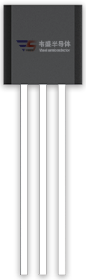
2SA1020 TRANSISTOR (PNP)

FEATURES

- Power Amplifier Applications



1.EMITTER

2.COLLECTOR

3.BASE

TO-92

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SA1020	TO-92	Bulk	1000pcs/Bag
2SA1020-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

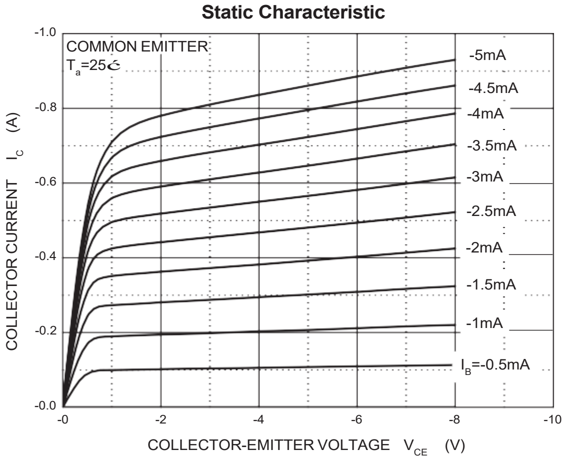
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-2	A
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	℃ /W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

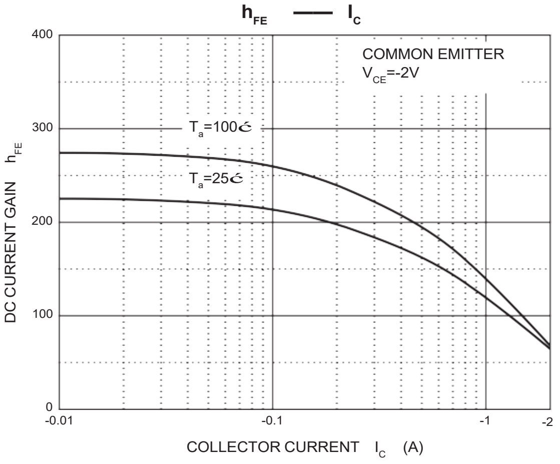
T_a=25℃ unless otherwise specified

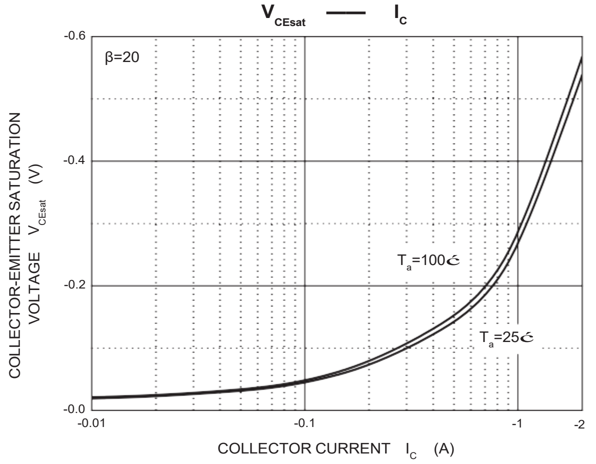
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =-100μA,I_E=0	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =-10mA,I_B=0	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	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	$h_{FE(1)}$	V_{CE}=-2V,I_C=-0.5A	70		240	
	$h_{FE(2)}$	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

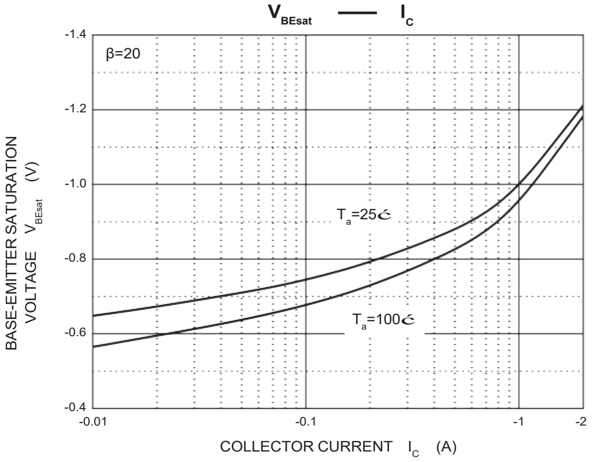
CLASSIFIC ATION OF $h_{FE(1)}$

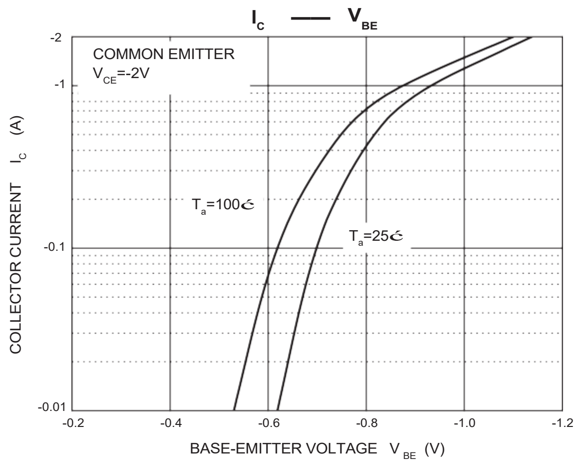
Rank	O	Y
Range	70-140	120-240

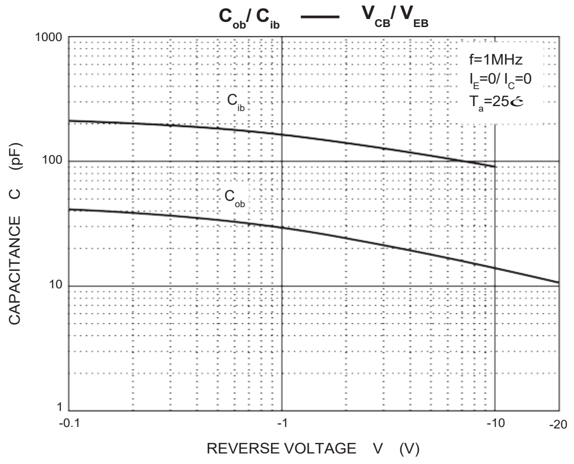

Static Characteristic

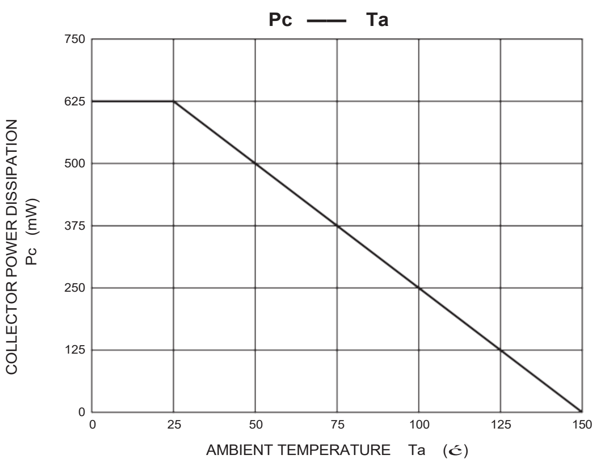

h_{FE} — I_C


V_{CEsat} — I_C


V_{BEsat} — I_C


I_C — V_{BE}


C_{ob}/ C_{ib} — V_{CB}/ V_{EB}


Pc — Ta