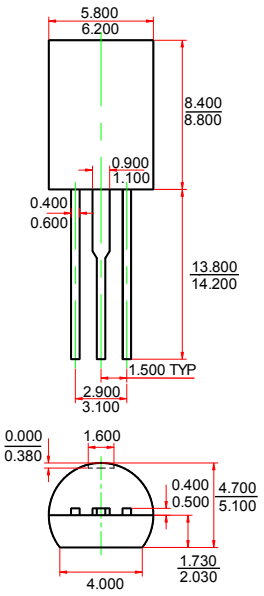
2SA1020

TO-92MOD Transistor (PNP)

RoHS COMPLIANT

1. EMITTER
2. COLLECTOR
3. BASE

TO-92MOD



Dimensions in inches and (millimeters)

Features

Power amplifier applications

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current –Continuous	-2	A
P_C	Collector Power Dissipation	900	mW
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =-100μA,I_E=0	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =-10mA,I_B=0	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-50V,I_E=0			-1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0			-1	μA
DC current gain	h_{FE1}	V_{CE}=-2V,I_C=-0.5A	70		240	
	h_{FE2}	V_{CE}=-2V,I_C=-1.5A	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-1A,I_B=-50mA			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-1A,I_B=-50mA			-1.2	V
Transition frequency	f_T	V_{CE}=-2V,I_C=-500mA		100		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0,f=1MHz		40		pF
Turn-on time	t_{on}	V_{CC}=-30V,I_{B1}=-I_{B2}=-0.05A, I_C=-1A		0.1		μs
Storage time	ts			1		μs
Fall time	tf			0.1		μs

CLASSIFICATION OF h_{FE1}

Rank	O	Y
Range	70-140	120-240

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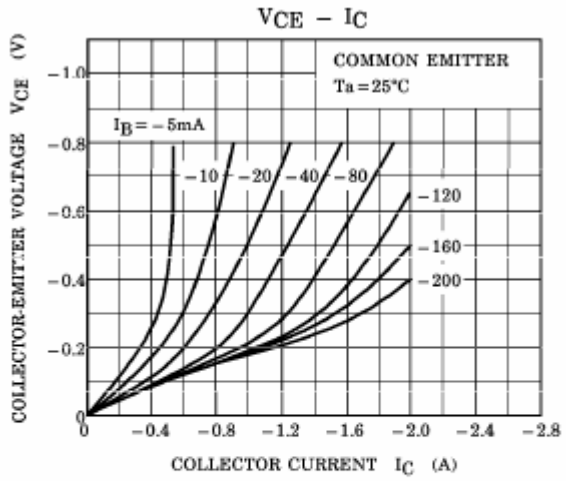
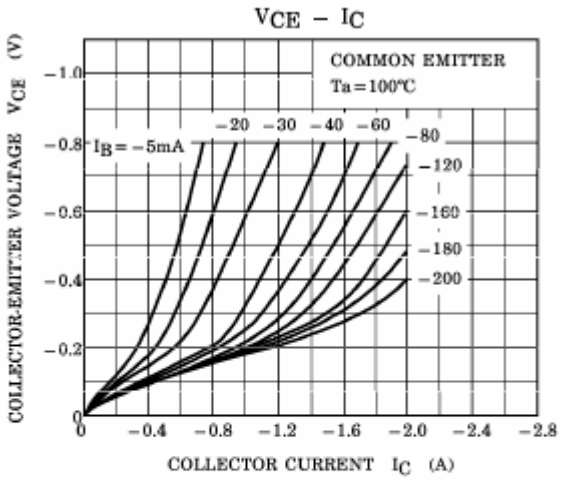
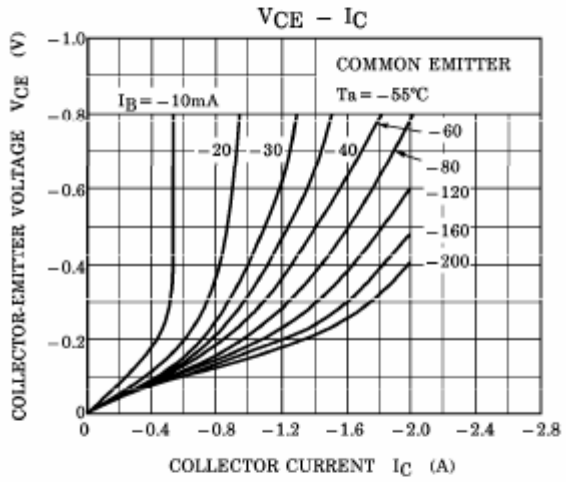
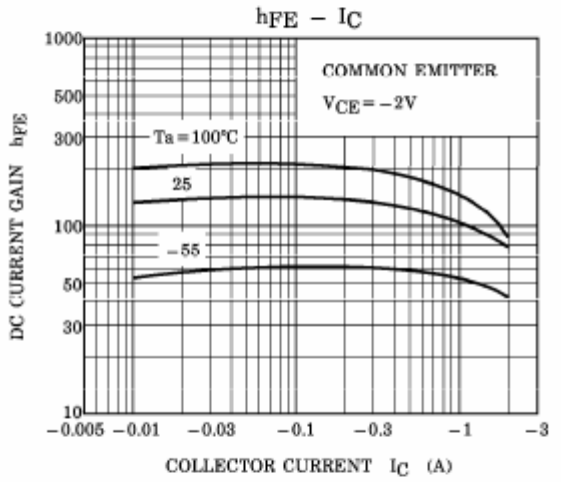
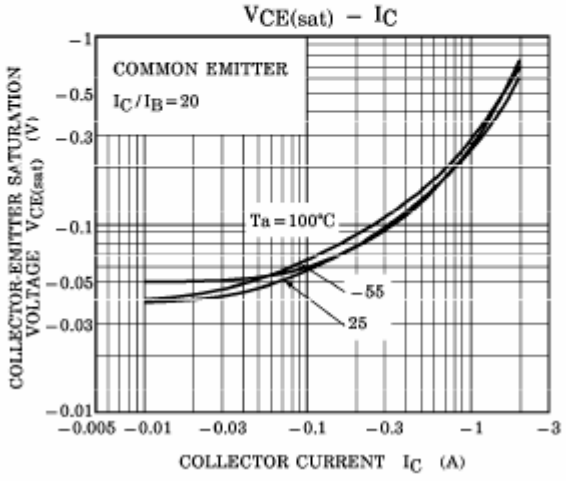
Typical Characteristics

