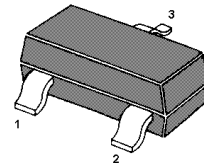


# MMBTSB624

## PNP Silicon Epitaxial Planar Transistor

For use in small type equipments, especially recommended or hybrid circuit and other applications

The transistor is subdivided into five groups A, B, C, D and E, according to its DC current gain.



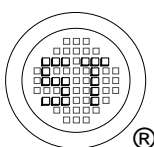
1.BASE 2.EMITTER 3.COLLECTOR  
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CEO}$	25	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	700	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{Stg}$	- 55 to + 150	$^\circ\text{C}$

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

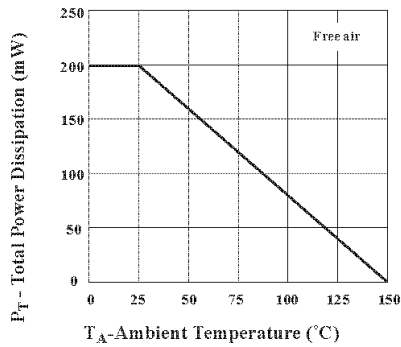
Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$	A	$h_{FE}$	110	-	180	-
	B	$h_{FE}$	135	-	220	-
	C	$h_{FE}$	170	-	270	-
	D	$h_{FE}$	200	-	320	-
	E	$h_{FE}$	250	-	400	-
at $-V_{CE} = 1\text{ V}$ , $-I_C = 700\text{ mA}$	$h_{FE}$	50	-	-	-	
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	-	100	nA	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA	
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	30	-	-	V	
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	25	-	-	V	
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 700\text{ mA}$ , $-I_B = 70\text{ mA}$	$-V_{CE(sat)}$	-	-	0.6	V	
Base Emitter On Voltage at $-V_{CE} = 6\text{ V}$ , $-I_C = 10\text{ mA}$	$-V_{BE(on)}$	0.6	-	0.7	V	
Output Capacitance at $-V_{CB} = 6\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$	$C_{ob}$	-	17	-	pF	
Transition Frequency at $-V_{CE} = 6\text{ V}$ , $-I_C = 10\text{ mA}$	$f_T$	-	160	-	MHz	



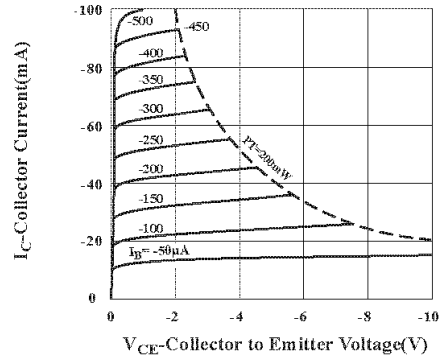
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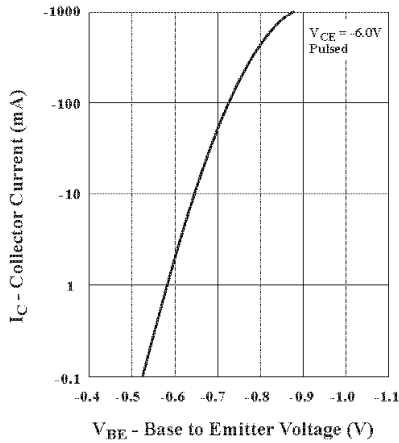
Dated : 12/11/2007



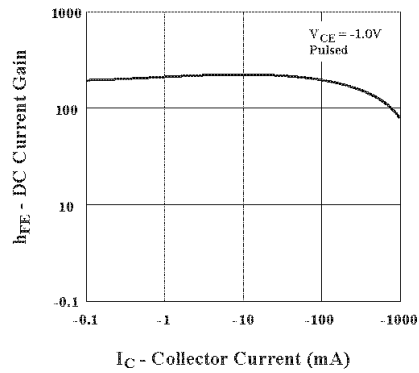
**Fig.1 TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE**



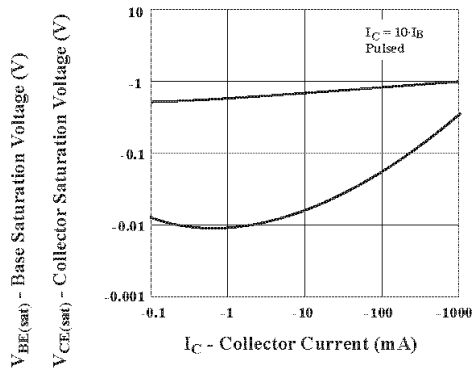
**Fig.2 COLLECTOR CURRENT VS. COLLECTOR TO EMITTER VOLTAGE**



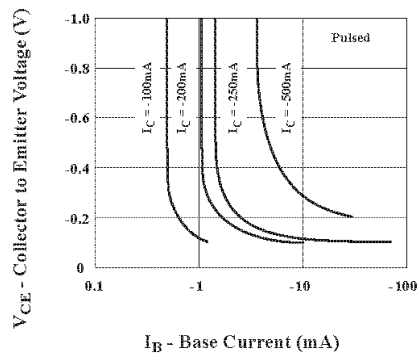
**Fig.3 COLLECTOR CURRENT VS. BASE TO EMITTER VOLTAGE**



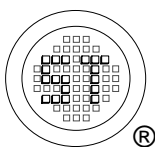
**Fig.4 DC CURRENT GAIN VS. COLLECTOR CURRENT**



**Fig.5 BASE AND COLLECTOR SATURATION VOLTAGE VS. COLLECTOR CURRENT**



**Fig.6 COLLECTOR TO EMITTER VOLTAGE VS. BASE CURRENT**



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