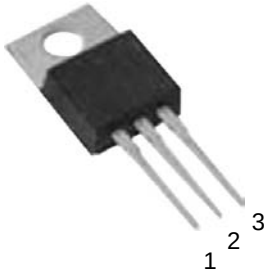
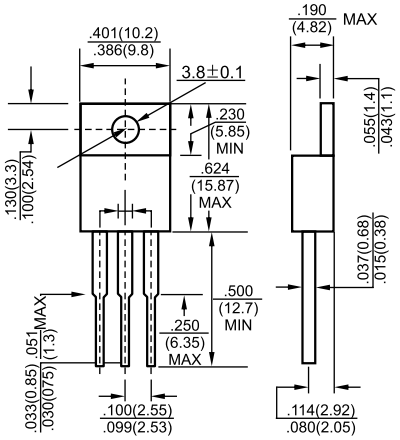
2SA1012(PNP)

TO-220 Transistor



1. **BASE**
2. **COLLECTOTR**
3. **EMITTER**

TO-220



Dimensions in inches and (millimeters)

Features

- ✧ **HIGH CURRENT SWITCHING APPLICATIONS.**
- ✧ **Low Collector Saturation Voltage**
  : $V_{CE(SAT)}$ = - 0.4V(MAX) at I_C= - 3A
- ✧ **High Speed Swithing Time : t_{stg} = 1.0us (Typ.)**
- ✧ **Complementary to 2SC2562**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-5	A
P_C	Collector Power Dissipation	2	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-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 =-1mA, I_E=0	-60			V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	I_C =-1mA, 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		$h_{FE(1)}$	V_{CE}=-1V, I_C=-1A	70		240	
		$h_{FE(2)}$ *	V_{CE}=-1V, I_C=-3A	30			
Collector-emitter saturation voltage		$V_{CE(sat)}$ *	I_C=-3A, I_B=150mA		-0.2	-0.4	V
Base-emitter saturation voltage		$V_{BE(SAT)}$	I_C=-3A, I_B=150mA		-0.9	-1.2	V
Transition frequency		f_T	V_{CE}=-4V, I_C=-1A		60		MHz
Collector output capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz		170		pF
Switching time	**Turn-on Time**	t_{on}	V_{CC}=-30V,I_C=-3A, I_{B1}=-I_{B2}=-0.15A		0.1		us
	Storage Time	t_{stg}			1.0		
	Fall Time	t_f			0.1		

