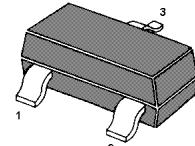


# MMBTSA1504

## PNP Silicon Epitaxial Planar Transistor

For switching and general purpose applications.

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



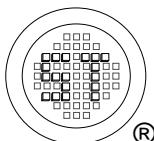
1. Base 2. Emitter 3. Collector  
TO-236 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	150	mA
Base Current	$-I_B$	30	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 $T_{amb}=25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 6 \text{ V}$ , $-I_C = 2 \text{ mA}$ Current Gain Group      O Y G	$h_{FE}$	70	140	-
	$h_{FE}$	120	240	-
	$h_{FE}$	200	400	-
Collector Base Cutoff Current at $-V_{CB} = 50 \text{ V}$	$-I_{CBO}$	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 5 \text{ V}$	$-I_{EBO}$	-	100	nA
Collector Emitter Saturation Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 10 \text{ mA}$	$-V_{CE(sat)}$	-	0.3	V
Transition Frequency at $-V_{CE} = 10 \text{ V}$ , $-I_C = 1 \text{ mA}$	$f_T$	80	-	MHz
Collector Output Capacitance at $-V_{CB} = 10 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{ob}$	-	7	pF



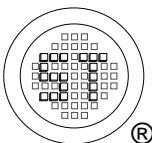
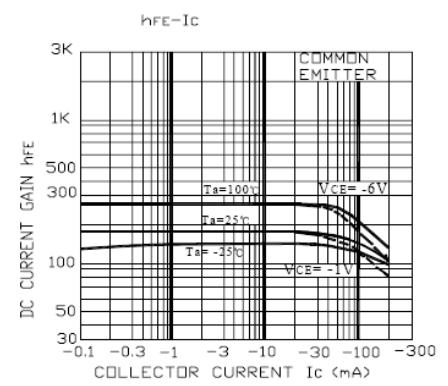
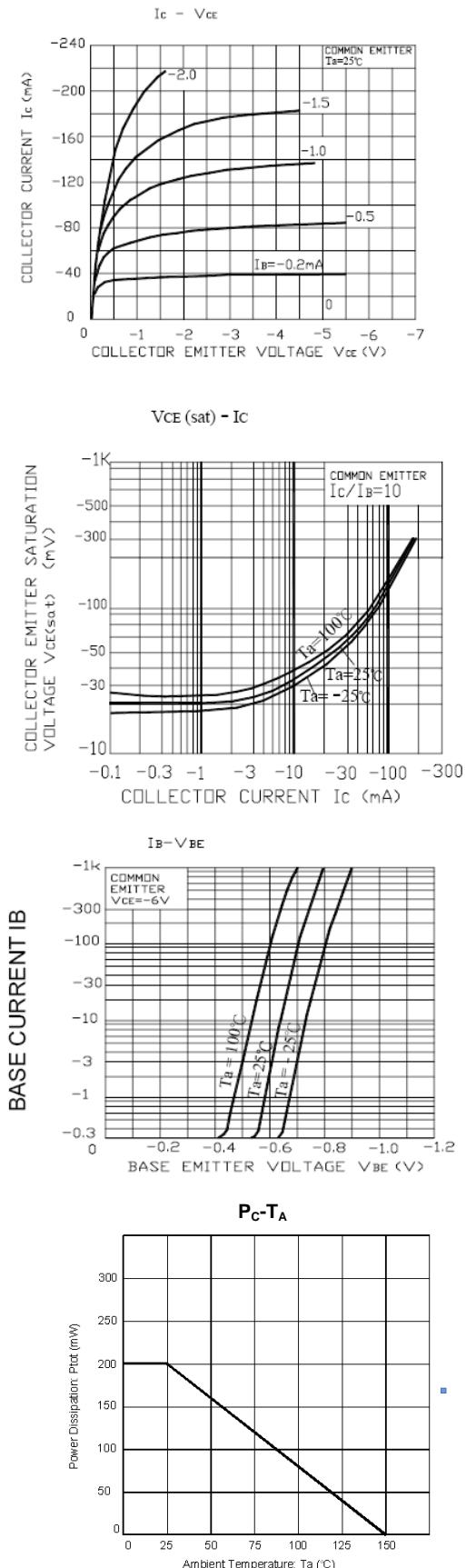
**SEMTECH ELECTRONICS LTD.**



ISO/TS 16949 : 2009 Certificate No. 16071900 ISO 14001 : 2004 Certificate No. 7116 ISO 9001 : 2008 Certificate No. 5013410 BS-OHSAS 18001 : 2007 Certificate No. 7116 IECQ QC 080000 Certificate No. PRC-HSPM-1483

Dated: 16/03/2015 Rev: 02

# MMBTSA1504



SEMTECH ELECTRONICS LTD.



ISO TS 16949 : 2009 ISO 14001 : 2004 ISO 9001 : 2008 BS-OHSAS 18001 : 2007 IECQ QC 080000  
Certificate No. 16071909 Certificate No. 7116 Certificate No. 501310 Certificate No. 7116  
Intertek UKAS DEKRA Intertek UKAS SGS

Dated: 16/03/2015 Rev: 02