



SHENZHEN LONG JING MICRO-ELECTRONICS CO., LTD.

TO-92 Plastic-Encapsulate Transistors

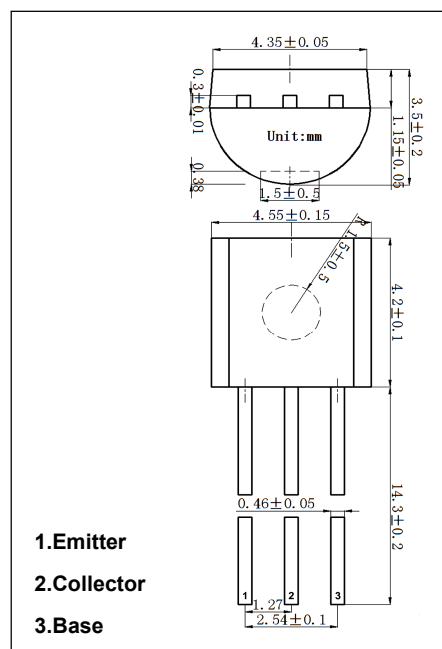
ALJ13002 NPN Transistors

Features

- Power Switching Applications

Maximum Ratings (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector Base Voltage	600	V
V _{CEO}	Collector Emitter Voltage	400	V
V _{EBO}	Emitter Base Voltage	6	V
I _C	Collector Current -Continuous	0.3	A
P _C	Collector Power Dissipation	0.9	W
T _j	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55~150	°C



