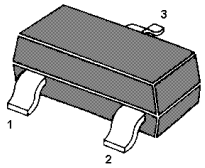
MMBTSC2712

NPN Silicon Epitaxial Planar Transistor

for audio frequency general purpose amplifier applications.

The transistor is subdivided into four groups O, Y, G and L, according to its DC current gain.



1.BASE 2.EMITTER 3.COLLECTOR

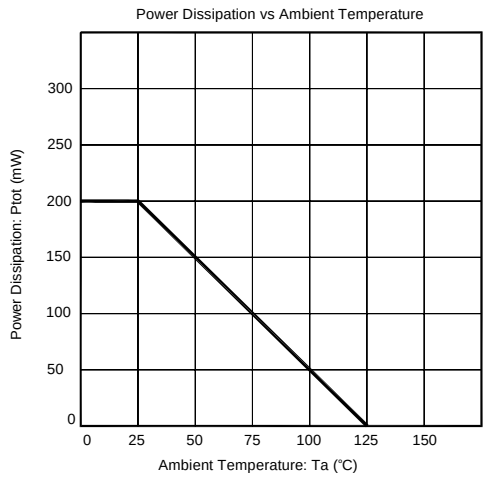
SOT-23 Plastic Package

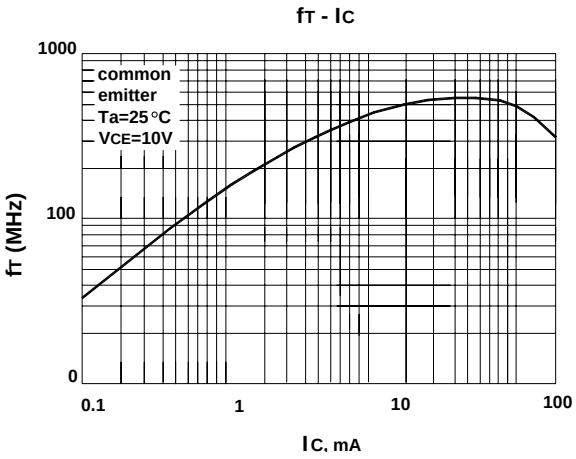
Absolute Maximum Ratings (T_a = 25 °C)

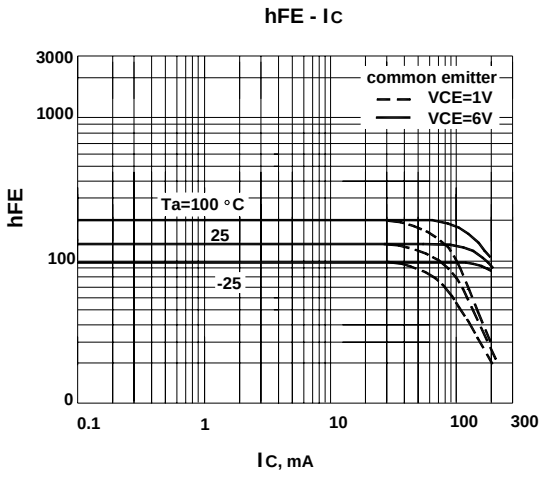
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	- 55 to + 125	°C

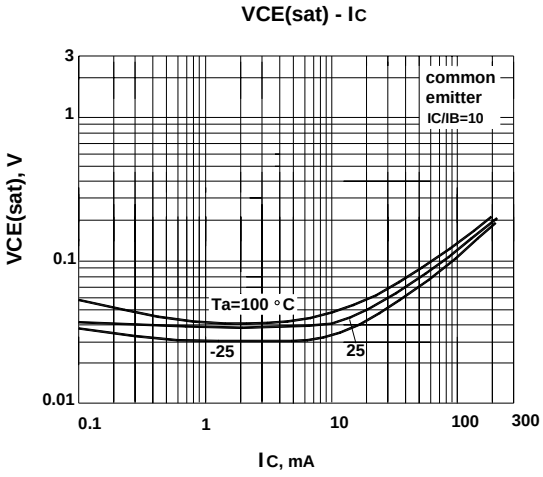
Characteristics at T_{amb}=25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 6 V, I_C = 2 mA	Current Gain Group O	h_{FE}	70	140	-
	Y	h_{FE}	120	240	-
	G	h_{FE}	200	400	-
	L	h_{FE}	350	700	-
Collector Base Cutoff Current at V_{CB} = 60 V		I_{CBO}	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 5 V		I_{EBO}	-	100	nA
Collector Emitter Saturation Voltage at I_C = 100 mA, I_B = 10 mA		$V_{CE(sat)}$	-	0.25	V
Transition Frequency at V_{CE} = 10 V, I_C = 1 mA		f_T	80	-	MHz
Collector Output Capacitance at V_{CB} = 10 V, f = 1 MHz		C_{ob}	-	3.5	pF


Power Dissipation vs Ambient Temperature
Power Dissipation: Ptot (mW)
300
250
200
150
100
50
0
0
25
50
75
100
125
150
Ambient Temperature: Ta (℃)


fT - IC
1000
100
0
common
emitter
Ta=25°C
VCE=10V
fT (MHz)
0.1
1
10
100
IC, mA


hFE - IC
3000
1000
100
0
hFE
common emitter
VCE=1V
VCE=6V
Ta=100 °C
25
-25
0.1
1
10
100
300
IC, mA


VCE(sat) - IC
3
1
0.1
0.01
VCE(sat), V
common
emitter
IC/IB=10
Ta=100 °C
-25
25
0.1
1
10
100
300
IC, mA