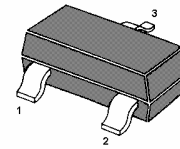


MMBTSA1235

PNP Silicon Epitaxial Planar Transistor

for low frequency amplification applications

The transistor is subdivided into two groups E and F, according to its DC current gain.



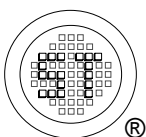
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	50	V
Emitter Base Voltage	$-V_{\text{EBO}}$	6	V
Collector Current	$-I_{\text{C}}$	200	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{s}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{\text{CE}} = 6\text{ V}$, $-I_{\text{C}} = 1\text{ mA}$ Current Gain Group E F at $-V_{\text{CE}} = 6\text{ V}$, $-I_{\text{C}} = 0.1\text{ mA}$	h_{FE}	150	-	300	-
	h_{FE}	250	-	500	-
	h_{FE}	90	-	-	-
Collector Base Breakdown Voltage at $-I_{\text{C}} = 100\ \mu\text{A}$	$-V_{(\text{BR})\text{CBO}}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_{\text{C}} = 100\ \mu\text{A}$	$-V_{(\text{BR})\text{CEO}}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_{\text{C}} = 100\ \mu\text{A}$	$-V_{(\text{BR})\text{EBO}}$	6	-	-	V
Collector Cutoff Current at $-V_{\text{CB}} = 60\text{ V}$	$-I_{\text{CBO}}$	-	-	0.1	μA
Emitter Cutoff Current at $-V_{\text{EB}} = 6\text{ V}$	$-I_{\text{EBO}}$	-	-	0.1	μA
Collector Emitter Saturation Voltage at $-I_{\text{C}} = 100\text{ mA}$, $-I_{\text{B}} = 10\text{ mA}$	$-V_{\text{CE}(\text{sat})}$	-	-	0.3	V
Base Emitter Saturation Voltage at $-I_{\text{C}} = 100\text{ mA}$, $-I_{\text{B}} = 10\text{ mA}$	$-V_{\text{BE}(\text{sat})}$	-	-	1	V
Gain Bandwidth Product at $-V_{\text{CE}} = 6\text{ V}$, $-I_{\text{C}} = 10\text{ mA}$	f_{T}	-	200	-	MHz
Collector Output Capacitance at $-V_{\text{CB}} = 6\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	4	-	pF
Noise Figure at $-V_{\text{CE}} = 6\text{ V}$, $I_{\text{E}} = 0.3\text{ mA}$, $f = 100\text{ Hz}$, $R_{\text{G}} = 10\text{ K}\Omega$	NF	-	-	20	dB



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



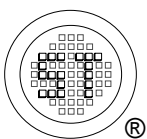
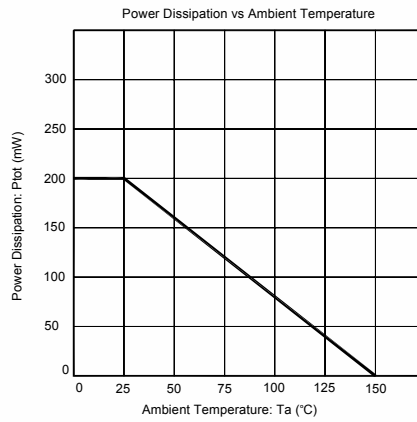
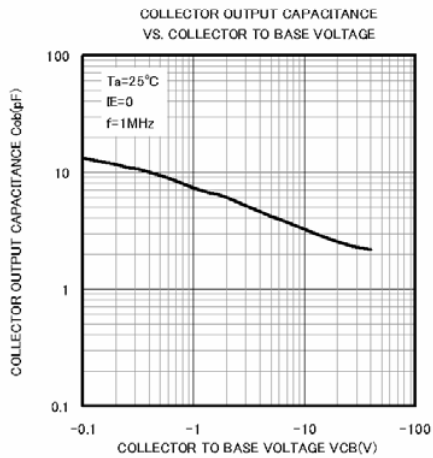
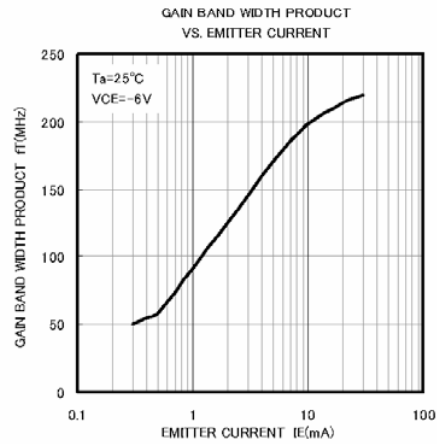
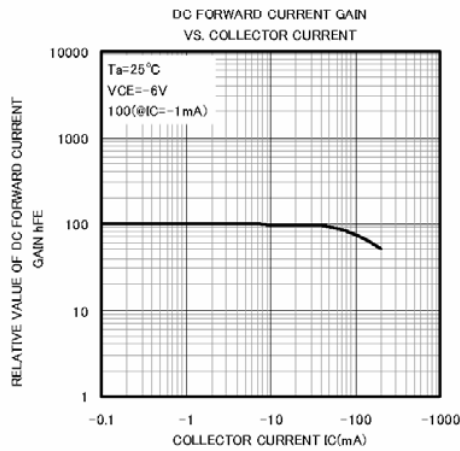
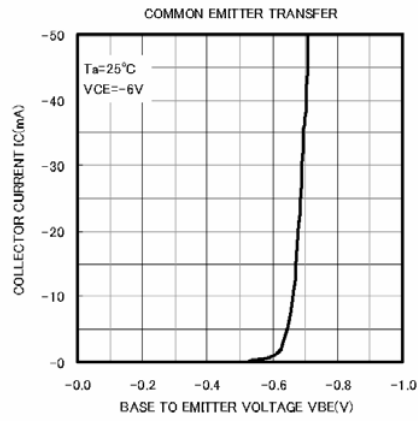
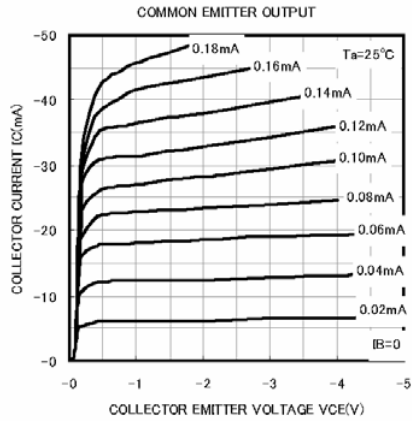
ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0508098

Dated : 05/08/2006

MMBTSA1235



SEMTECH ELECTRONICS LTD.

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



Dated : 05/08/2006