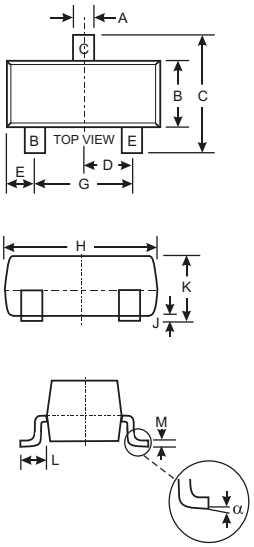
HAICHUANG SEMI

MMBTA92

PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR

Features

- Epitaxial Planar Die Construction.
- Complementary NPN Type Available(MMBTA42).
- Ideal for Medium Power Amplification and Switching.
- Marking Code:2D



SOT-23		
Dim	**Min**	**Max**
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-300	V
Collector Emitter Voltage	V_{CEO}	-300	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	500	mA
Power Dissipation	P_d	300	mW
Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{Stg}	- 55 to + 150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 10 V, $-I_C$ = 1 mA at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA at $-V_{CE}$ = 10 V, $-I_C$ = 30 mA	 h_{FE} h_{FE} h_{FE}	 25 80 25	 - 200 -	 - - -
Collector Base Cutoff Current at $-V_{CB}$ = 200 V	$-I_{CBO}$	-	0.25	μA
Emitter Base Cutoff Current at $-V_{EB}$ = 3 V	$-I_{EBO}$	-	0.1	μA
Collector Base Breakdown Voltage at $-I_C$ = 100 μA	$-V_{(BR)CBO}$	300	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA	$-V_{(BR)CEO}$	300	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 μA	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 20 mA, $-I_B$ = 2 mA	$-V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage at $-I_C$ = 20 mA, $-I_B$ = 2 mA	$-V_{BE(sat)}$	-	0.9	V
Gain Bandwidth Product at $-V_{CE}$ = 20 V, $-I_C$ = 10 mA, f = 100 MHz	f_T	50	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 20 V, f = 1 MHz	C_{ob}	-	6	pF

