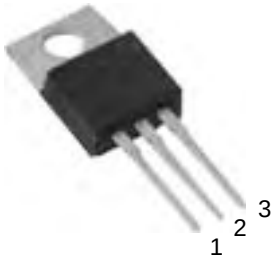
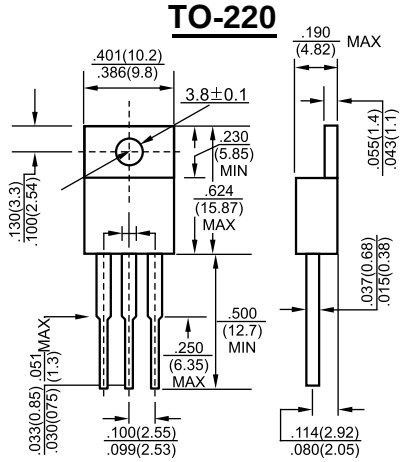
2SA940

TO-220 Bipolar Transistor(PNP)



1. BASE
2. COLLECTOR
3. EMITTER

TO-220



Dimensions in inches and (millimeters)

Features

- ✧ Wide safe Operating Area.
- ✧ Complementary to 2SC2703

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Paramenter	Value	Units
V_{CBO}	Collector-Base Voltage	-150	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-1.5	A
P_C	Collector Power Dissipation	1.5	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 =-100μA, I_E=0	-150			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =-1mA, I_B=0	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-120V, I_E=0			-10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0			-10	μA
DC current gain	h_{FE}	V_{CE}=-10V, I_C=-0.5A	40		140	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-0.5A, I_B=-50mA			-1.5	V
Base-emitter voltage	V_{BE}	V_{CE}=-10V, I_C=-0.5A	-0.65		-0.85	V
Transition frequency	f_T	V_{CE}=-10V, I_C=-0.5A		4		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz		55		pF

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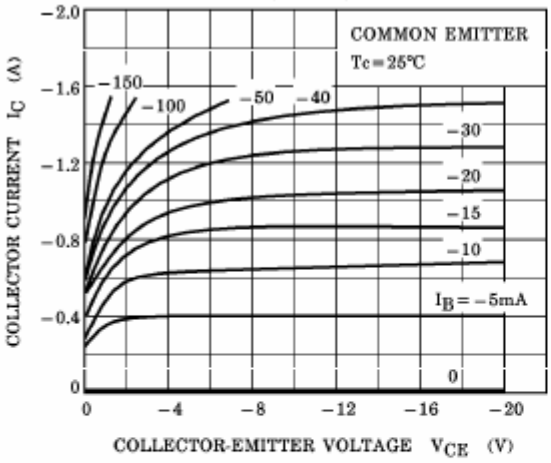
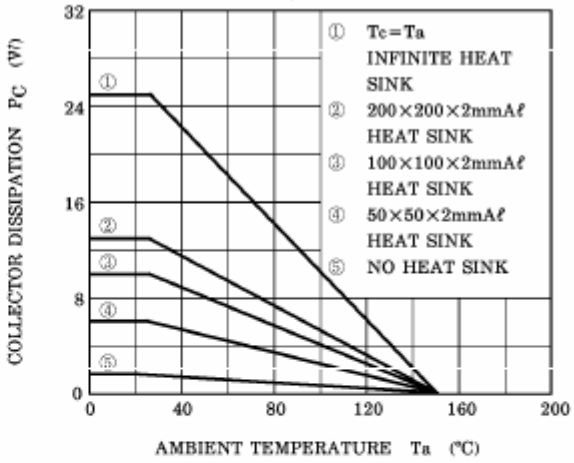
Typical Characteristics

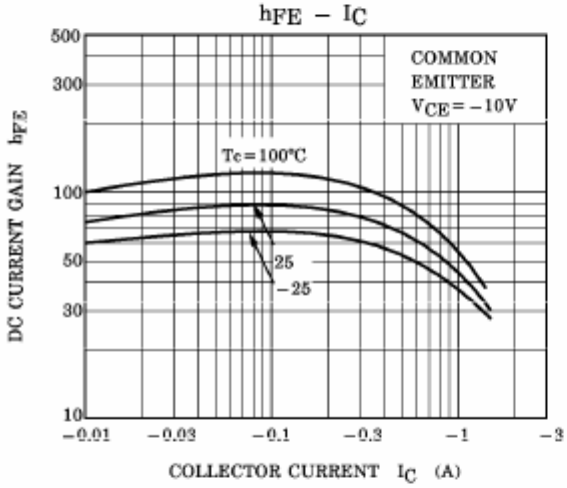
$I_C - V_{CE}$



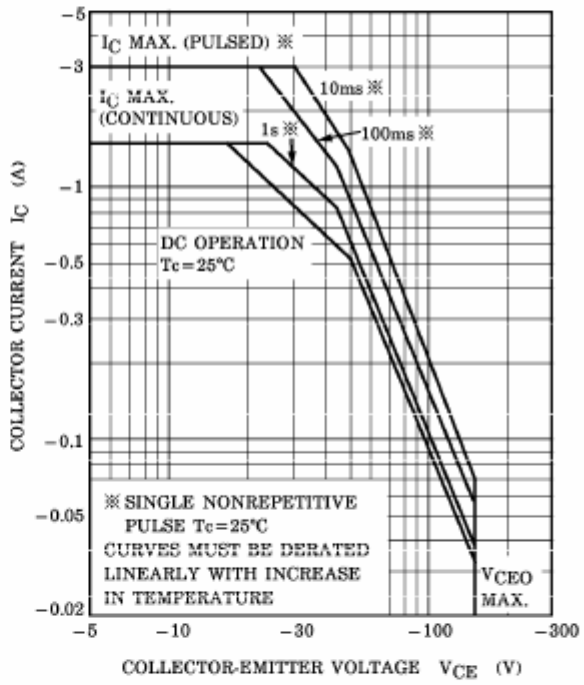
$P_C - T_a$



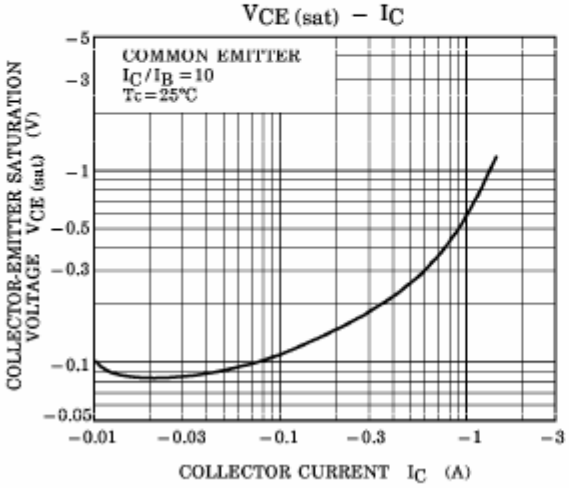
$h_{FE} - I_C$



SAFE OPERATING AREA



$V_{CE\,(sat)} - I_C$



Packge	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
TO-220	50pcs/Tube	558×148×38	1000	565×225×175	5000