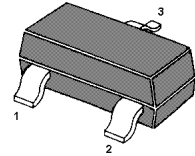


MMBT491A NPN Silicon Epitaxial Planar Transistor

MARKING: 491A



1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package

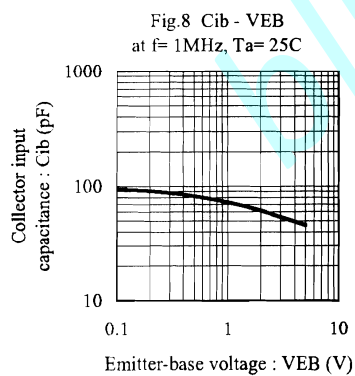
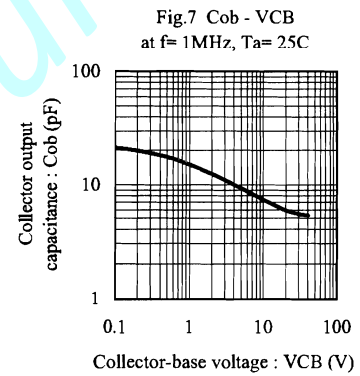
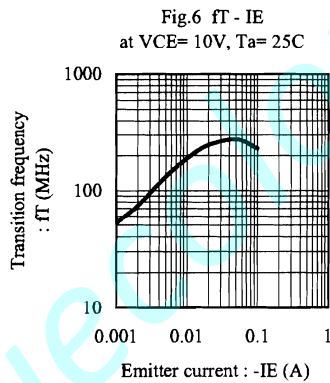
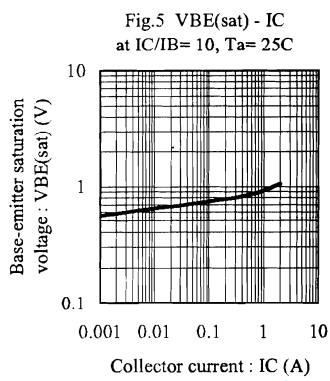
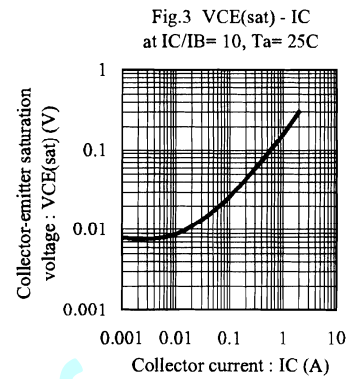
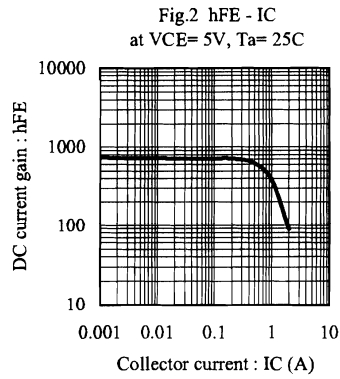
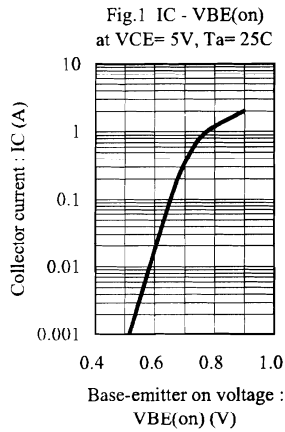
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	40	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Peak Pulse Current	I_{CM}	2	A
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_S	- 55 to + 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	300	-	-
at $V_{CE} = 5\text{ V}$, $I_C = 500\text{ mA}$	h_{FE}	300	900	-
at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ A}$	h_{FE}	200	-	-
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	I_{CBO}	-	100	nA
Collector Emitter Cutoff Current at $V_{CE} = 30\text{ V}$	I_{CES}	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 4\text{ V}$	I_{EBO}	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	V_{CEsat}	-	0.3	V
at $I_C = 1\text{ A}$, $I_B = 100\text{ mA}$	V_{CEsat}	-	0.5	V
Base Emitter Saturation Voltage at $I_C = 1\text{ A}$, $I_B = 100\text{ mA}$	V_{BEsat}	-	1.2	V
Base Emitter Voltage at $I_C = 1\text{ A}$, $V_{CE} = 5\text{ V}$	V_{BE}	-	1.1	V
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	10	pF
Gain Bandwidth Product at $V_{CE} = 10\text{ V}$, $I_C = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	150	-	MHz

Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20