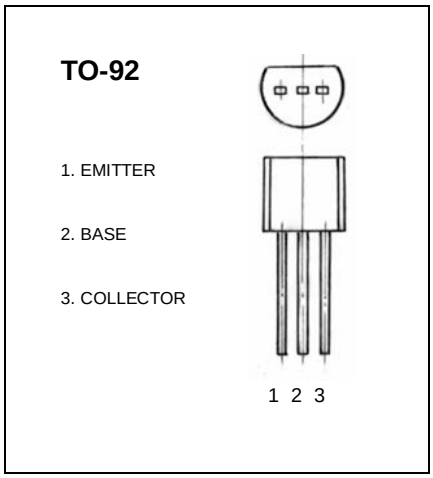
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

A42 TRANSISTOR (NPN)



FEATURES

Power dissipation

$P_{CM:}$ 0.625 W (Tamb=25℃)

Collector current

$I_{CM:}$ 0.5 A

Collector-base voltage

$V_{(BR)CBO:}$ 300 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

ELECTRICAL CHARACTERISTICS(Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	Ic= 100μA, I_E=0	300			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	Ic= 1mA, I_B=0	300			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}= 200 V, I_E=0			0.25	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V, I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}= 10 V, I_C= 1 mA	60			
	$h_{FE(2)}$	V_{CE}= 10V, IC = 10 mA	80		250	
	$H_{FE(3)}$	V_{CE}= 10 V, I_C=30 mA	75			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C= 20 mA, I_B= 2 mA			0.2	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C= 20mA, I_B= 2 mA			0.9	V
Transition frequency	f_T	V_{CE}=20 V, I_C= 10 mA f =30MHz	50			MHz

CLASSIFICATION OF $h_{FE(2)}$

Rank	A	B_1	B_2	C
Range	80-100	100-150	150-200	200-250