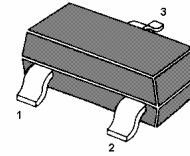


MMBTA10 / MMBTA11

NPN Silicon Epitaxial Planar Transistor

VHF / UHF transistor



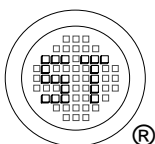
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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	$^\circ\text{C}$

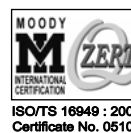
Characteristics at $T_{\text{amb}} = 25^\circ\text{C}$

Parameter	Symbol	Min	Max	Unit
DC Current Gain at $V_{\text{CE}} = 10\text{ V}$, $I_{\text{C}} = 4\text{ mA}$	h_{FE}	60	-	-
Collector Base Breakdown Voltage at $I_{\text{C}} = 100\text{ }\mu\text{A}$	$V_{(\text{BR})\text{CBO}}$	30	-	V
Collector Emitter Breakdown Voltage at $I_{\text{C}} = 1\text{ mA}$	$V_{(\text{BR})\text{CEO}}$	25	-	V
Emitter Base Breakdown Voltage at $I_{\text{E}} = 10\text{ }\mu\text{A}$	$V_{(\text{BR})\text{EBO}}$	3	-	V
Collector Cutoff Current at $V_{\text{CB}} = 25\text{ V}$	I_{CBO}	-	100	nA
Emitter Cutoff Current at $V_{\text{EB}} = 2\text{ V}$	I_{EBO}	-	100	nA
Collector Emitter Saturation Voltage at $I_{\text{C}} = 4\text{ mA}$, $I_{\text{B}} = 0.4\text{ mA}$	$V_{\text{CE}(\text{sat})}$	-	0.5	V
Base-Emitter On Voltage at $V_{\text{CE}} = 10\text{ V}$, $I_{\text{C}} = 4\text{ mA}$	$V_{\text{BE}(\text{on})}$	-	0.95	V
Current Gain Bandwidth Product at $V_{\text{CE}} = 10\text{ V}$, $I_{\text{C}} = 4\text{ mA}$, $f = 100\text{ MHz}$	f_{T}	650	-	MHz
Collector Base Capacitance at $V_{\text{CB}} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{cb}	-	0.7	pF
Collector Base Feedback Capacitance $V_{\text{CB}} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{rb}	0.35 0.6	0.65 0.9	pF pF
		MMBTA10 MMBTA11		



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 71116



ISO 9001:2000
Certificate No. 0506098

Dated : 17/06/2006