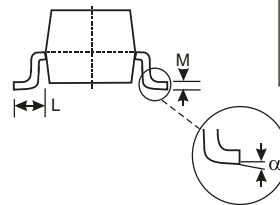
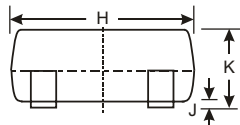
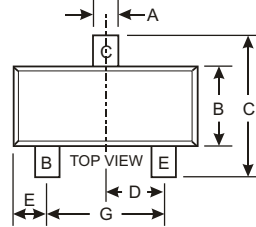
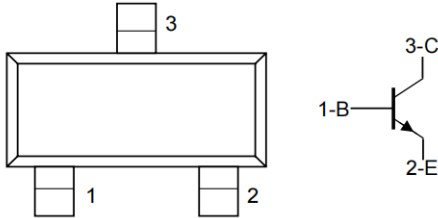


Features

- Epitaxial Planar Die Construction.
- Complementary PNP Type Available(MMBTA92).
- Ideal for Low Power Amplification and Switching.
- Marking Code:1D



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 @ $T_A = 25^\circ\text{C}$ 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}	6	V
Collector Current	I_C	500	mA
Power Dissipation	P_d	300	mW
Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	25	-	-
at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	80	200	-
at $V_{CE} = 10\text{ V}$, $I_C = 30\text{ mA}$	h_{FE}	40	-	-
Collector Base Cutoff Current	I_{CBO}	-	0.1	μA
Emitter Base Cutoff Current	I_{EBO}	-	0.1	μA
Collector Base Breakdown Voltage	$V_{(BR)CBO}$	300	-	V
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	300	-	V
Emitter Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	-	0.9	V
Gain Bandwidth Product	f_T	50	-	MHz
Collector Output Capacitance	C_{ob}	-	3	pF

