CHENMKO ENTERPRISE CO.,LTD

3N13003GP

Halogens free devices

SMALL FLAT
NPN Epitaxial Transistor

VOLTAGE 400 Volts CURRENT 1.5 Ampere

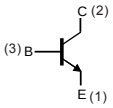
APPLICATION
* Power driver and Dc to DC convertor .

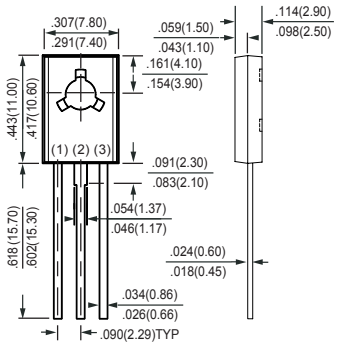
FEATURE
* Small flat package. (TO-126)
* PC= 1.5 W (mounted on ceramic substrate).
* High saturation current capability.

CONSTRUCTION
* NPN Switching Transistor

TO-126

CIRCUIT





1 Emitter
2 Collector
3 Base

Dimensions in inches and (millimeters)

TO-126

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	700	V
V_{CEO}	collector-emitter voltage	open base	–	400	V
V_{EBO}	emitter-base voltage	open collector	–	9	V
I_C	collector current (DC)		–	1.5	A
P_C	Collector power dissipatio		–	1.5	W
T_{stg}	storage temperature		–55	+150	°C
T_j	junction temperature		–	150	°C

ELECTRICAL CHARACTERISTIC (3N13003GP)

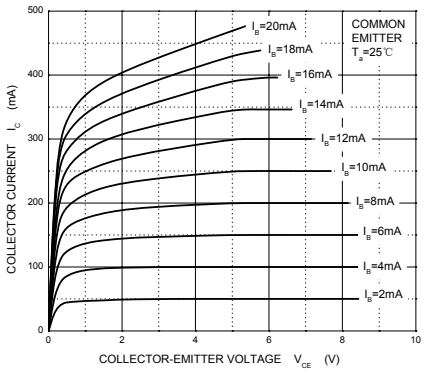
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =5mA, I_E=0	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=2mA, I_C=0	9			V
Collector cut-off current	I_{CBO}	V_{CB}=700V,I_E=0			1	mA
Collector cut-off current	I_{CEO}	V_{CE}=400V,I_B=0			0.5	mA
Emitter cut-off current	I_{EBO}	V_{EB}=9V, I_C=0			1	mA
DC current gain	h_{FE1}	V_{CE}=5V, I_C= 0.5 A	8		40	
	h_{FE2}	V_{CE}=5V, I_C= 1.5A	5			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A,I_B=0.25A			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=1A,I_B=0.25A			1.2	V
Transition frequency	f_T	V_{CE}=10V,Ic=100mA, f =1MHz	5			MHz
Fall time	t_f	I_C=1A, I_{B1}=-I_{B2}=0.2A, V_{CC}=100V			0.5	μs
Storage time	**t**s	I_C=250mA (UI9600)	2		4	μ s

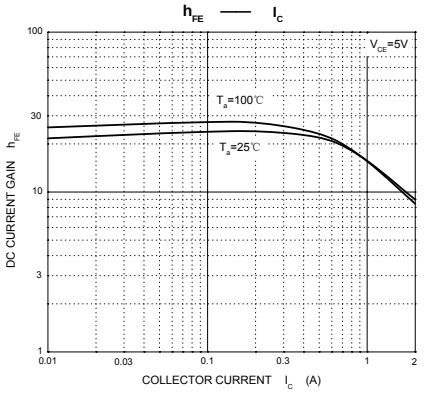
RATING CHARACTERISTIC CURVES (3N13003GP)

Typical Electrical Characteristics

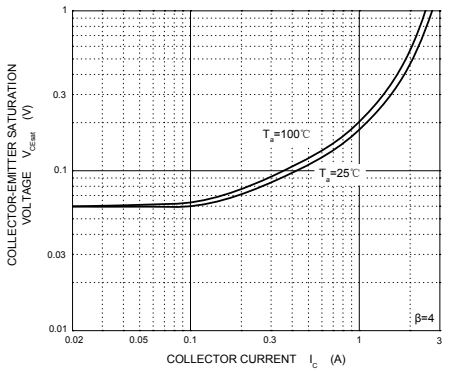
Static Characteristic



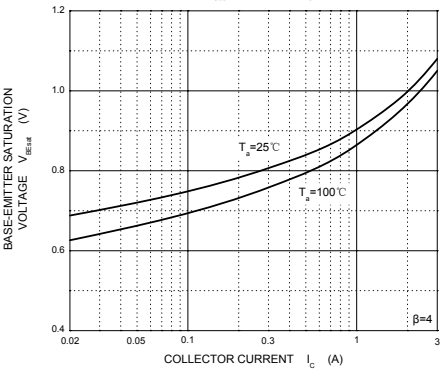
h_{FE} —— I_C



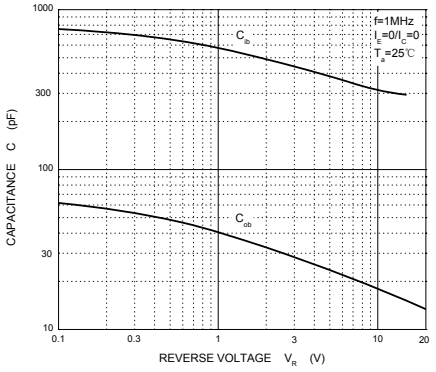
V_{CEsat} —— I_C



V_{BEsat} —— I_C



C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}



P_C —— T_a