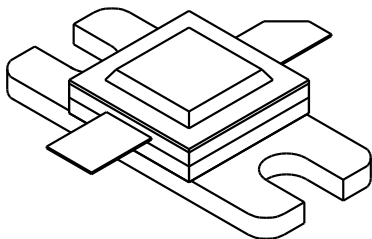


16AM08

8 Watts, 18 Volts, Class A
Linear 1500 - 1700 MHz

<p>GENERAL DESCRIPTION The 16AM08 is a COMMON EMITTER, HIGH GAIN transistor capable of providing 8 Watts, P_{1dB}, Class A, RF output power in the band 1500 - 1700 MHz. The transistor includes double input and output prematching for full broadband capability. Gold metalization and diffused ballasting are used to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55AW, STYLE 2</p> 																	
<p>ABSOLUTE MAXIMUM RATINGS</p> <table border="0"> <tr> <td>Maximum Power Dissipation @ 25°C</td> <td style="text-align: right;">35 Watts</td> </tr> <tr> <td colspan="2">Maximum Voltage and Current</td> </tr> <tr> <td>BVcbo Collector to Base Voltage</td> <td style="text-align: right;">45 Volts</td> </tr> <tr> <td>BVceo Collector to Emitter Voltage</td> <td style="text-align: right;">25 Volts</td> </tr> <tr> <td>BVebo Emitter to Base Voltage</td> <td style="text-align: right;">3.5 Volts</td> </tr> <tr> <td>Ic Collector Current</td> <td style="text-align: right;">4.0 Amps</td> </tr> <tr> <td colspan="2">Maximum Temperatures</td> </tr> <tr> <td>Storage Temperature</td> <td style="text-align: right;">- 65 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	35 Watts	Maximum Voltage and Current		BVcbo Collector to Base Voltage	45 Volts	BVceo Collector to Emitter Voltage	25 Volts	BVebo Emitter to Base Voltage	3.5 Volts	Ic Collector Current	4.0 Amps	Maximum Temperatures		Storage Temperature	- 65 to + 200°C	Operating Junction Temperature
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Maximum Temperatures																		
Storage Temperature	- 65 to + 200°C																	
Operating Junction Temperature	+ 200°C																	

ELECTRICAL CHARACTERISTICS @ 25 °C

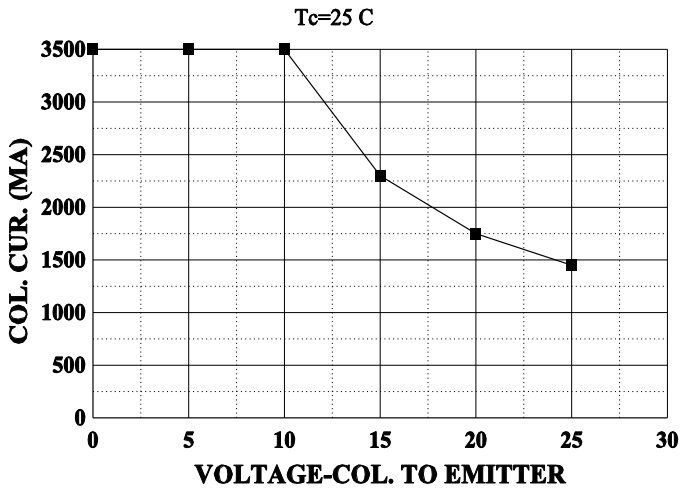
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout - 1dB	Power Out - 1 dB	F = 1700 MHz	8			Watts
Pin	Power Input	Vcc = 22 Volts			1.6	Watts
Pg - 1dB	Power Gain	Ic = 1.2 Amps	7			dB
VSWR	Load Mismatch Tolerance	Pout = 8 Watts	5 : 1			

BVcbo	Collector to Base Breakdown	Ic = 50 mA	45			Volts
BVceo	Collector to Emitter Breakdown	Ic = 50 mA	25			Volts
BVebo	Emitter to Base Breakdown	Ie = 8.0 mA	3.5			Volts
Icbo	Collector to Base Leakage	Vcb = 20 V			6.0	mA
Hfe	Current Gain	Vce = 5 V, Ic = 0.8A	20		120	
θjc	Thermal Resistance	Tc = 25 °C		4.0	5.0	°C/W

