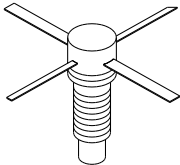
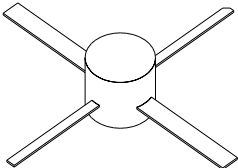


2A5/2A5A

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

<p>GENERAL DESCRIPTION</p> <p>The 2A5/2A5A is a COMMON EMITTER transistor capable of providing 0.5 Watt of Class A, RF output power to 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>CASE OUTLINE 2A5 - 55ET, STYLE 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 5.3 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 50 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 300 mAmps</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to + 150°C Operating Junction Temperature + 200°C</p>	<p>2A5A - 55EU, STYLE 2</p> 

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 2000 MHz	0.5	0.8		Watts
Pin	Power Input	Ic = 140 mA			0.1	Watts
Pg	Power Gain	Vcc = 20 Volts	7.0	9.0		dB
Ft	Transition Frequency	Vce = 20 V, Ic = 140 A	3.4	3.7		GHz
VSWR	Load Mismatch Tolerance				30:1	

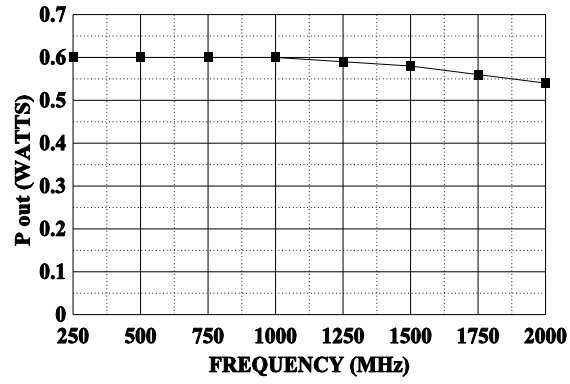
BVebo	Emitter to Base Breakdown	Ie = 1 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
BVceo	Collector to Emitter Breakdown	Ic = 10 mA	22			Volts
hFE	DC Current Gain	Vce = 5 V, Ic = 100 mA	20			
Cob	Capacitance	Vcb = 28V, f = 1 MHz		2.0	3.0	pF
θjc	Thermal Resistance			30	33	°C/W

Issue August 1996

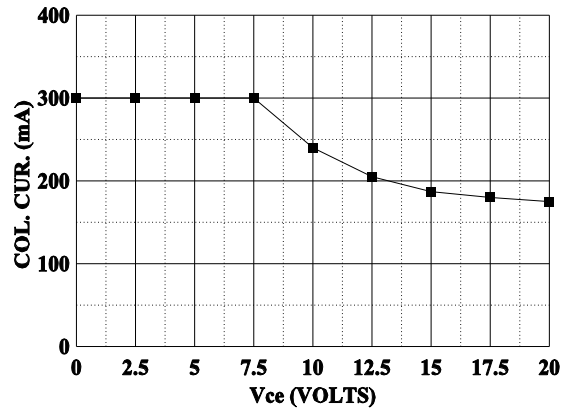
GHz TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHz RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

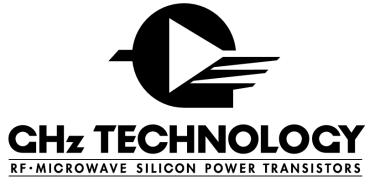
POWER OUTPUT vs FREQUENCY

$P_{in}=0.1W, V_{ce}=20V, I_c=140\text{ mA}$



DC SAFE OPERATING AREA

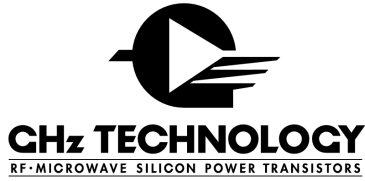




2A5-3 (20V, 140mA)