***Pulse test: t_p≤300μS, δ≤0.02.**

CLASSIFICATION OF h_{FE}

Rank	**O**	**Y**
Range	70-140	120-240

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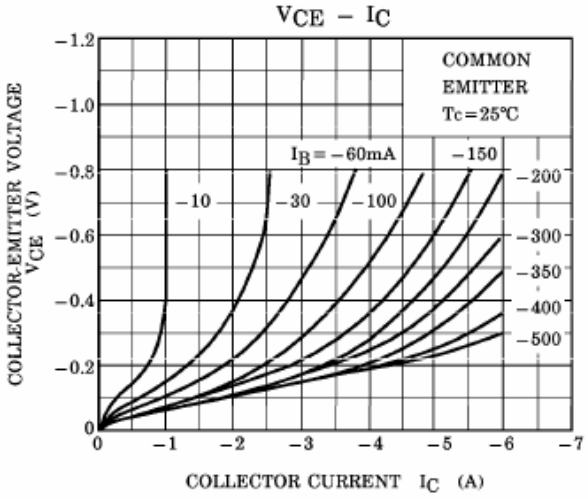
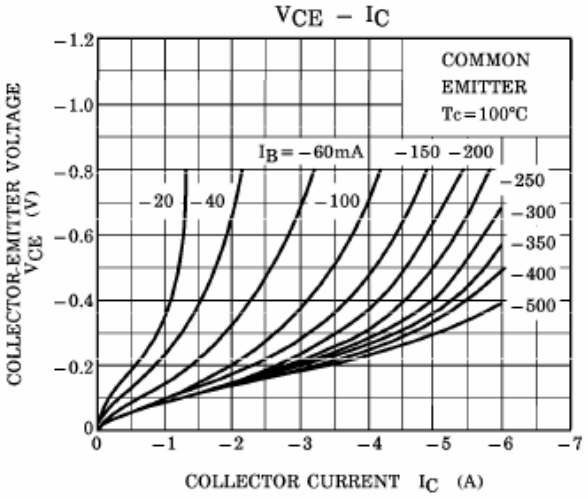
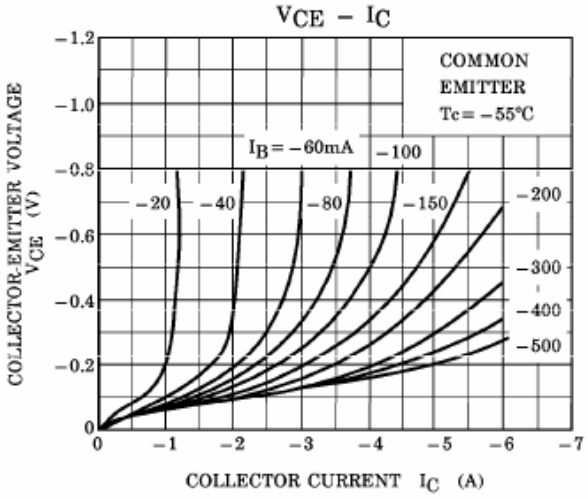
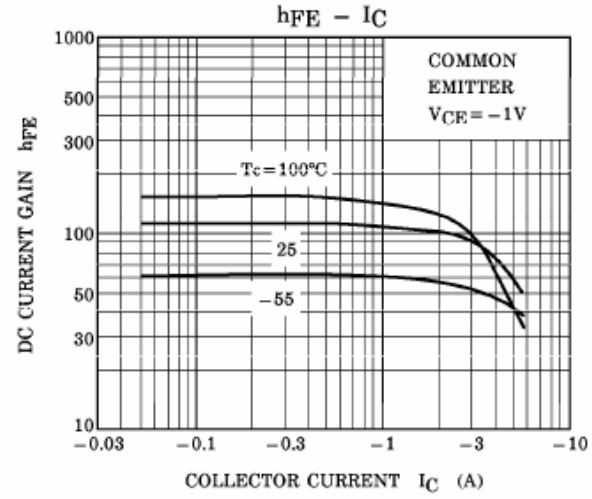
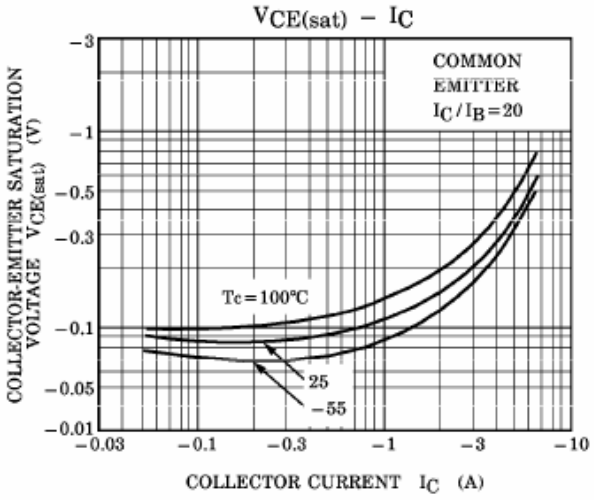
Typical Characteristics

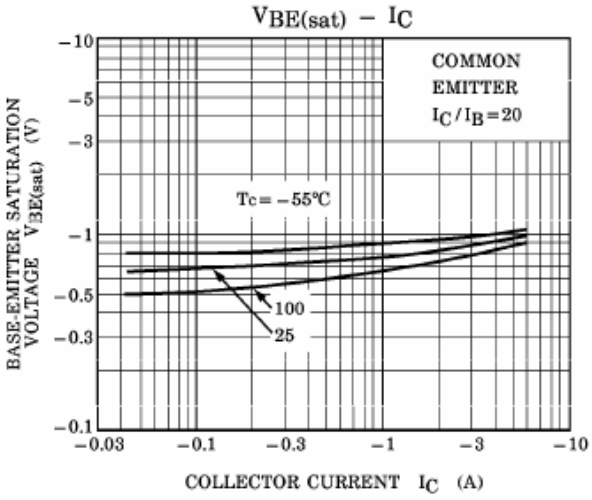












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