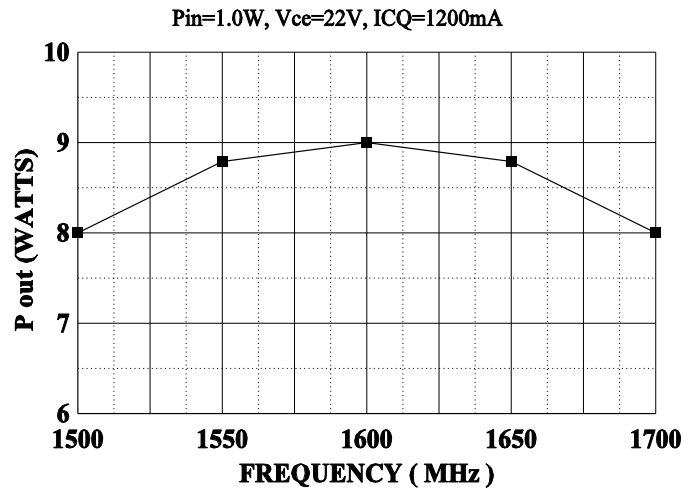
Issue January 1996

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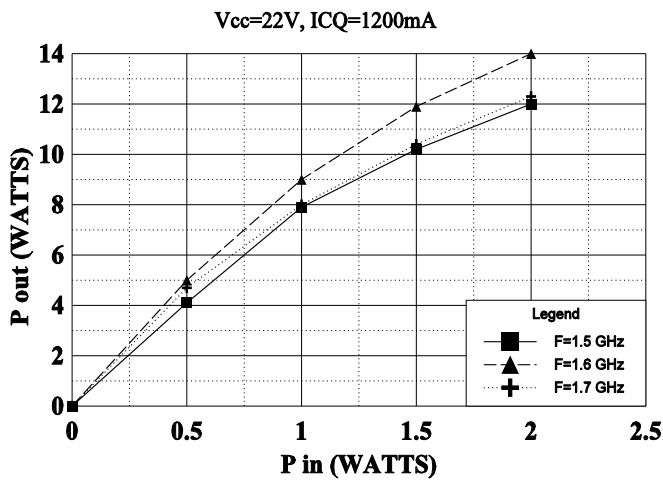
DC SAFE OPERATING AREA



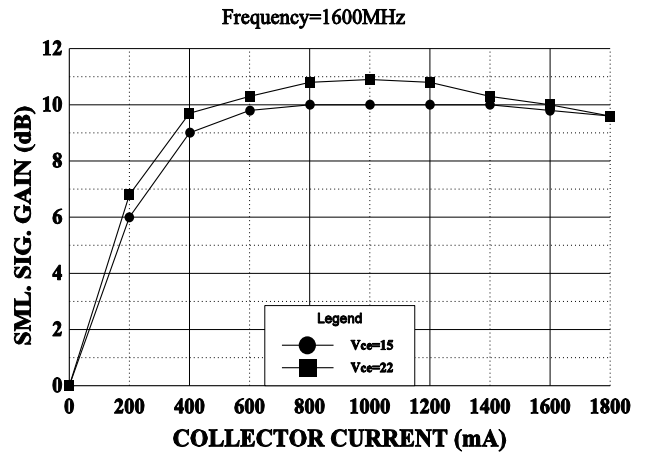
POWER OUTPUT vs FREQUENCY



POWER OUT vs POWER IN



SML SIGNAL GAIN vs COLLECTOR CURRENT





GHz TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

16AM08-2 (22V, 1200mA)

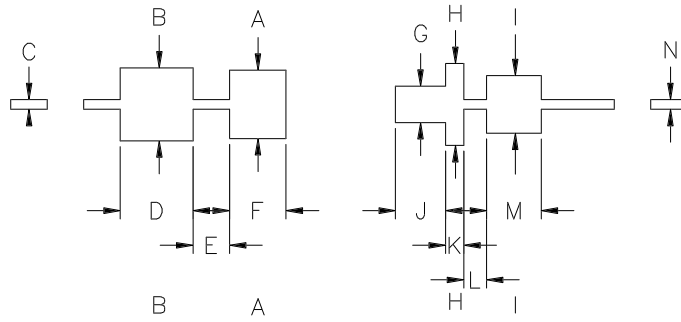
MMICAD for Windows Fri Aug 26 11:44:01 1994