MMICAD for Windows Thu Jul 07 09:56:25 1994
 CIRCUIT: MES

FREQ	--- S11 ---		--- S21 ---		--- S12 ---		--- S22 ---	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
0.100	0.52879	-117.998	18.4557	127.431	0.02250	52.0618	0.68993	-29.4704
0.200	0.61759	-151.661	11.3148	105.348	0.02976	44.5916	0.50829	-35.7179
0.300	0.64545	-167.228	7.96244	91.2929	0.03427	46.5294	0.43520	-37.0060
0.400	0.65520	-178.012	6.09583	82.1823	0.03887	48.7447	0.40250	-38.3410
0.500	0.66193	173.801	4.91752	75.3585	0.04419	51.4514	0.38565	-40.5384
0.600	0.66959	166.977	4.12241	68.7364	0.05005	53.2026	0.37572	-43.3873
0.700	0.67554	161.011	3.54252	61.8562	0.05599	55.1416	0.36943	-46.8267
0.800	0.68334	155.392	3.10637	55.9376	0.06244	56.0621	0.36475	-50.7590
0.900	0.68969	150.077	2.76675	50.3172	0.06945	56.6320	0.36179	-54.9437
1.000	0.69739	145.070	2.49340	44.9852	0.07696	57.0929	0.36000	-59.5913
1.100	0.70414	140.248	2.26822	39.7443	0.08506	57.1476	0.35912	-64.4455
1.200	0.71183	135.592	2.07740	34.5640	0.09339	56.5165	0.35815	-69.7438
1.300	0.72220	131.207	1.91464	29.4903	0.10226	55.9061	0.35787	-75.1564
1.400	0.73246	126.890	1.77187	24.5941	0.11108	54.8257	0.35863	-80.7170
1.500	0.74195	122.661	1.64818	19.9231	0.12059	53.8989	0.36023	-86.6042
1.600	0.75065	118.500	1.54082	15.3329	0.13091	52.5170	0.36439	-92.7388
1.700	0.76066	114.498	1.44313	10.7216	0.14121	51.0474	0.36592	-99.0128
1.800	0.77380	110.522	1.35564	6.26720	0.15260	49.2030	0.37043	-105.261
1.900	0.78718	106.436	1.27690	1.91097	0.16382	47.1716	0.37564	-111.404
2.000	0.79076	102.192	1.19961	-2.39805	0.17499	45.0008	0.38224	-118.087
2.100	0.79314	98.6537	1.13086	-6.37123	0.18658	42.7961	0.38850	-124.433
2.200	0.79667	95.4368	1.06699	-10.3052	0.19816	40.4822	0.39591	-131.094
2.300	0.80251	92.4528	1.00767	-14.0712	0.21018	38.1231	0.40473	-137.685
2.400	0.81348	89.3710	0.95315	-17.4445	0.22215	35.7435	0.41241	-144.038
2.500	0.82431	86.2156	0.90584	-20.7033	0.23471	33.3298	0.42284	-150.204
2.600	0.83083	83.1092	0.86287	-24.0047	0.24801	30.7458	0.43537	-156.685
2.700	0.83713	80.0668	0.82006	-27.2635	0.26145	27.9147	0.44725	-163.038
2.800	0.84300	77.1331	0.77965	-30.2017	0.27457	25.0567	0.45986	-169.254
2.900	0.84789	74.2832	0.74170	-32.9692	0.28780	22.1275	0.47215	-175.441
3.000	0.85279	71.5374	0.70524	-35.6052	0.29968	19.1213	0.48247	178.257



2A5A-1 (20V, 140mA)

MMICAD for Windows Mon Aug 29 11:12:33 1994
 CIRCUIT: MES

FREQ Mhz	--- S11 ---		--- S21 ---		--- S12 ---		--- S22 ---	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
0.100	0.62445	-116.709	20.0037	125.053	0.02426	46.1536	0.65221	-34.0681
0.200	0.67709	-150.120	11.8555	103.946	0.03000	39.8099	0.46694	-38.4638
0.300	0.68820	-165.574	8.25090	90.4305	0.03337	40.6251	0.39943	-38.7400
0.400	0.69586	-175.471	6.28753	82.0261	0.03787	43.8655	0.36952	-39.4519
0.500	0.70045	177.083	5.07154	75.9798	0.04189	46.9711	0.35655	-41.1805
0.600	0.70518	170.947	4.24357	69.7906	0.04657	49.2779	0.34911	-43.8513
0.700	0.70912	165.527	3.64688	63.0560	0.05142	51.4143	0.34592	-47.1002
0.800	0.71502	160.590	3.20068	57.5940	0.05698	52.9556	0.34474	-50.7015
0.900	0.71974	155.853	2.85202	52.3538	0.06254	54.2064	0.34499	-54.5688
1.000	0.72491	151.342	2.57405	47.3747	0.06910	55.1832	0.34592	-58.8284
1.100	0.72914	147.005	2.34231	42.5142	0.07534	55.4525	0.34735	-63.1149
1.200	0.73418	142.861	2.15059	37.7171	0.08228	55.8119	0.35002	-67.6905
1.300	0.74063	138.903	1.98608	33.0468	0.08981	55.6233	0.35230	-72.4400
1.400	0.74764	134.983	1.84448	28.4255	0.09720	55.1787	0.35529	-77.3916
1.500	0.75544	131.078	1.72161	23.8413	0.10512	54.6660	0.35844	-82.2835
1.600	0.76205	127.216	1.61063	19.4169	0.11337	53.8677	0.36144	-87.4860
1.700	0.76805	123.415	1.51266	15.0815	0.12219	52.8433	0.36602	-92.7713
1.800	0.77474	119.772	1.42427	10.8062	0.13132	51.5657	0.37104	-98.2804
1.900	0.78245	116.189	1.34484	6.60340	0.14059	50.0797	0.37600	-103.973
2.000	0.79031	112.775	1.27131	2.46904	0.14991	48.4857	0.38172	-109.725
2.100	0.79773	109.340	1.20212	-1.60222	0.15940	46.9302	0.38752	-115.712
2.200	0.80514	105.921	1.13808	-5.51514	0.16938	45.2991	0.39358	-121.717
2.300	0.81242	102.607	1.07928	-9.30690	0.18023	43.4204	0.40054	-127.771
2.400	0.81971	99.3747	1.02455	-12.9595	0.19078	41.2543	0.40791	-133.795
2.500	0.82681	96.3032	0.97491	-16.4948	0.20189	39.0323	0.41687	-139.845
2.600	0.83465	93.1629	0.92730	-19.9990	0.21242	36.6269	0.42682	-145.981
2.700	0.84039	90.1727	0.88179	-23.4115	0.22325	34.2330	0.43728	-152.207
2.800	0.84709	87.2807	0.83824	-26.6846	0.23374	31.7565	0.44874	-158.301
2.900	0.85281	84.3297	0.79691	-29.7720	0.24469	29.2078	0.46021	-164.236
3.000	0.85725	81.5193	0.75737	-32.6610	0.25511	26.6137	0.47261	-170.030