

MMBTSA1505

PNP Silicon Epitaxial Planar Transistor

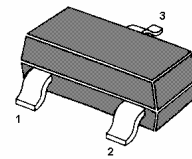
For switching and general purpose applications.

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

Features

Excellent h_{FE} linearity:

$h_{FE}=25(\text{min})$ at $V_{CE}=-6\text{V}$, $I_C=-400\text{mA}$

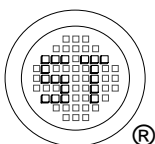


1. Base 2. Emitter 3. Collector

SOT-23 Plastic Package

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

	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	$^\circ\text{C}$



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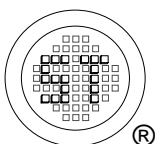


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Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}=1\text{V}$, $-I_C=100\text{mA}$					
Current Gain Group O	h_{FE}	70	-	140	-
Y	h_{FE}	120	-	240	-
GR	h_{FE}	200	-	400	-
at $-V_{CE}=6\text{V}$, $-I_C=400\text{mA}$					
O	h_{FE}	25	-	-	-
Y	h_{FE}	40	-	-	-
Collector Cutoff Current at $-V_{CB}=35\text{V}$	$-I_{CBO}$	-	-	0.1	μA
Emitter Cutoff Current at $-V_{EB}=5\text{V}$	$-I_{EBO}$	-	-	0.1	μA
Collector 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	-	200	-	MHz
Collector Output Capacitance at $-V_{CB}=6\text{V}$, $f=1\text{MHz}$	C_{ob}	-	13	-	pF



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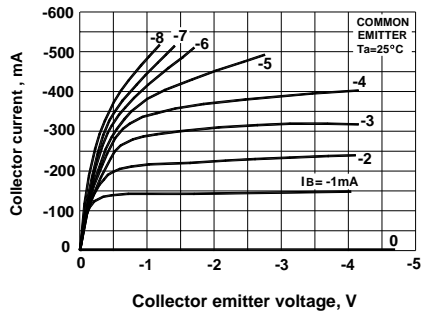
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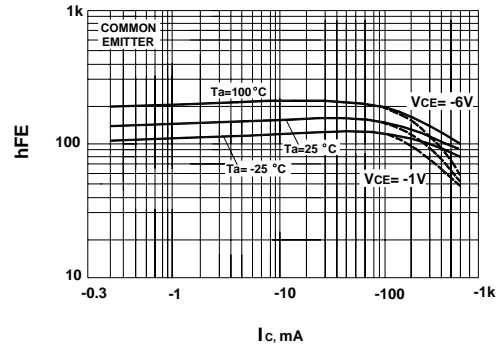
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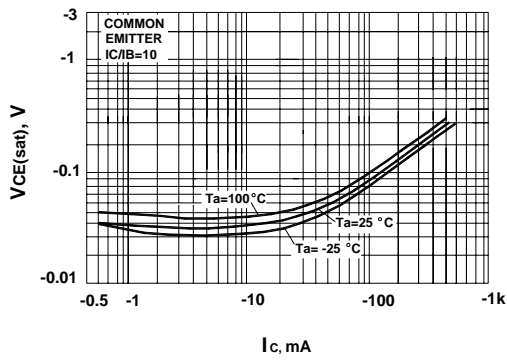
$I_c - V_{CE}$ (LOW VOLTAGE REGION)



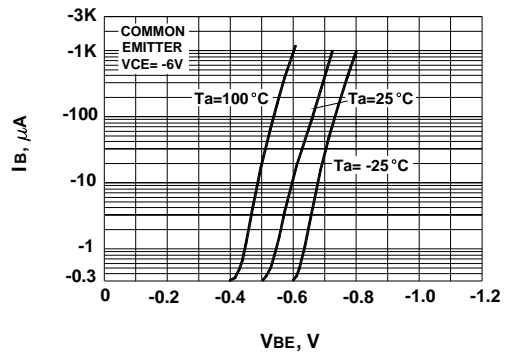
$h_{FE} - I_c$



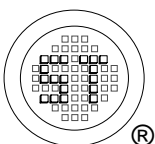
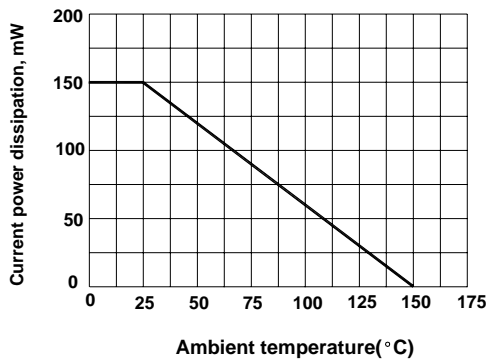
$V_{CE(sat)} - I_c$



$I_B - V_{BE}$



$P_c - T_a$



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ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

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