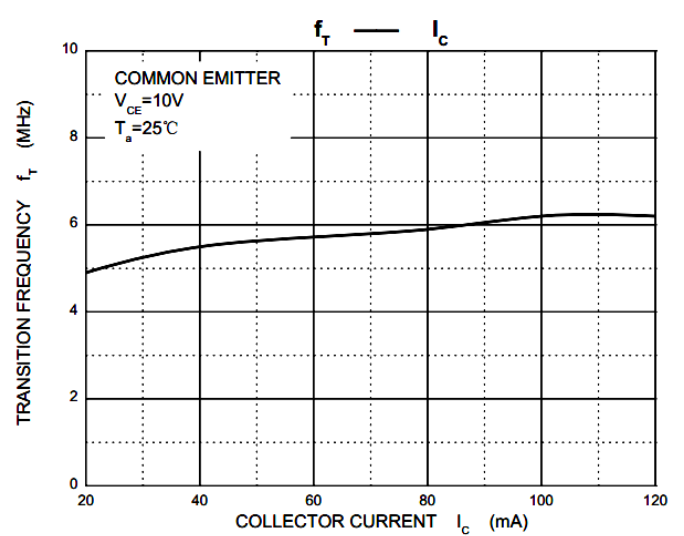
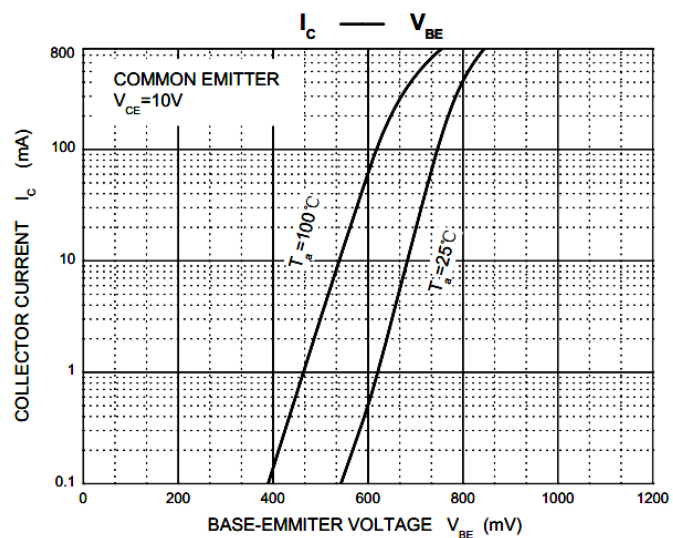
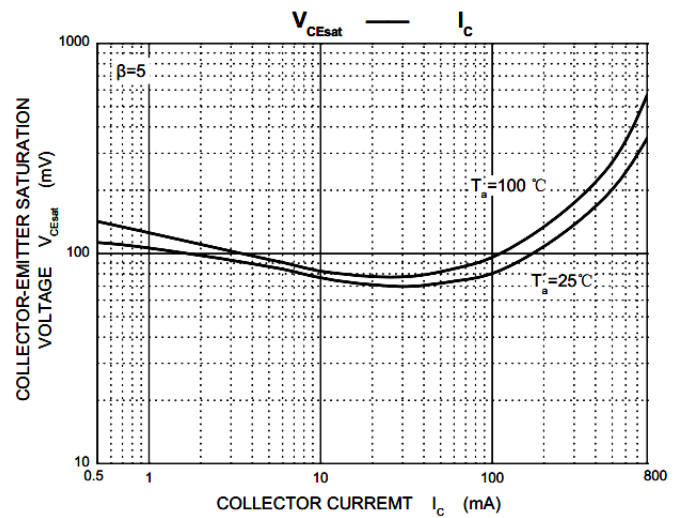
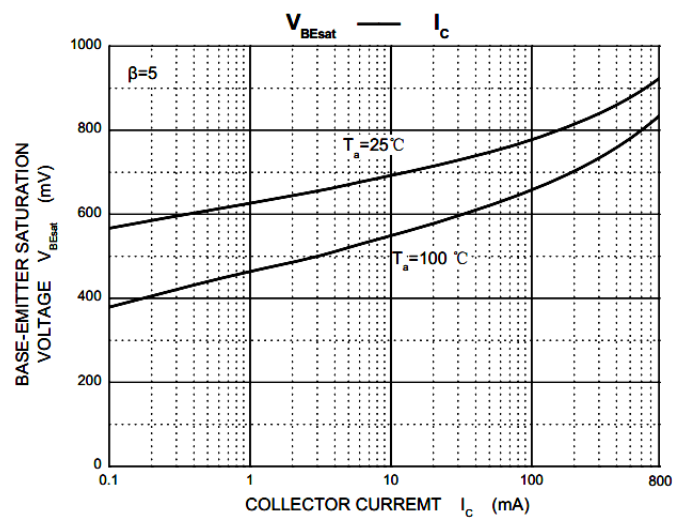
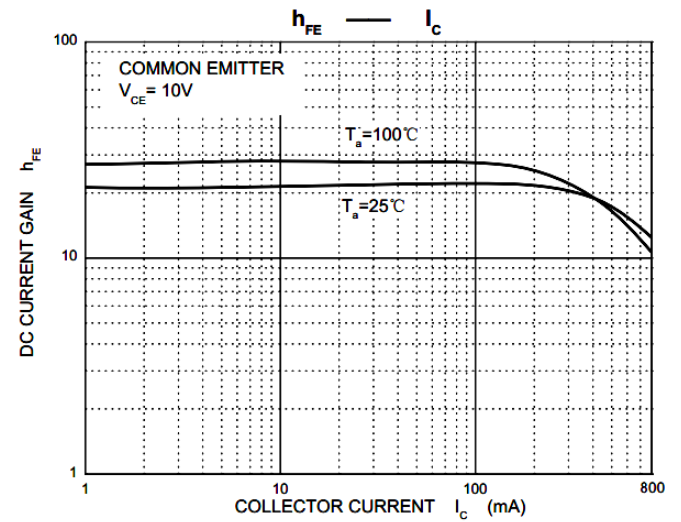
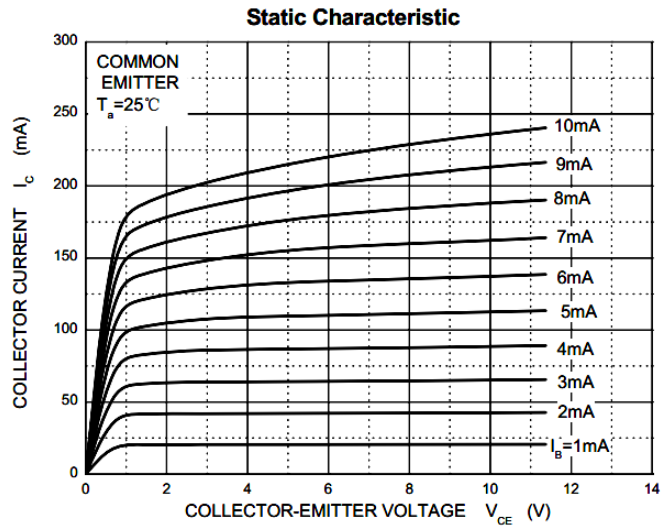
Electrical Characteristics (T_a=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =100μA, I _E =0	600			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =1mA, I _B =0	400			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =100μA, I _C =0	6			V
I _{CBO}	Collector cut-off current	V _{CB} = 600V, I _E =0			100	μA
I _{CEO}	Collector cut-off current	V _{CE} = 400V, I _B =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} = 6V, I _C =0			100	μA
h _{FE(1)}	DC current gain	V _{CE} =10V, I _C =200mA	9		40	
h _{FE(2)}		V _{CE} =10V, I _C =0.25mA	5			
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =200mA, I _B =40mA			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =200mA, I _B =40mA			1.1	V
f _T	Transition frequency	V _{CE} =10V, I _C =0.1A, f =1MHz	5			MHz
t _f	Fall time	I _C =1A, I _{B1} =-I _{B2} =0.2A			0.5	μs
t _s	Storage time	V _{CC} =100V			2.5	μs

Classification OF h_{FE1}

Range	9-15	15-20	20-25	25-30	30-35	35-40
-------	------	-------	-------	-------	-------	-------

Typical Characteristics



Typical Characteristics (Continued)

