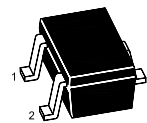


# MMBTSA1579W

## PNP Silicon Epitaxial Planar Transistor

for high-voltage amplifier applications

The transistor is subdivided into two groups R and S according to its DC current gain.



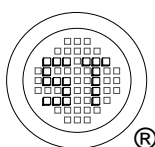
1.Base 2.Emitter 3.Collector  
SOT-323 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	120	V
Collector Emitter Voltage	$-V_{CEO}$	120	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	50	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 $-V_{CE} = 6\text{ V}$ , $-I_C = 2\text{ mA}$	Current Gain Group R	$h_{FE}$	180	-	390	-
	Current Gain Group S	$h_{FE}$	270	-	560	-
Collector Base Cutoff Current at $-V_{CB} = 100\text{ V}$	$-I_{CBO}$	-	-	0.5	$\mu\text{A}$	
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	0.5	$\mu\text{A}$	
Collector Base Breakdown Voltage at $-I_C = 50\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	120	-	-	V	
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	120	-	-	V	
Emitter Base Breakdown Voltage at $-I_E = 50\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$ , $-I_B = 1\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V	
Transition Frequency at $-V_{CE} = 12\text{ V}$ , $I_E = 2\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	-	140	-	MHz	
Collector Output Capacitance at $-V_{CB} = 12\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	3.2	-	pF	



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Dated : 20/11/2010 Rev:01

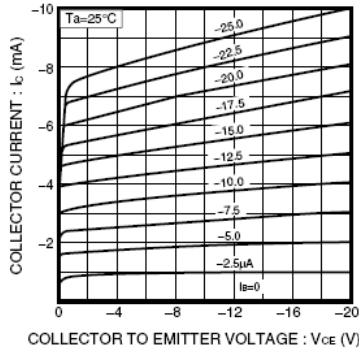


Fig.1 Ground emitter output characteristics

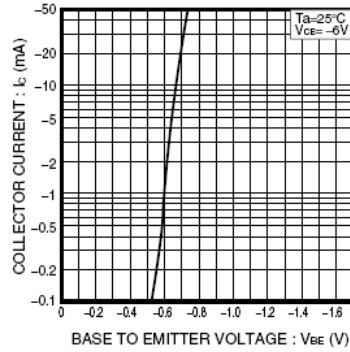


Fig.2 Ground emitter propagation characteristics

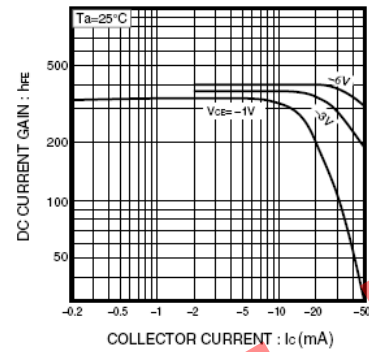


Fig.3 DC current gain vs. collector current

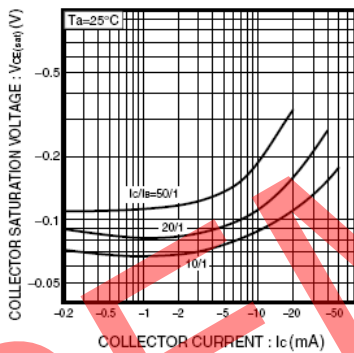


Fig.4 Collector-Emitter saturation voltage vs. collector current

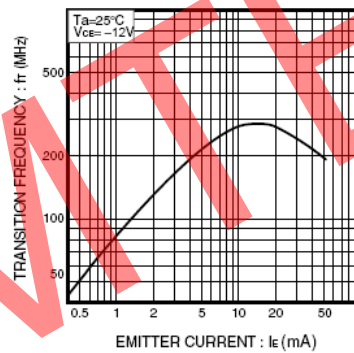


Fig.5 Transition frequency vs. emitter current

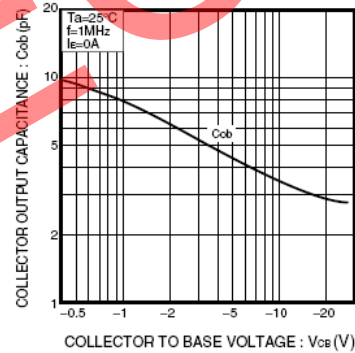
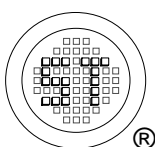


Fig.6 Collector output capacitance vs. collector-base voltage



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