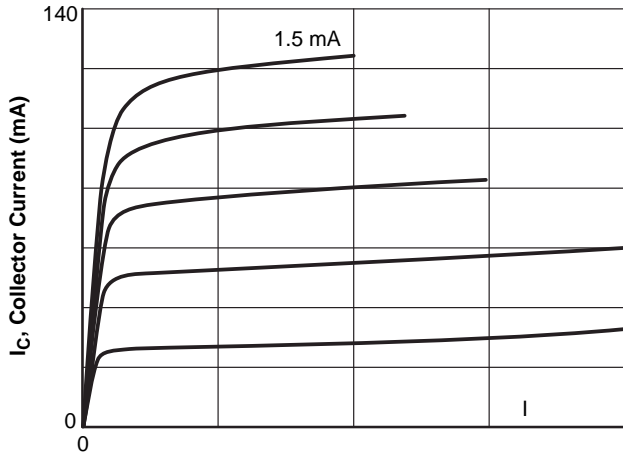


TYPICAL CHARACTERISTICS



V_{CE} , Collector-to-Emitter Voltage (V)

Figure 1. $I_C - V_{CE}$

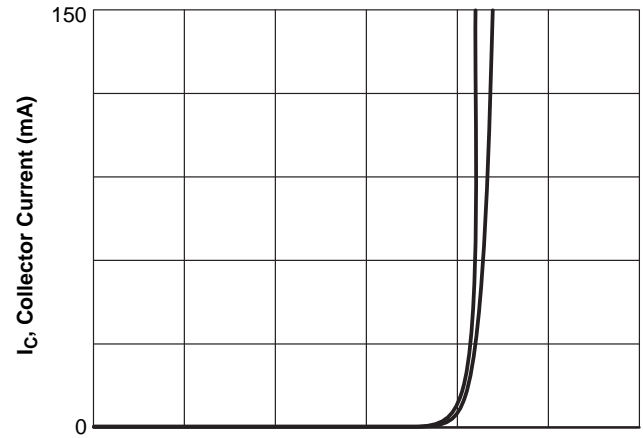


Figure 2. $I_C - V_{BE}$

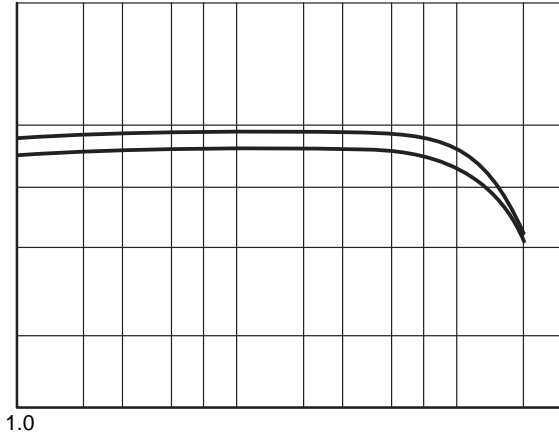
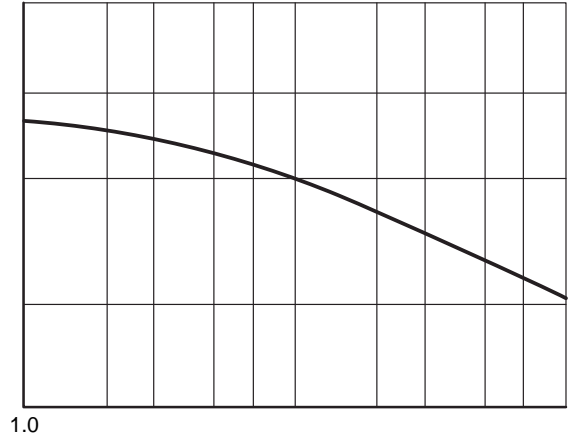
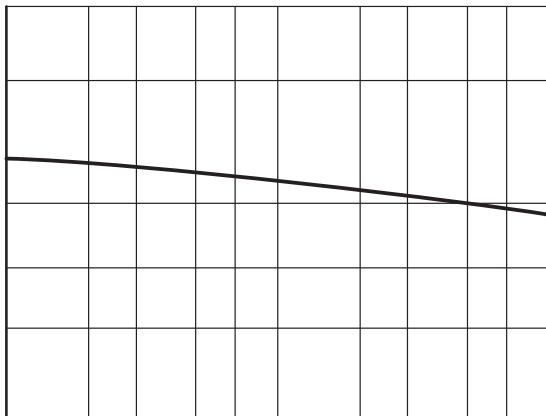


Figure 3. $h_{FE} - I_C$



$|S_{21}|^2$, Forward Transfer Gain (dB)



MCH4020

$V_{CE} = 1 \text{ V}$, $I_C = 50 \text{ mA}$

Freq (MHz)	S11	$\angle S11$	S21	$\angle S21$	S12	$\angle S12$	S22	$\angle S22$
200	0.652	-152.6	22.719	111.2	0.024	50.4	0.545	-102.4
400	0.694	-168.0	12.745	95.1	0.034	54.6	0.466	-133.3
600	0.693	-174.1	8.865	86.6	0.045	58.6	0.442	-140.7
800	0.694	179.3	6.618	81.7	0.055	61.5	0.422	-149.5
1000	0.693	174.3	5.279	77.7	0.066	63.1	0.415	-154.8
1200	0.697	170.1	4.399	74.2	0.078	64.0	0.410	-159.2
1400	0.698	166.3	3.771	70.8	0.089	64.0	0.407	-162.2
1600	0.700	162.8	3.307	67.7	0.100	63.8	0.405	-165.0
1800	0.700	159.6	2.961	64.7	0.111	63.3	0.403	-167.1
2000	0.700	156.8	2.683	61.8	0.122	62.7	0.405	-169.1
2200	0.699	153.5						

MCH4020

$V_{CE} = 1 \text{ V}$, $I_C = 100 \text{ mA}$

Freq (MHz)	S11	$\angle S11$	S21	$\angle S21$	S12	$\angle S12$	S22	$\angle S22$
200	0.797	-170.2	11.994	103.3	0.023	46.0	0.462	-142.7
400	0.821	-178.6	6.267	90.3	0.031600	0.8294	1.1228	681.7323

Tm(90.2.346 .9075.961 690.69 53.802 .9



MCH4020

S Parameter (Common Emitter)

$V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$

Freq (MHz)	S11	$\angle S11$	S21	$\angle S21$	S12	$\angle S12$	S22	$\angle S22$
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200

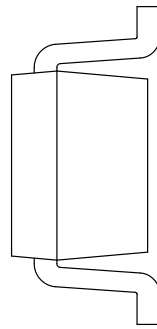
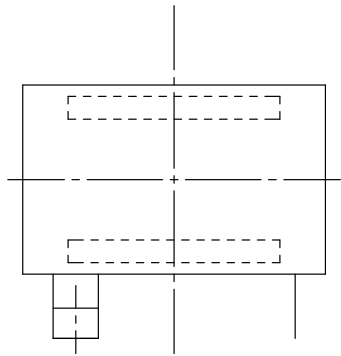
MCH4020

S Parameter (Common Emitter)

$V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$

Freq (MHz)	S11	$\angle S11$	S21	$\angle S21$	S12	$\angle S12$	S22	$\angle S22$
200	0.489	-128.9	33.664	121.6	0.019	61.0	0.625	-65.5
400	0.568	-154.7	19.269	100.2	0.028	61.3	0.449	-94.0
600	0.579	-163.6	13.271	90.3	0.038	64.6		

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