

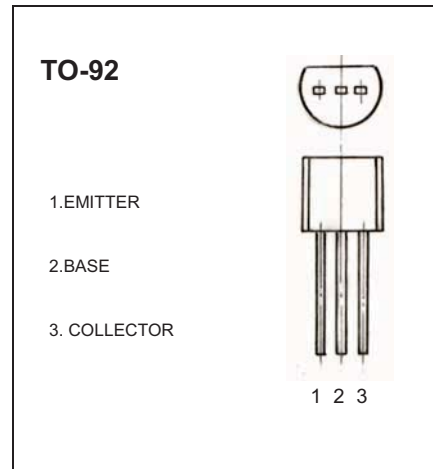
TO-92 Plastic-Encapsulate Transistor 2N3906

FEATURE

- PNP silicon epitaxial planar transistor for switching and Amplifier applications
- As complementary type, the NPN transistor 2N3904 is Recommended
- This transistor is also available in the SOT-23 case with the type designation MMBT3906

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-0.2	A
P _C	Collector Power Dissipation	0.625	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

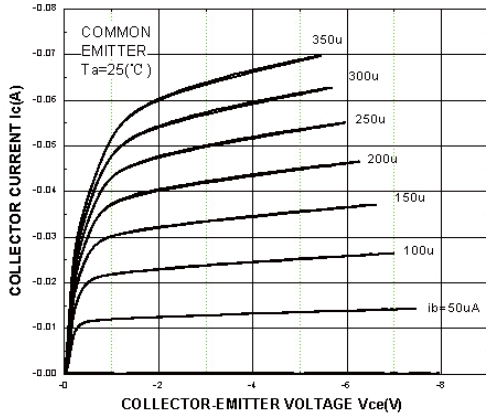
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = -10μA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA, I _B =0	-40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -10μA, I _C =0	-5			V
Collector cut-off current	I _{CB0}	V _{CB} = -40 V, I _E =0			-0.1	μA
Collector cut-off current	I _{CEX}	V _{CE} = -30 V, V _{BE(off)} = -3V			-50	nA
Emitter cut-off current	I _{EBO}	V _{EB} = -5 V, I _C =0			-0.1	μA
DC current gain	h _{FE1}	V _{CE} = -1 V, I _C = -10mA	100		400	
	h _{FE2}	V _{CE} = -1 V, I _C = -50mA	60			
	h _{FE3}	V _{CE} = -1 V, I _C = -100mA	30			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -50mA, I _B = -5mA			-0.4	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -50mA, I _B = -5mA			-0.95	V
Transition frequency	f _T	V _{CE} = -20V, I _C = -10mA f = 100MHz	250			MHz
Delay Time	t _d	V _{CC} = -3V, V _{BE} = -0.5V, I _C = -10mA, I _{B1} = -1mA			35	ns
Rise Time	t _r	I _C = -10mA, I _{B1} = -1mA			35	ns
Storage Time	t _s	V _{CC} = -3V, I _C = -10mA			225	ns
Fall Time	t _f	I _{B1} = I _{B2} = -1mA			75	ns

CLASSIFICATION OF h_{FE1}

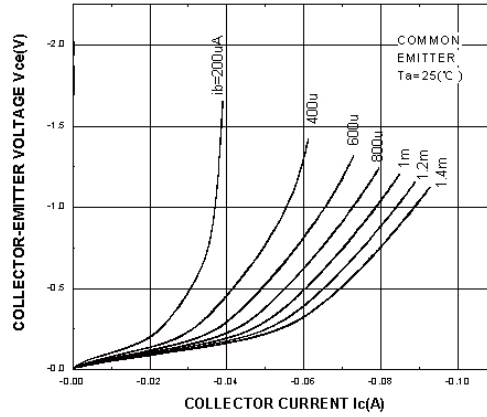
Rank	O	Y	G
Range	100-200	200-300	300-400

2N3906

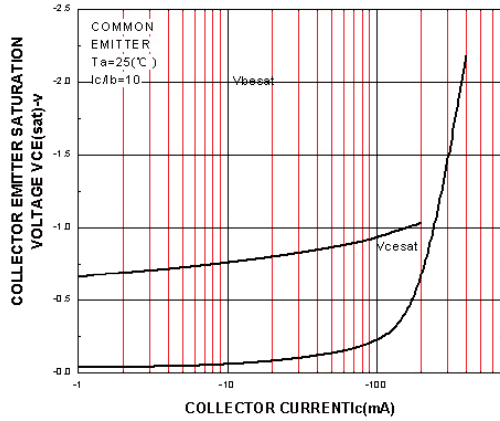
Ic-Vce



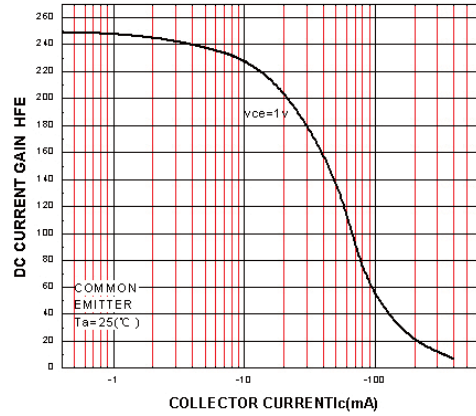
Vce-Ic



Vcesat-Ic
Vbesat-Ic



hFE-Ic



Pc-Ta