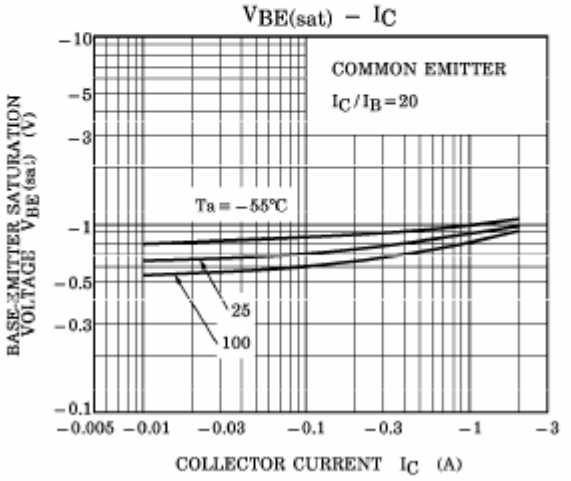












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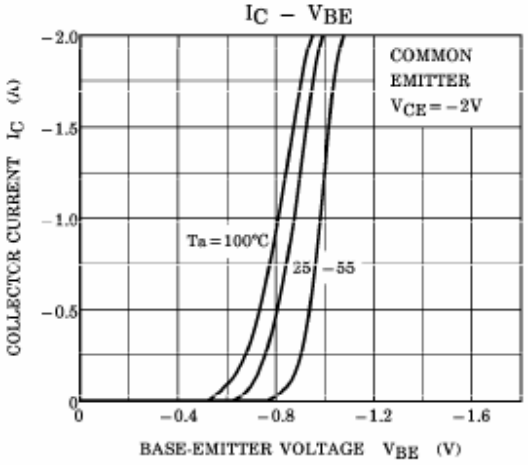
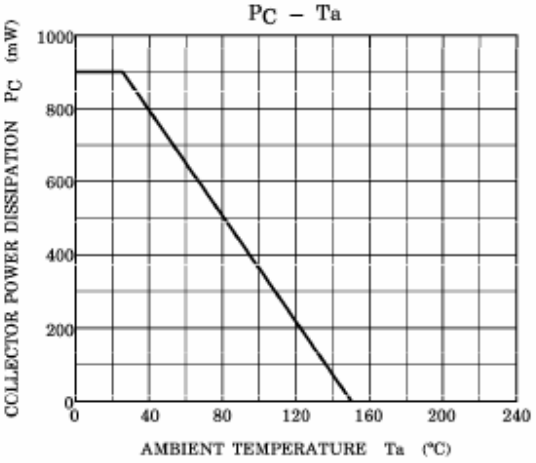
I_C – V_{BE}



P_C – Ta



SAFE OPERATION AREA