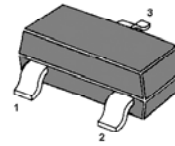


MMBT591A

PNP Silicon Epitaxial Planar Transistor



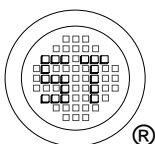
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

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	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $-V_{CE} = 5\text{ V}$, $-I_C = 1\text{ mA}$	h_{FE}	300	-	-
at $-V_{CE} = 5\text{ V}$, $-I_C = 100\text{ mA}$	h_{FE}	300	800	-
at $-V_{CE} = 5\text{ V}$, $-I_C = 500\text{ mA}$	h_{FE}	250	-	-
at $-V_{CE} = 5\text{ V}$, $-I_C = 1\text{ A}$	h_{FE}	160	-	-
Collector Cutoff Current				
at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	0.1	μA
Collector Cutoff Current				
at $-V_{CE} = 30\text{ V}$	$-I_{CEO}$	-	0.1	μA
Emitter Cutoff Current				
at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	0.1	μA
Collector Emitter Saturation Voltage				
at $-I_C = 100\text{ mA}$, $-I_B = 1\text{ mA}$	$-V_{CEsat}$	-	0.2	V
at $-I_C = 500\text{ mA}$, $-I_B = 20\text{ mA}$	$-V_{CEsat}$	-	0.35	V
at $-I_C = 1\text{ A}$, $-I_B = 100\text{ mA}$	$-V_{CEsat}$	-	0.5	V
Base Emitter Saturation Voltage				
at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$	$-V_{BEsat}$	-	1.1	V
Base Emitter Voltage				
at $-I_C = 1\text{ A}$, $-V_{CE} = 5\text{ V}$	$-V_{BE}$	-	1	V
Collector Capacitance				
at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_C	-	12	pF
Gain Bandwidth Product				
at $-V_{CE} = 10\text{ V}$, $-I_C = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	150	-	MHz



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

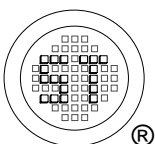
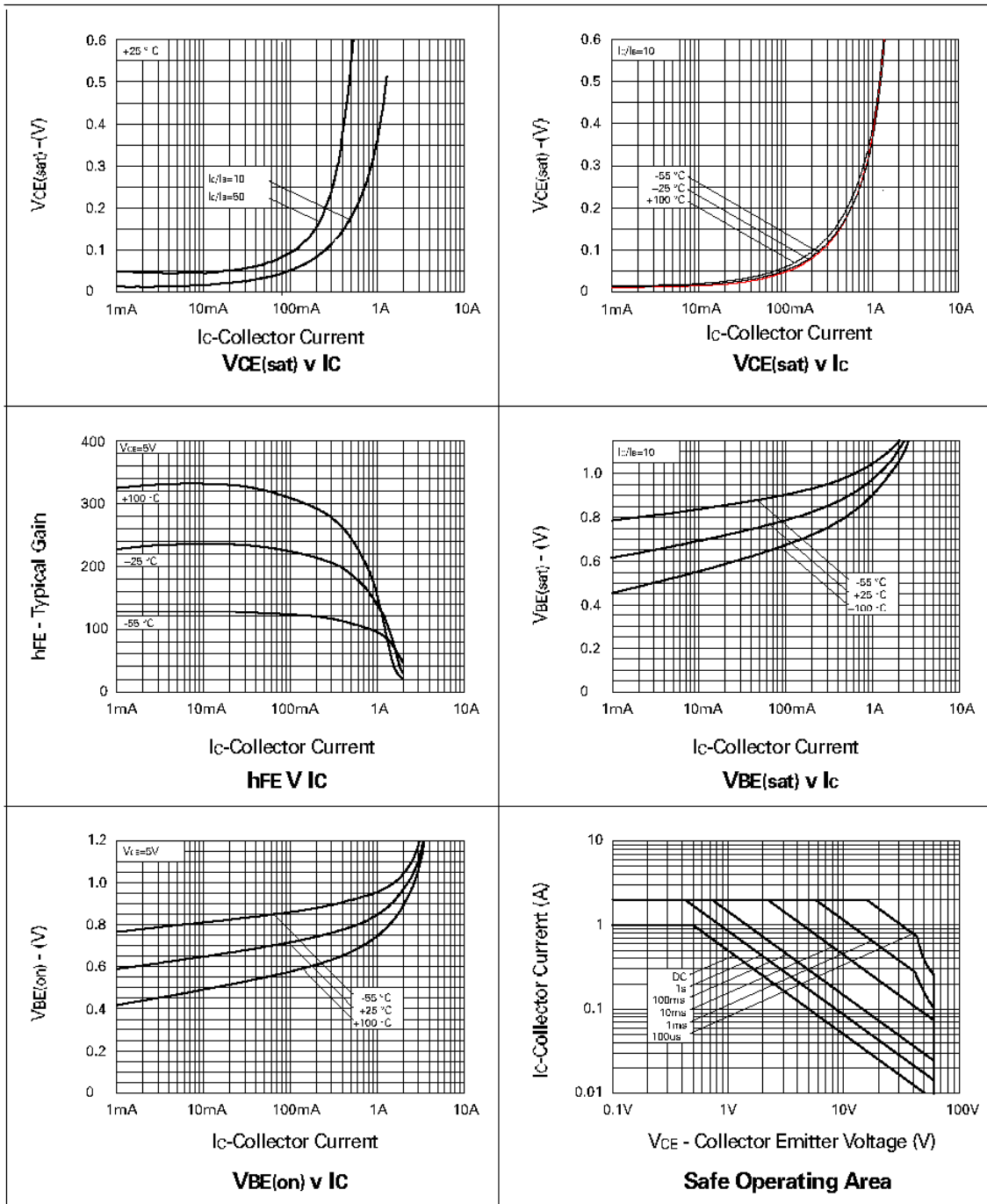


ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

Dated : 21/09/2006



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