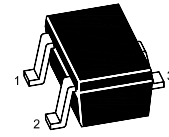


MMBTSA1980W

PNP Silicon Epitaxial Planar Transistor

for general small signal amplifier applications.

The transistor is subdivided into four groups, O, Y, G and L, according to its DC current gain.



1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$-V_{\text{CBO}}$	50	V
Collector-Emitter Voltage	$-V_{\text{CEO}}$	50	V
Emitter-Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	150	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	-55 +150	$^\circ\text{C}$

Characteristics at $T_{\text{amb}} = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{\text{CE}} = 6\text{ V}$, $-I_{\text{C}} = 2\text{ mA}$	Current Gain Group			
O	h_{FE}	70	140	-
Y	h_{FE}	120	240	-
G	h_{FE}	200	400	-
L	h_{FE}	300	700	-
Collector Base Breakdown Voltage at $-I_{\text{C}} = 100\text{ }\mu\text{A}$	$-V_{(\text{BR})\text{CBO}}$	50	-	V
Collector Emitter Breakdown Voltage at $-I_{\text{C}} = 1\text{ mA}$	$-V_{(\text{BR})\text{CEO}}$	50	-	V
Emitter Base Breakdown Voltage at $-I_{\text{E}} = 10\text{ }\mu\text{A}$	$-V_{(\text{BR})\text{EBO}}$	5	-	V
Collector Cutoff Current at $-V_{\text{CB}} = 50\text{ V}$	$-I_{\text{CBO}}$	-	0.1	μA
Emitter Cutoff Current at $-V_{\text{EB}} = 5\text{ V}$	$-I_{\text{EBO}}$	-	0.1	μA
Collector Emitter Saturation Voltage at $-I_{\text{C}} = 100\text{ mA}$, $-I_{\text{B}} = 10\text{ mA}$	$-V_{\text{CE(sat)}}$	-	0.3	V
Transition Frequency at $-V_{\text{CE}} = 10\text{ V}$, $-I_{\text{C}} = 1\text{ mA}$	f_{T}	80	-	MHz
Collector Output Capacitance at $-V_{\text{CB}} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{OB}	-	7	pF
Noise Figure at $-V_{\text{CE}} = 6\text{ V}$, $-I_{\text{C}} = 0.1\text{ mA}$, $f = 1\text{ KHz}$, $R_{\text{G}} = 10\text{ K}\Omega$	NF	-	10	dB

Fig. 1 P_C-T_a

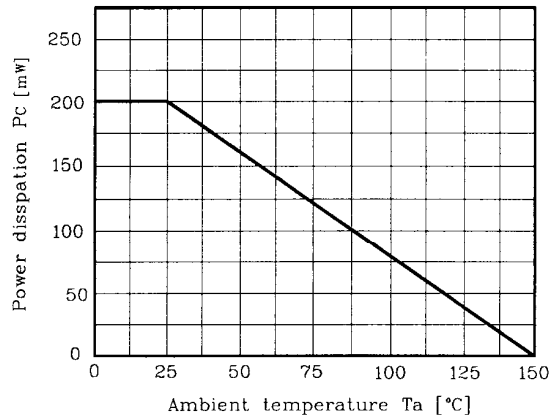


Fig. 2 I_C-V_{BE}

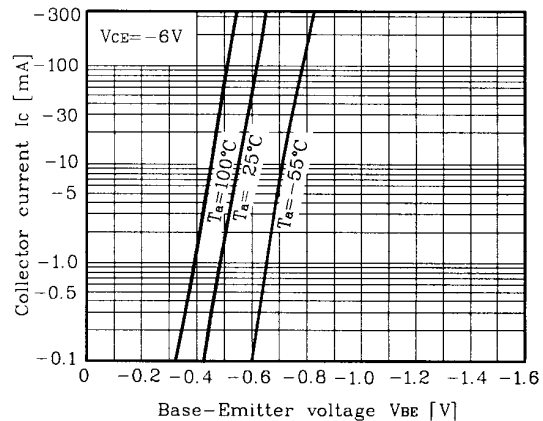


Fig. 3 I_C-V_{CE}

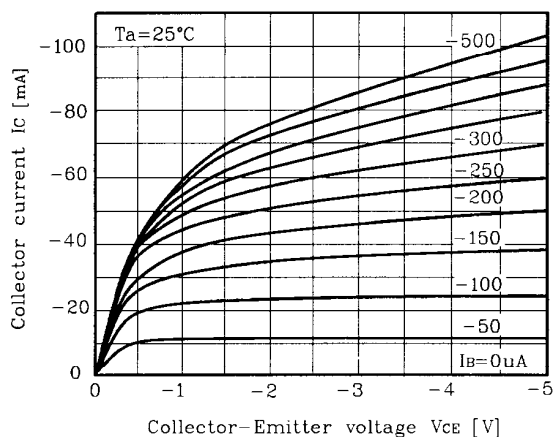


Fig. 4 $h_{FE}-I_C$

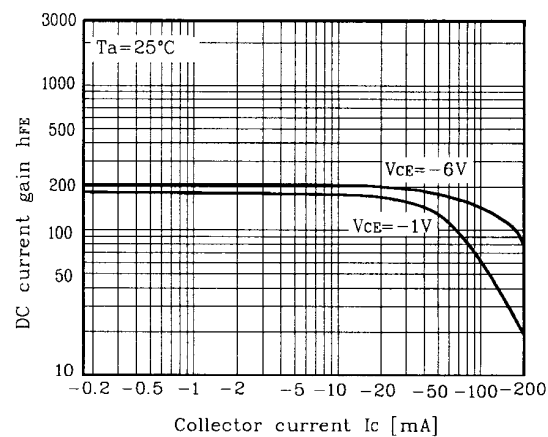


Fig. 5 $V_{CE(sat)}-I_C$