TYPICAL TRANSIENT CHARACTERISTICS

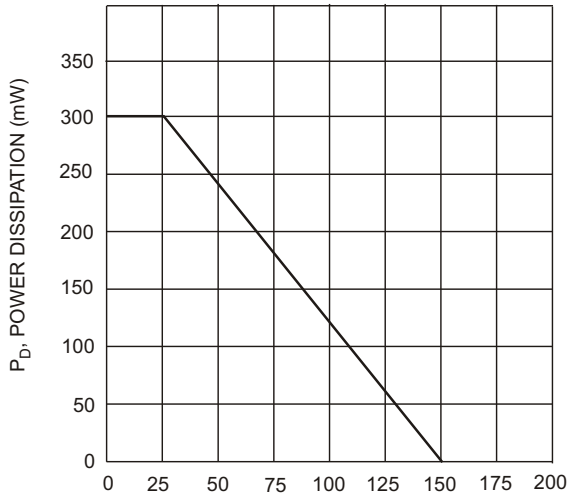


Fig. 1, Max Power Dissipation vs Ambient Temperature

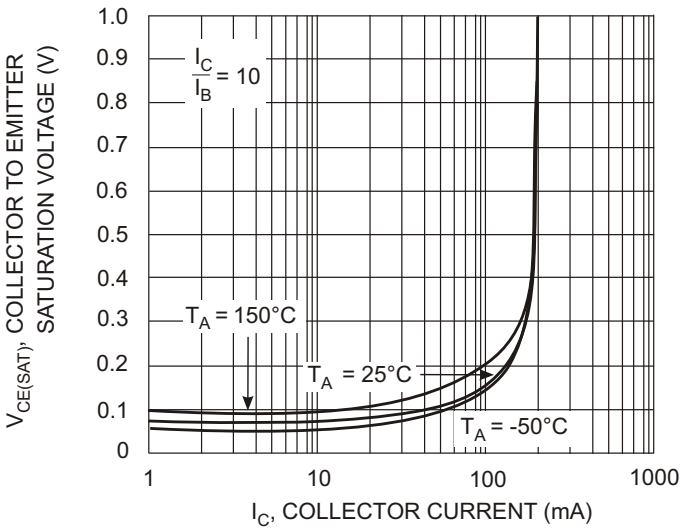


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

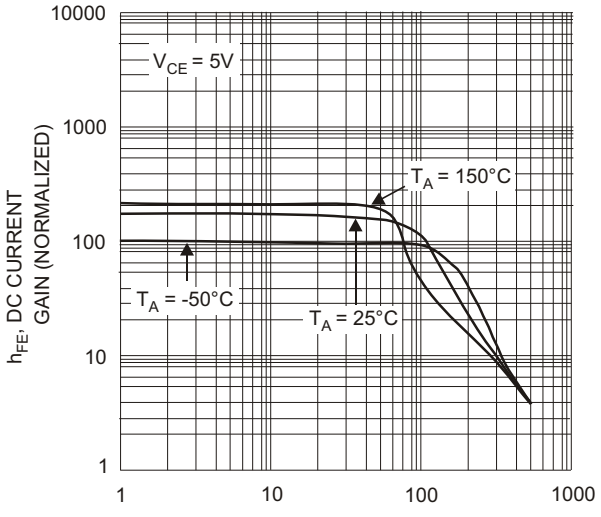


Fig. 3, DC Current Gain vs Collector Current

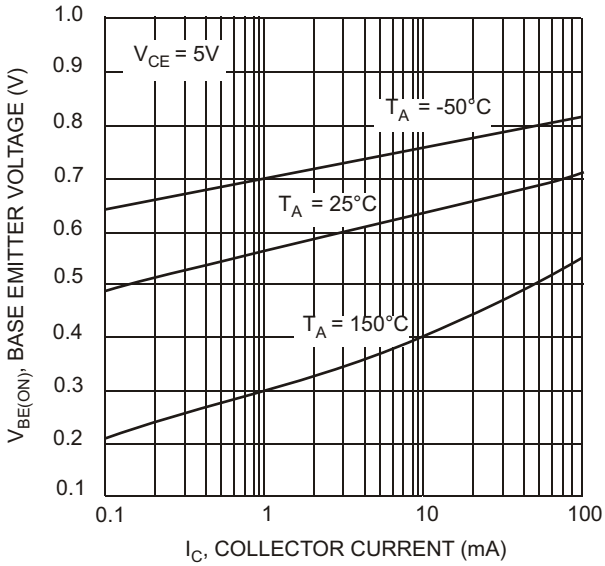


Fig. 4, Base Emitter Voltage vs Collector Current

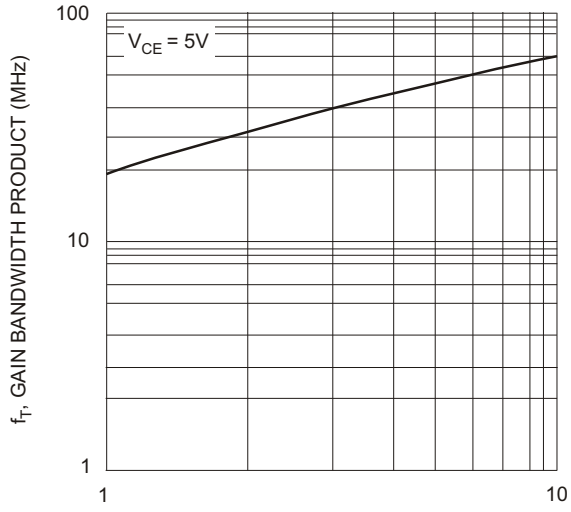


Fig. 5, Gain Bandwidth Product vs Collector Current

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