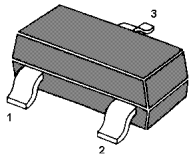
MMBTSC2413

NPN Silicon Epitaxial Planar Transistor

High frequency amplifier transistor.



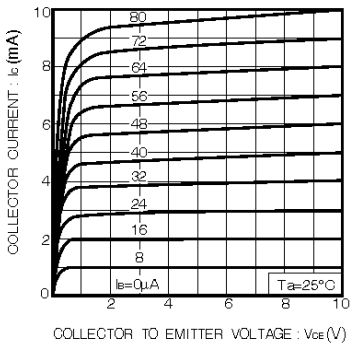
1. Base 2. Emitter 3. Collector
TO-236 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

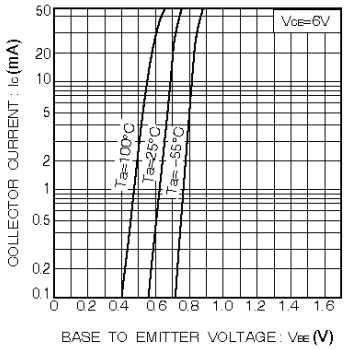
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	25	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

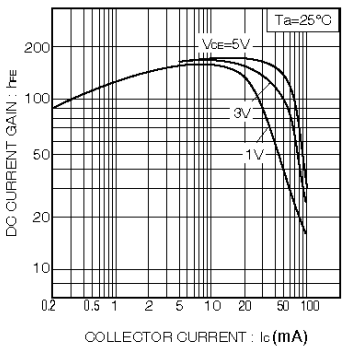
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 6 V, I_C = 1 mA	h_{FE}	82	-	180	-
Collector Base Cutoff Current at V_{CB} = 24 V	I_{CBO}	-	-	0.5	µA
Emitter Base Cutoff Current at V_{EB} = 3 V	I_{EBO}	-	-	0.5	µA
Collector Base Breakdown Voltage at I_C = 50 µA	$V_{(BR)CBO}$	40	-	-	V
Collector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



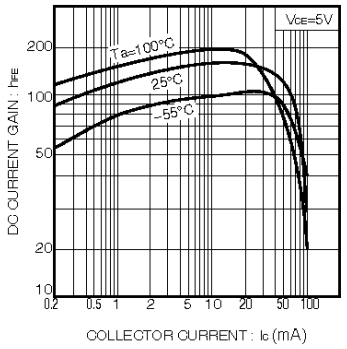
Ground emitter output characteristics



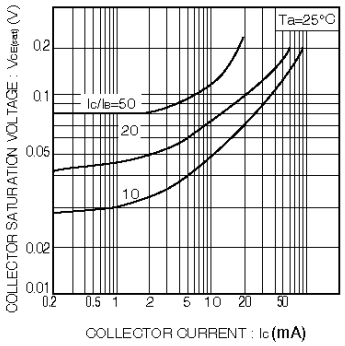
Ground emitter propagation characteristics



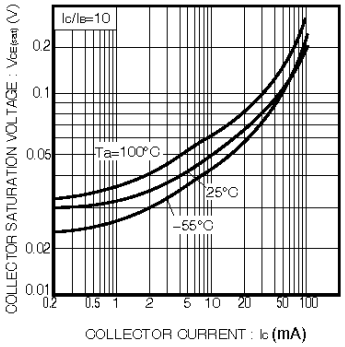
DC current gain vs. collector current (Ⅰ)



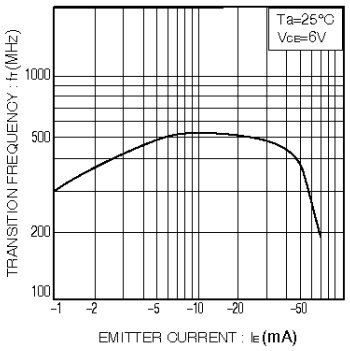
DC current gain vs. collector current (Ⅱ)



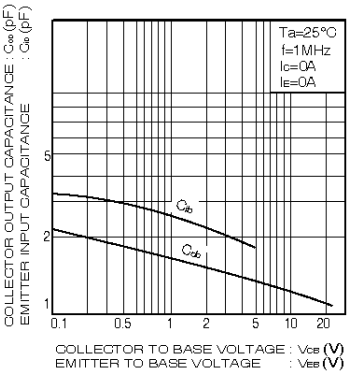
Collector-emitter saturation voltage vs. collector current (Ⅰ)



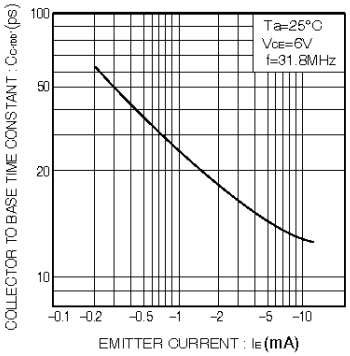
Collector-emitter saturation voltage vs. collector current (Ⅱ)



Gain bandwidth product vs emitter current



Capacitance vs. voltage



Collector to base time constance vs. emitter current