

**FUKUCOM COMPANY LTD.**

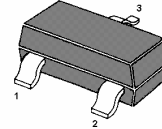
福 靈 有 限 公 司

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MMBTA10 / MMBTA11**NPN Silicon Epitaxial Planar Transistor**

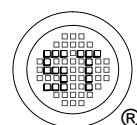
VHF / UHF transistor

1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package**Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)**

Parameter	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	25	V
Emitter Base Voltage	V_{EBO}	3	V
Collector Current	I_C	100	mA
Total Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min	Max	Unit
DC Current Gain at $V_{CE} = 10\text{ V}$, $I_C = 4\text{ mA}$	h_{FE}	60	-	-
Collector Base Breakdown Voltage at $I_C = 100\ \mu\text{A}$	$V_{(BR)CBO}$	30	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	25	-	V
Emitter Base Breakdown Voltage at $I_E = 10\ \mu\text{A}$	$V_{(BR)EBO}$	3	-	V
Collector Cutoff Current at $V_{CB} = 25\text{ V}$	I_{CBO}	-	100	nA
Emitter Cutoff Current at $V_{EB} = 2\text{ V}$	I_{EBO}	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 4\text{ mA}$, $I_B = 0.4\text{ mA}$	$V_{CE(sat)}$	-	0.5	V
Base-Emitter On Voltage at $V_{CE} = 10\text{ V}$, $I_C = 4\text{ mA}$	$V_{BE(on)}$	-	0.95	V
Current Gain Bandwidth Product at $V_{CE} = 10\text{ V}$, $I_C = 4\text{ mA}$, $f = 100\text{ MHz}$	f_T	650	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{cb}	-	0.7	pF
Collector Base Feedback Capacitance $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{fb}	0.35 0.6	0.65 0.9	pF pF
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Dated : 17/06/2006