TYPICAL TRANSIENT CHARACTERISTICS

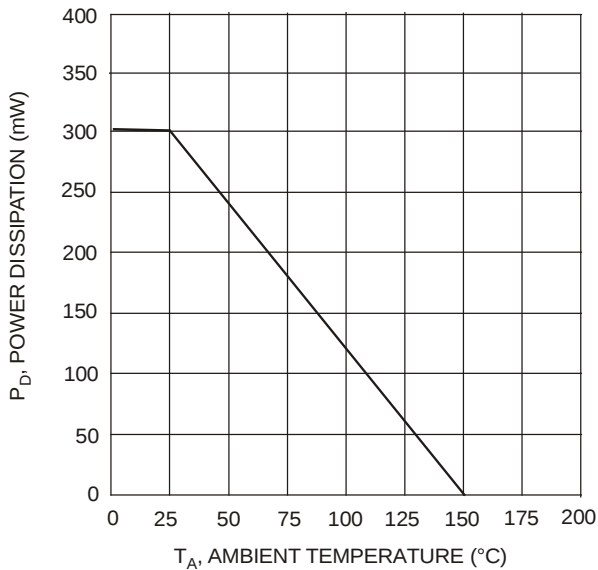


Fig. 1, Max Power Dissipation vs Ambient Temperature

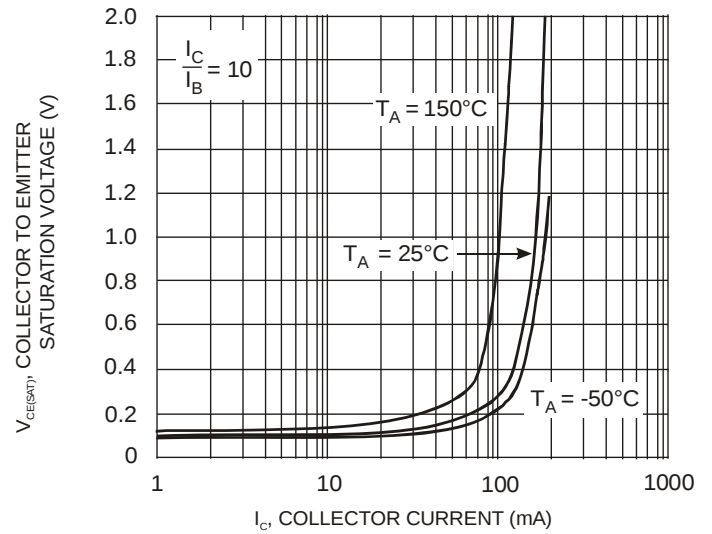


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

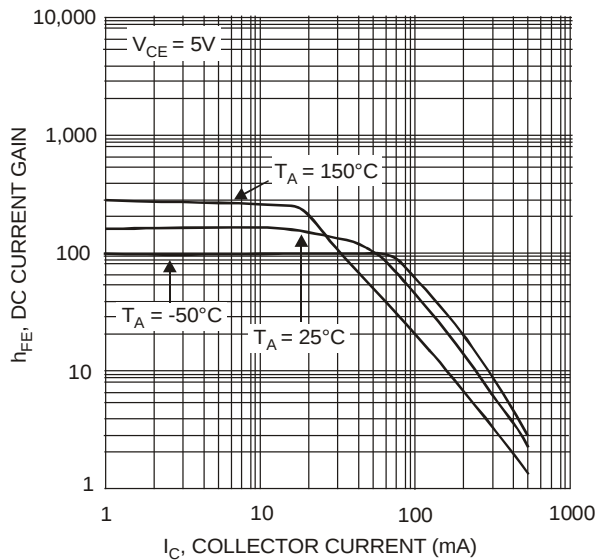


Fig. 3, DC Current Gain vs Collector Current

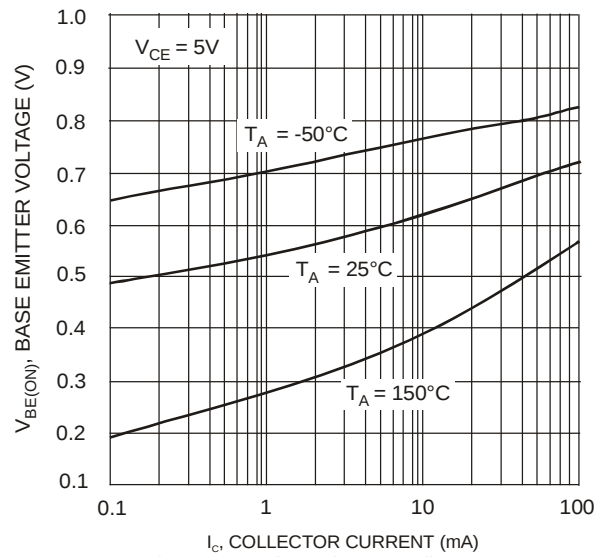


Fig. 4, Base Emitter Voltage vs Collector Current

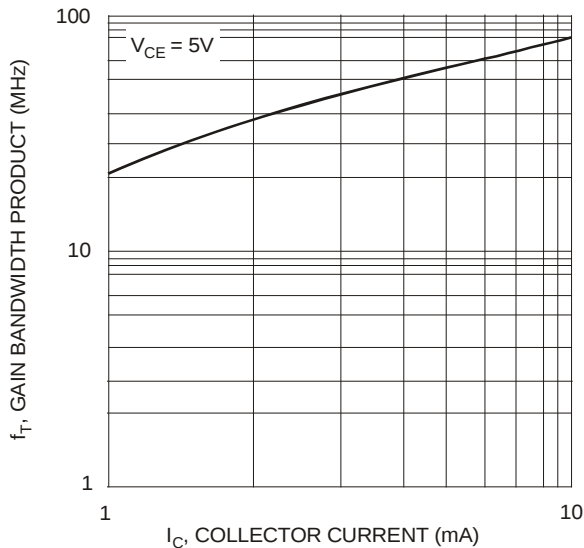


Fig. 5, Gain Bandwidth Product vs Collector Current