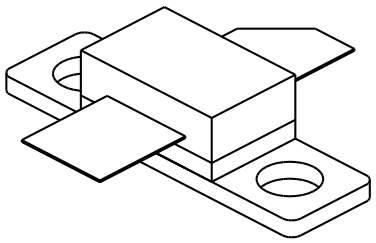


1920A05

5 Watts, 26 Volts, Class A
Personal 1930 - 1990 MHz

<p>GENERAL DESCRIPTION</p> <p>The 1920A05 is a COMMON EMITTER transistor capable of providing 5 Watts of Class A, RF output power over the band 1930-1990 MHz. This transistor is specifically designed for PERSONAL COMMUNICATIONS BASE STATION LINEAR amplifier applications. It includes Input prematching and utilizes Gold metalization and HIGH VALUE EMITTER ballasting to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55CT, STYLE 2 COMMON EMITTER</p> 																
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 35 Watts</p> <p>Maximum Voltage and Current</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">BVces</td> <td style="width: 45%;">Collector to Emitter Voltage</td> <td style="width: 40%; text-align: right;">55 Volts</td> </tr> <tr> <td>LVceo</td> <td>Collector to Emitter Voltage</td> <td style="text-align: right;">27 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;">3.5 Amps</td> </tr> </table> <p>Maximum Temperatures</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 45%;">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;">+ 200°C</td> </tr> </table>	BVces	Collector to Emitter Voltage	55 Volts	LVceo	Collector to Emitter Voltage	27 Volts	BVebo	Emitter to Base Voltage	3.5 Volts	Ic	Collector Current	3.5 Amps	Storage Temperature	- 65 to + 150°C	Operating Junction Temperature	+ 200°C	
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ELECTRICAL CHARACTERISTICS @ 25 °C

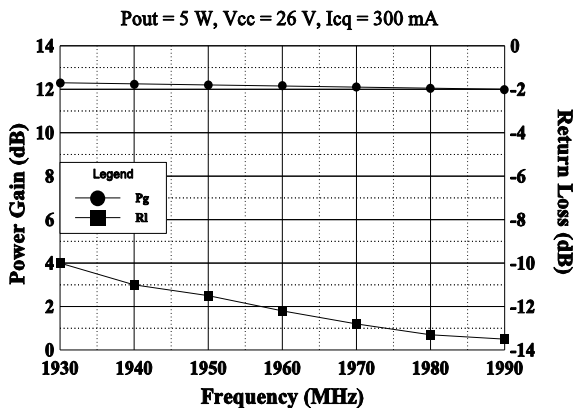
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1930 - 1990 MHz	5			Watt
Pin	Power Input	Vce = 26 Volts			.4	Watt
Pg	Power Gain	Icq = 600 mAmps	11	12		dB
IMD₃	Intermodulation Distortion	As Above		30		dB
η_c	Collector Efficiency	At P1dB				%
VSWR₁	Load Mismatch Tolerance				3:1	

BVces	Collector to Emitter Breakdown	Ic = 50 mA	55			Volts
LVceo	Collector to Emitter Breakdown	Ic = 50 mA	27			Volts
BVebo	Emitter to Base Breakdown	Ie = 10 mA	3.5			Volts
Ices	Collector Leakage Current	Vce = 27 Volts			10	mA
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 0.5 A	20		100	
Cob	Output Capacitance	F = 1 MHz, Vcb = 28 V				pF
θjc	Thermal Resistance	Tc = 25°C			5.0	°C/W

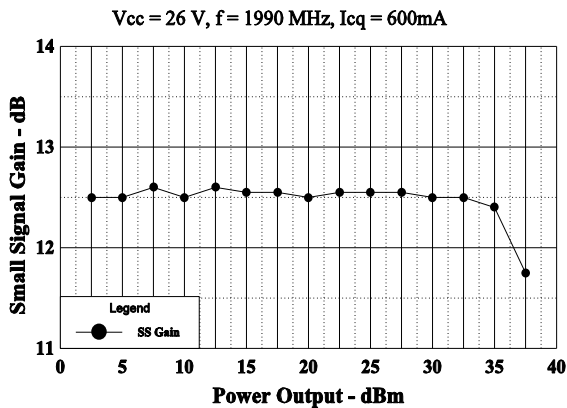
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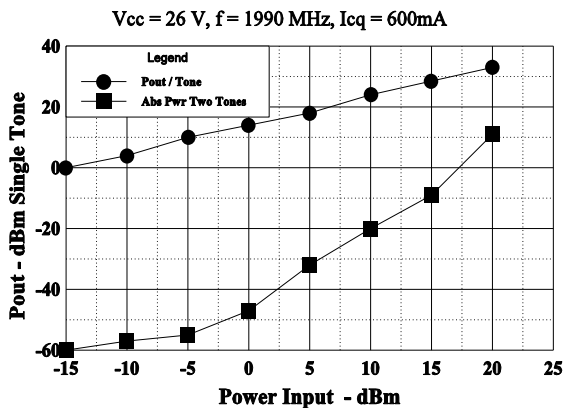
BROADBAND POWER GAIN & RETURN LOSS



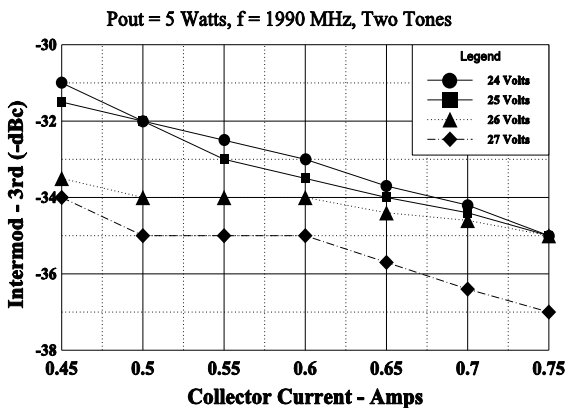
Power Gain vs Power Output



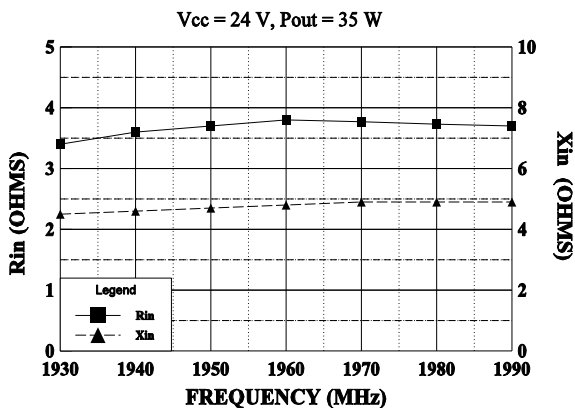
Two Tone Intermodulation Distortion



THIRD ORDER IMD vs COLLECTOR CURRENT



INPUT IMPEDANCE



LOAD IMPEDANCE

