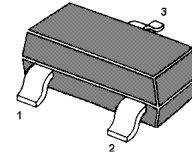


MMBTSC2413

NPN Silicon Epitaxial Planar Transistor

High frequency amplifier transistor.



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

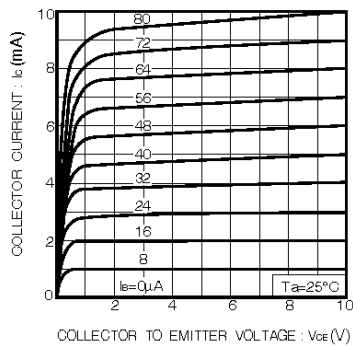
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	25	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	$^\circ\text{C}$

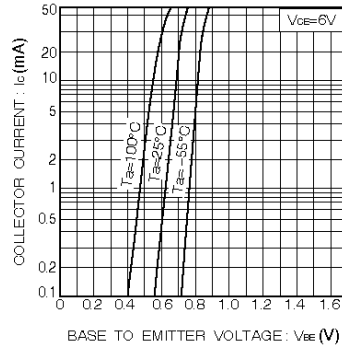
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	82	-	180	-
Collector Base Cutoff Current at $V_{CB} = 24\text{ V}$	I_{CBO}	-	-	0.5	μA
Emitter Base Cutoff Current at $V_{EB} = 3\text{ V}$	I_{EBO}	-	-	0.5	μA
Collector Base Breakdown Voltage at $I_C = 50\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	25	-	-	V
Emitter Base Breakdown Voltage at $I_E = 50\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$	$V_{CE(sat)}$	-	-	0.3	V
Gain Bandwidth Product at $V_{CE} = 6\text{ V}$, $-I_E = 1\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	300	-	MHz
Output Capacitance at $V_{CB} = 6\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	1.3	2.2	pF

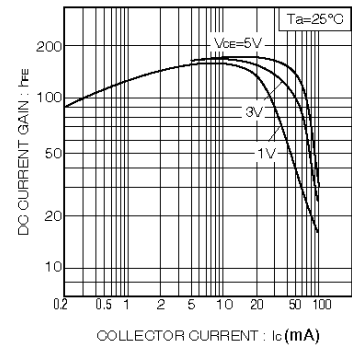
TOP DYNAMIC



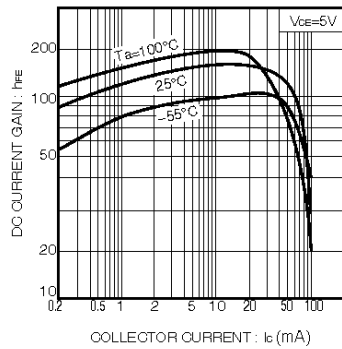
Ground emitter output characteristics



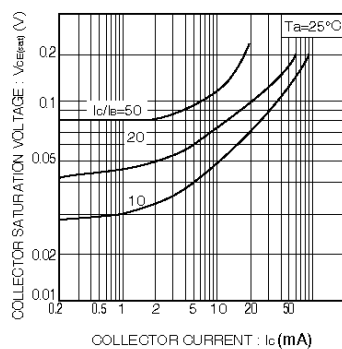
Ground emitter propagation characteristics



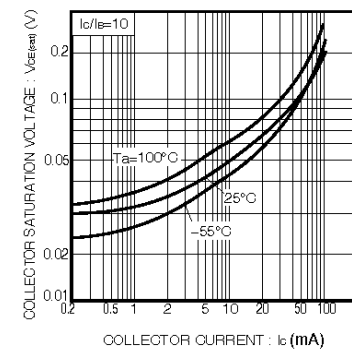
DC current gain vs. collector current (I)



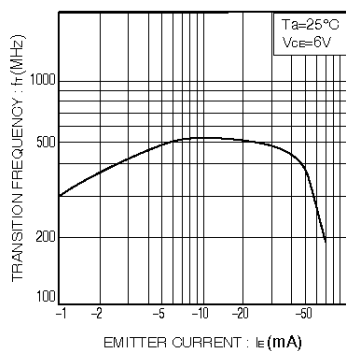
DC current gain vs. collector current (II)



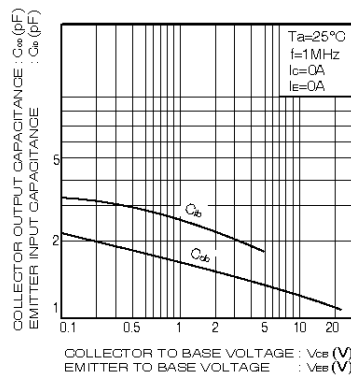
Collector-emitter saturation voltage vs. collector current (I)



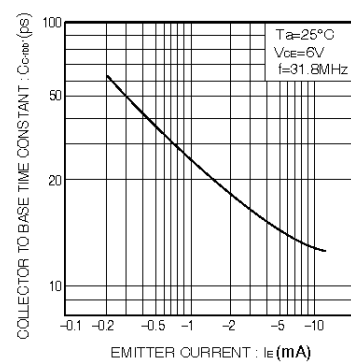
Collector-emitter saturation voltage vs. collector current (II)



Gain bandwidth product vs. emitter current



Capacitance vs. voltage



Collector to base time constant vs. emitter current