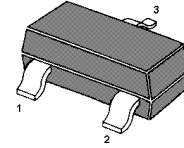


MMBTSB1116

PNP Silicon Epitaxial Planar Transistor

high collector power dissipation.



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	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	1	A
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 0.1\text{ A}$ at $-V_{CE} = 2\text{ V}$, $-I_C = 1\text{ A}$	h_{FE} h_{FE}	135 81	- -	600 -	- -
Collector Base Cutoff Current at $-V_{CB} = 60\text{ V}$	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 6\text{ V}$	$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	-	0.3	V
Base Emitter Saturation Voltage at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$	$-V_{BE(sat)}$	-	-	1.2	V
Base Emitter On Voltage at $-V_{CE} = 2\text{ V}$, $-I_C = 50\text{ mA}$	$-V_{BE(on)}$	0.6	-	0.7	V
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	25	-	pF
Transition Frequency at $-V_{CE} = 2\text{ V}$, $-I_C = 0.1\text{ A}$	f_T	70	-	-	MHz
Turn-on Time at $-V_{CE} = 10\text{ V}$, $-I_C = 100\text{ mA}$, $-I_{B1} = I_{B2} = 10\text{ mA}$	t_{on}	-	70	-	ns
Storage Time at $-V_{CE} = 10\text{ V}$, $-I_C = 100\text{ mA}$, $-I_{B1} = I_{B2} = 10\text{ mA}$	t_s	-	700	-	ns
Fall Time at $-V_{CE} = 10\text{ V}$, $-I_C = 100\text{ mA}$, $-I_{B1} = I_{B2} = 10\text{ mA}$	t_f	-	70	-	ns

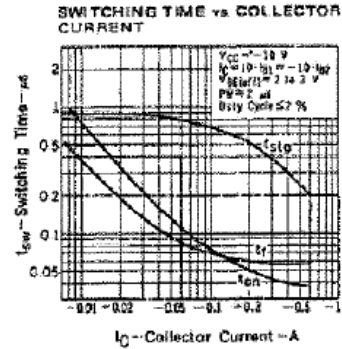
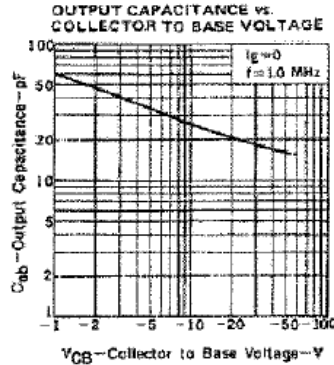
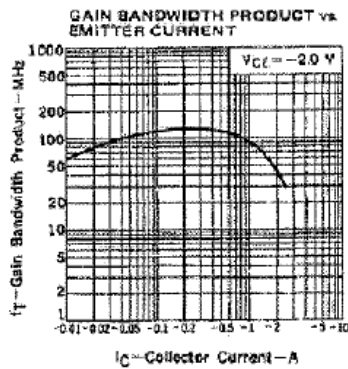
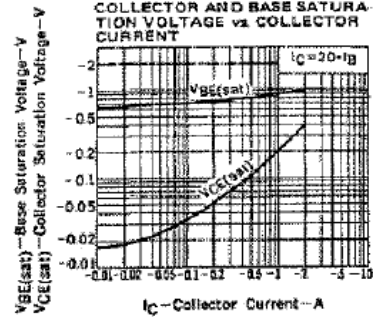
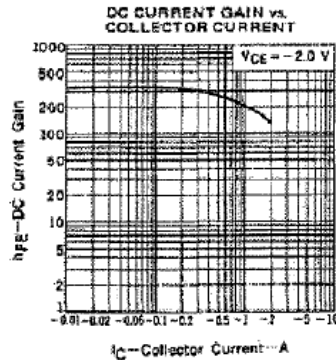
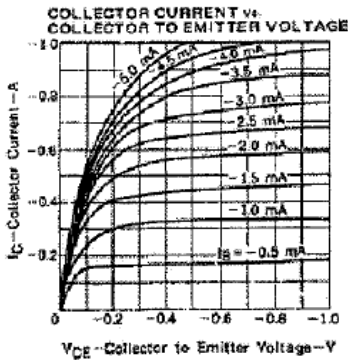
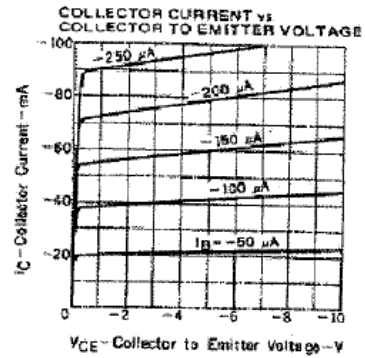
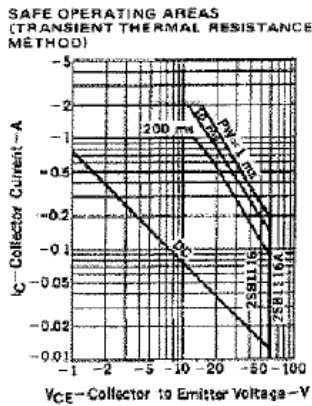
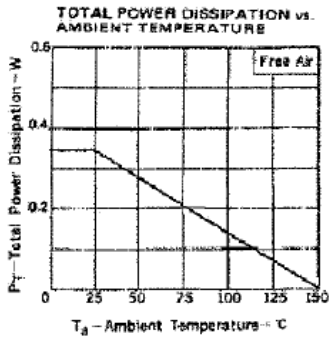
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ISO 14001 : 2004 Certificate No. 121505007
 ISO 9001 : 2008 Certificate No. 50114012
 OHSAS 18001 : 2007 Certificate No. 05131509008
 IECQ QC 080000 Certificate No. E241100271482

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