CIRCUIT: MES

FREQ	--- S11 ---		--- S21 ---		--- S12 ---		--- S22 ---	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
0.100	0.82090	-171.250	3.60069	57.2766	0.01115	-28.5221	0.90505	-168.574
0.200	0.91135	-173.829	1.13429	28.3998	0.00574	-52.0767	0.97461	-174.785
0.300	0.95358	-176.838	0.41380	12.2117	0.00263	-60.6283	1.00020	-179.052
0.400	0.97087	-179.465	0.10874	5.57941	0.00158	84.4338	1.00534	177.343
0.500	0.97907	178.003	0.05616	148.931	0.00415	93.0172	1.00464	174.457
0.600	0.98171	176.073	0.15927	149.725	0.00680	82.9896	0.99894	171.435
0.700	0.98424	174.267	0.24035	142.150	0.01020	76.0497	0.98549	168.373
0.800	0.98634	172.627	0.31402	134.005	0.01263	69.0192	0.96394	165.504
0.900	0.98812	170.718	0.39212	125.601	0.01530	62.8716	0.93856	162.696
1.000	0.98917	168.570	0.48536	116.712	0.01860	55.5756	0.90906	159.850
1.100	0.98610	166.165	0.61044	107.233	0.02321	50.4753	0.87217	156.605
1.200	0.97898	163.044	0.79500	96.3246	0.02980	42.7833	0.82299	152.829
1.300	0.96132	158.678	1.10319	82.4736	0.04102	32.2922	0.74166	147.574
1.400	0.89626	151.216	1.68428	61.1380	0.06252	13.6828	0.56938	141.101
1.500	0.61726	144.060	2.62117	19.1275	0.09782	-26.3725	0.26848	178.007
1.600	0.57933	-178.425	2.33226	-38.7082	0.08779	-83.7032	0.75981	-162.651
1.700	0.80000	-179.467	1.47234	-71.4168	0.05646	-117.093	0.89672	179.182
1.800	0.87732	175.673	1.00971	-89.4761	0.03958	-137.162	0.89529	170.451
1.900	0.90805	172.269	0.75929	-102.214	0.03141	-152.013	0.87342	165.584
2.000	0.92463	169.632	0.60732	-112.676	0.02650	-165.647	0.85158	162.458
2.100	0.93372	167.479	0.50840	-121.955	0.02435	-176.864	0.82810	160.317
2.200	0.93663	165.350	0.44111	-130.486	0.02341	172.055	0.81025	159.124
2.300	0.93596	163.500	0.39634	-138.728	0.02341	162.811	0.79919	158.312
2.400	0.93477	162.007	0.36680	-146.781	0.02420	153.952	0.79313	157.506
2.500	0.93324	160.258	0.34947	-155.120	0.02599	146.738	0.78950	156.706

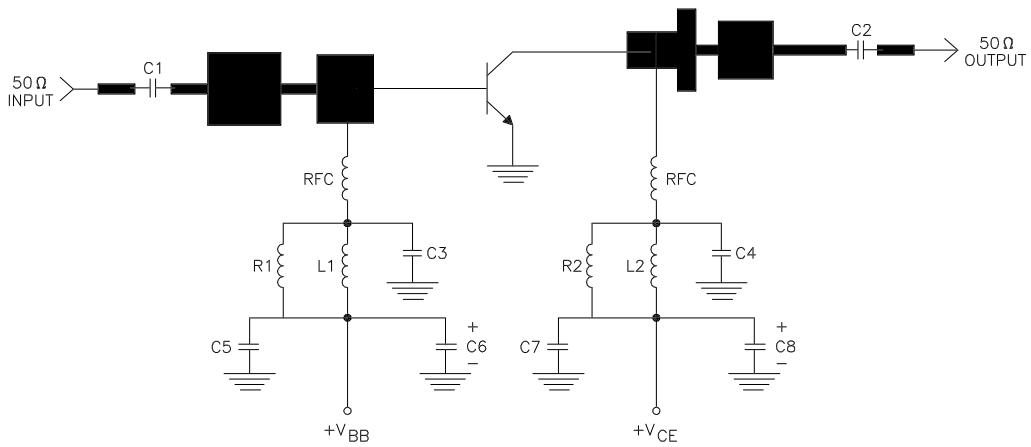
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.375
B	.400
C	.053
D	.400
E	.250
F	.180
G	.150
H	.285
I	.450
J	.255
K	.030
L	.255
M	.300
N	.053

16AM08 TEST CIRCUIT



DIELECTRIC = 20 MIL THICK DUROID Er = 2.3
 C1, C2, C3, C4 = 62pF CHIP ATC "B"
 C5, C7 = 0.1 MFD
 C6, C8 = 10 MFD @ 35V
 R1, R2 = 15Ω 1/2 WATT
 RFC = 4 turns #22 wire 1/16" I.D.
 L1, L2 = 10 MICROHENRY



CAGE OPJR2	DWG NO. 16AM08	REV A
	SCALE 1/1	SHEET