td style="text-align: right;">- 65 to + 150°C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+ 150°C</td> </tr> </table>	BVces	Collector to Emitter Voltage	50 Volts	BVebo	Emitter to Base Voltage	3.5 Volts	Ic	Collector Current	300 mA	Storage Temperature	- 65 to + 150°C	Operating Junction Temperature	+ 150°C	
BVces	Collector to Emitter Voltage	50 Volts												
BVebo	Emitter to Base Voltage	3.5 Volts												
Ic	Collector Current	300 mA												
Storage Temperature	- 65 to + 150°C													
Operating Junction Temperature	+ 150°C													

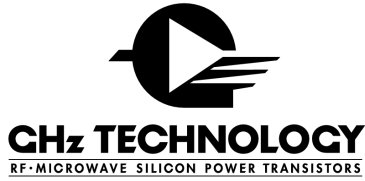
## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Out @ 1db Comp. Pt.	F = 2.0 GHz	0.5			Watts
<b>Pin</b>	Power Input	Vcc = 20 Volts			0.1	Watts
<b>Pg</b>	Power Gain	Ic = 150mA	7.0	9.0		dB
<b>ηc</b>	Efficiency			20		%
<b>VSWR<sub>1</sub></b>	Load Mismatch Tolerance				30:1	

<b>BVebo</b>	Emitter to Base Breakdown	Ie = 1 mA	3.5			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 10mA	50			Volts
<b>BVceo</b>	Collector to Emitter Breakdown	Ic = 10 mA	21			Volts
<b>Hfe</b>	DC Current Gain	Vce = 5 V, Ic = 100 mA	20			
<b>Cob</b>	Capacitance	Vcb = 28V, f = 1 MHz		3.0	4.0	pF
<b>θjc</b>	Thermal Resistance			28	33	°C/W

Issue September 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.



**2A8-2 (19.9V, 150mA)**

MMICAD for Windows Mon Aug 29 10:57:36 1994  
 CIRCUIT: MES

FREQ	--- S11 ---		--- S21 ---		--- S12 ---		--- S22 ---	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
0.100	0.58256	-131.579	22.1701	127.551	0.02296	38.1021	0.50355	-47.6776
0.200	0.69721	-157.306	13.3857	106.506	0.02914	35.1767	0.32372	-63.4932
0.300	0.72082	-169.421	9.38721	92.6214	0.03281	36.5742	0.24514	-70.3590
0.400	0.73289	-177.356	7.17730	84.4817	0.03663	40.7223	0.20597	-74.6703
0.500	0.73894	176.612	5.79952	78.9241	0.04030	43.8715	0.18545	-78.3614
0.600	0.74370	171.646	4.85629	73.0961	0.04460	45.9126	0.17459	-82.5275
0.700	0.74697	167.225	4.17743	66.4085	0.04940	47.7288	0.16913	-86.8291
0.800	0.75135	163.117	3.66591	61.2127	0.05474	49.0294	0.16707	-91.3152
0.900	0.75479	159.190	3.26970	56.2663	0.06006	50.3980	0.16801	-96.0809
1.000	0.75843	155.402	2.95578	51.6377	0.06583	50.7384	0.17052	-101.253
1.100	0.76057	151.751	2.69520	47.0738	0.07158	50.7936	0.17379	-106.206
1.200	0.76355	148.254	2.47842	42.5305	0.07795	50.9948	0.17962	-111.558
1.300	0.76826	144.891	2.29189	38.0578	0.08434	50.5094	0.18566	-117.113
1.400	0.77324	141.577	2.13343	33.6478	0.09089	49.8435	0.19282	-122.617
1.500	0.77915	138.183	1.99656	29.3024	0.09776	49.0596	0.19993	-127.898
1.600	0.78388	134.844	1.87375	25.0314	0.10492	48.1693	0.20907	-133.495
1.700	0.78745	131.474	1.76372	20.7708	0.11200	46.9091	0.21944	-139.103
1.800	0.79263	128.274	1.66452	16.5902	0.11937	45.6592	0.23029	-144.741
1.900	0.79854	125.121	1.57596	12.4613	0.12709	44.0501	0.24254	-150.401
2.000	0.80496	122.050	1.49424	8.34609	0.13469	42.5542	0.25538	-155.855
2.100	0.81108	118.898	1.41899	4.28438	0.14258	40.7972	0.26942	-161.473
2.200	0.81729	115.764	1.34821	0.25212	0.15051	39.0408	0.28455	-166.877
2.300	0.82291	112.708	1.28280	-3.66895	0.15865	37.2246	0.30054	-172.182
2.400	0.82893	109.712	1.22122	-7.45997	0.16667	35.3252	0.31709	-177.402
2.500	0.83552	106.842	1.16562	-11.1687	0.17539	33.2144	0.33489	177.560
2.600	0.84270	103.929	1.11343	-14.8560	0.18374	31.1471	0.35306	172.591
2.700	0.84869	101.084	1.06343	-18.4831	0.19201	28.9065	0.37223	167.749
2.800	0.85483	98.2150	1.01538	-22.0574	0.20065	26.5810	0.39154	162.993
2.900	0.86037	95.4016	0.96956	-25.4966	0.20878	24.1941	0.41071	158.460
3.000	0.86496	92.6534	0.92574	-28.7893	0.21708	21.8647	0.43073	154.114