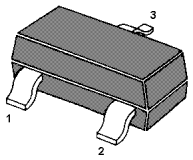
MMBTSD2675

NPN Silicon Epitaxial Planar Transistor

for low frequency amplifier



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}	30	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C I_{CP}	1 2 [1)]	A
Power Dissipation	P_{tot}	500 1 [2)]	mW W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

[1)] Single pulse, Pw = 1 ms
[2)] Mounted on a 25 x 25 x [t] 0.8 mm ceramic substrate

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 2 V, I_C = 100 mA	h_{FE}	270	-	680	-
Collector Base Cutoff Current at V_{CB} = 30 V	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 6 V	I_{EBO}	-	-	100	nA
Collector Base Breakdown Voltage at I_C = 10 µA	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at I_E = 10 µA	$V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at I_C = 500 mA, I_B = 25 mA	$V_{CE(sat)}$	-	-	350	mV
Transition Frequency at V_{CE} = 2 V, -I_E = 100 mA, f = 100 MHz	f_T	-	320	-	MHz
Output Capacitance at V_{CB} = 10 V, I_E = 0 A, f = 1 MHz	C_{ob}	-	7	-	pF

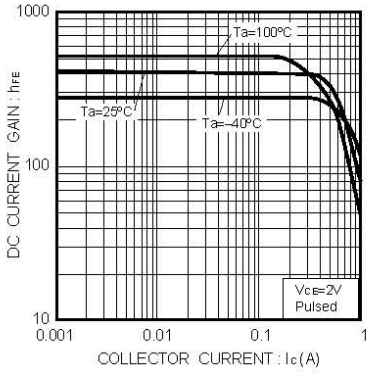


Fig.1 DC current gain
vs. collector current

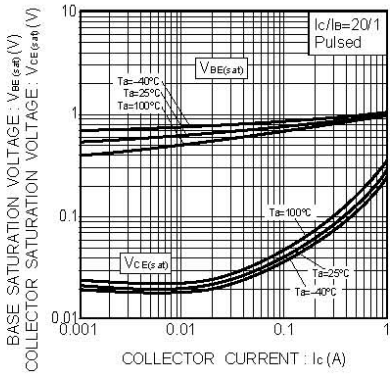


Fig.2 Collector-emitter saturation voltage
base-emitter saturation voltage
vs. collector current

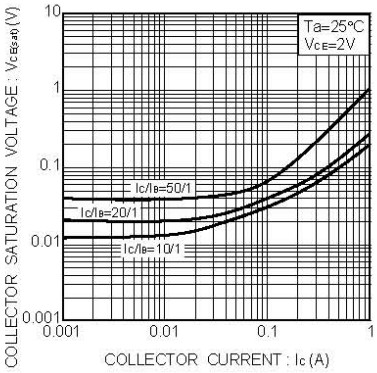


Fig.3 Collector-emitter saturation voltage
vs. collector current

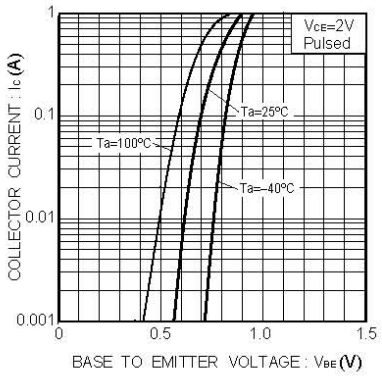


Fig.4 Grounded emitter propagation
characteristics

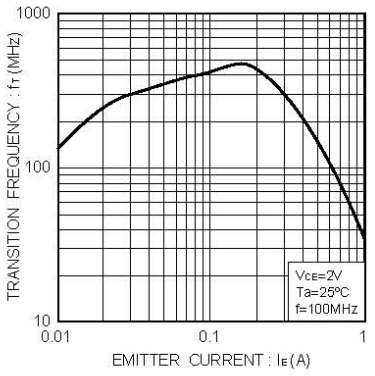


Fig.5 Gain bandwidth product
vs. emitter current

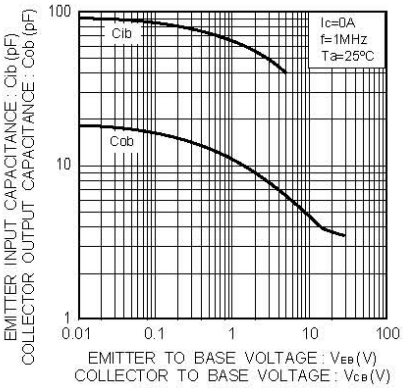


Fig.6 Collector output capacitance
vs. collector-base voltage
Emitter input capacitance
vs. emitter-base voltage