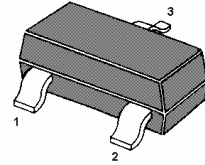


# MMBTSC3876

## NPN Silicon Epitaxial Planar Transistor

for general purpose application

The transistor is subdivided into three groups O, Y and G according to its DC current gain.



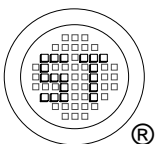
1.BASE 2.EMITTER 3.COLLECTOR  
SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	35	V
Collector Emitter Voltage	$V_{CEO}$	30	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	500	mA
Base Current	$I_B$	50	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 150	$^\circ\text{C}$

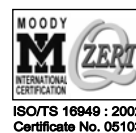
### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$  at $V_{CE} = 6\text{ V}$ , $I_C = 400\text{ mA}$	O	$h_{FE}$	70	-	140	-
	Y	$h_{FE}$	120	-	240	-
	G	$h_{FE}$	200	-	400	-
	O	$h_{FE}$	25	-	-	-
	Y, G	$h_{FE}$	40	-	-	-
Collector Cutoff Current at $V_{CB} = 35\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	
Emitter Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$ , $I_B = 10\text{ mA}$	$V_{CE(sat)}$	-	-	0.25	V	
Base Emitter Voltage at $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$	$V_{BE}$	-	-	1	V	
Transition Frequency at $V_{CE} = 6\text{ V}$ , $I_C = 20\text{ mA}$	$f_T$	-	300	-	MHz	
Collector Base Capacitance at $V_{CB} = 6\text{ V}$ , $f = 1\text{ MHz}$	$C_{cb}$	-	7	-	pF	



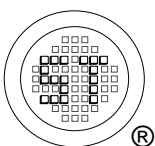
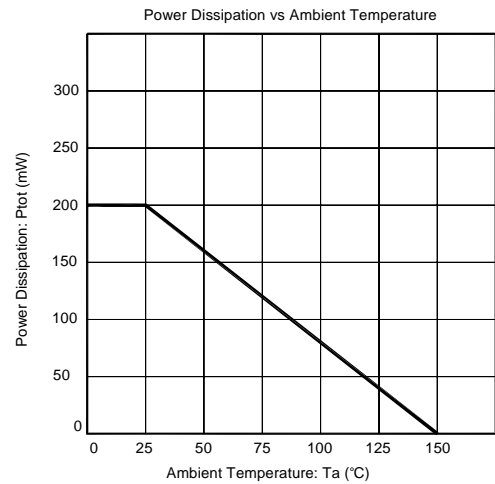
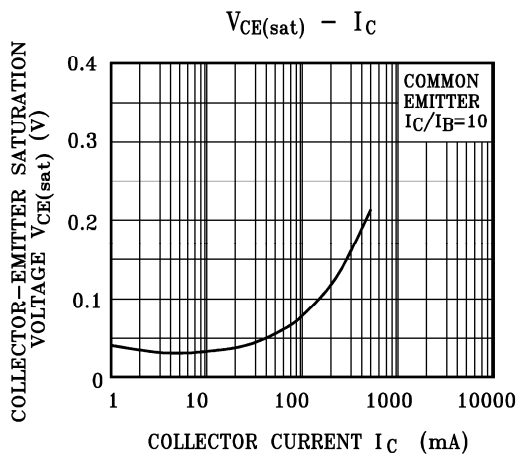
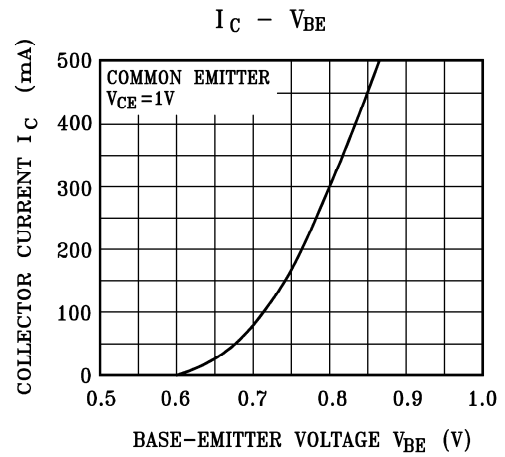
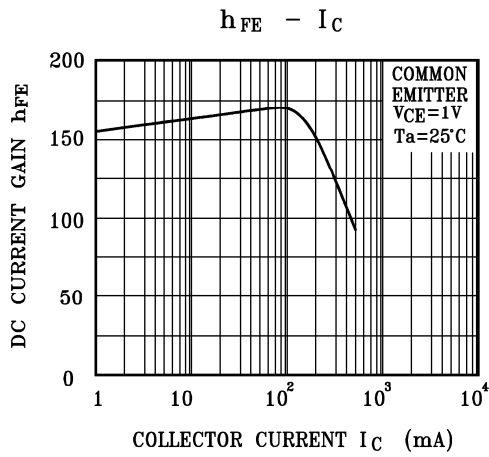
**SEMTECH ELECTRONICS LTD.**

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



Dated : 27/04/2007

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