

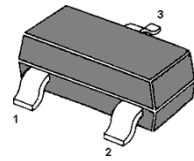
MMBTSC2712 NPN Silicon Epitaxial Planar Transistor

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.

Features

- .High voltage and high current: $V_{CE0}=50V$, $I_C=150mA(max)$
- .High h_{FE} : $h_{FE}=70\sim700$
- .Low noise: $NF=1dB(typ.)$, $10dB(max)$
- .Small package



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

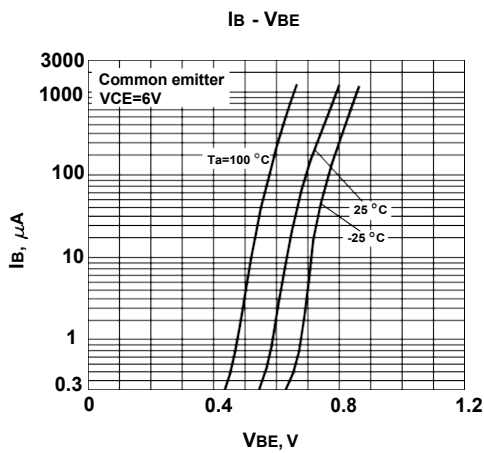
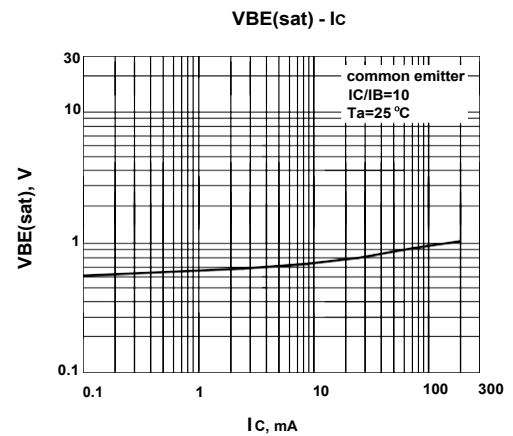
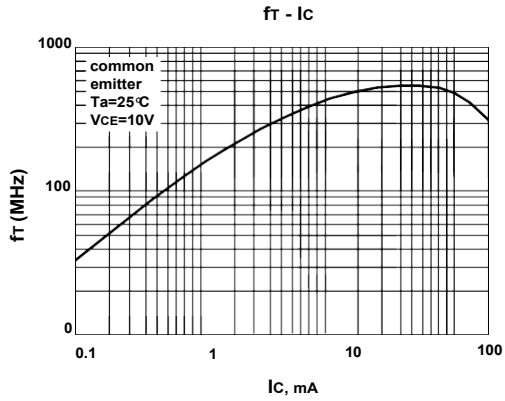
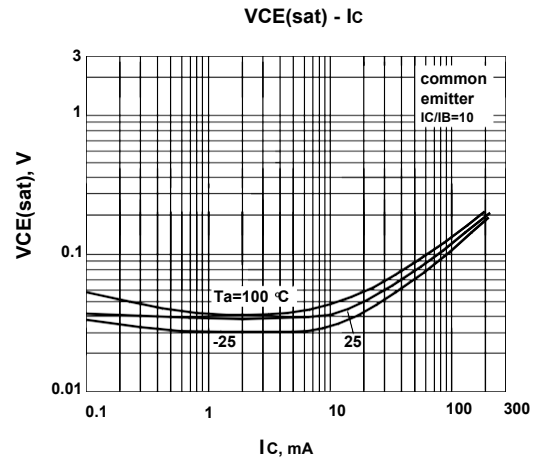
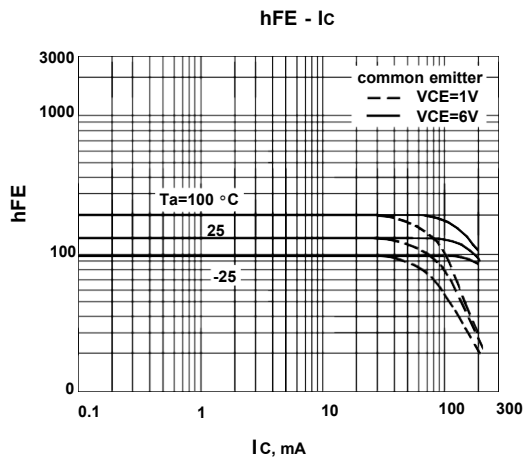
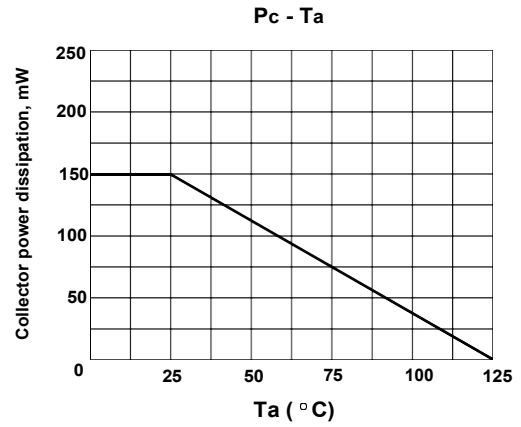
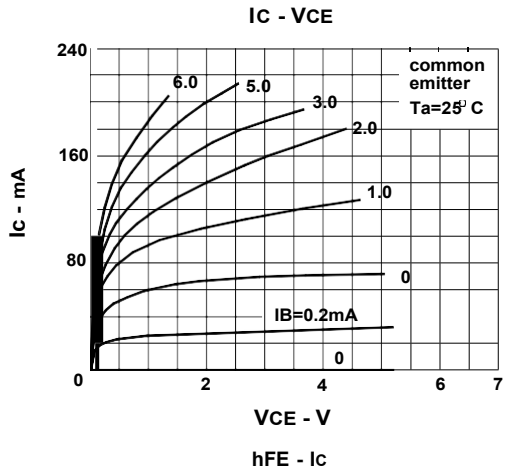
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

	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	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +125	$^\circ\text{C}$

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

	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE}=6V$, $I_C=2mA$	O	h_{FE}	70	-	140	-
	Y	h_{FE}	120	-	240	-
	G	h_{FE}	200	-	400	-
	L	h_{FE}	350	-	700	-
Collector Cutoff Current at $V_{CB}=60V$	I_{CBO}	-		0.1	μA	
Emitter Cutoff Current at $V_{EB}=5V$	I_{EBO}	-		0.1	μA	
Collector Saturation Voltage at $I_C=100mA$, $I_B=10mA$	$V_{CE(sat)}$	-	-	0.25	V	
Transition Frequency at $V_{CE}=10V$, $I_C=1mA$	f_T	80		-	MHz	
Collector Output Capacitance at $V_{CB}=10V$, $f=1MHz$	C_{ob}	-		3.5	pF	
Noise Figure at $V_{CE}=6V$, $I_C=0.1mA$, $f=1KHz$, $R_g=10K\Omega$	NF		1	1	dB	

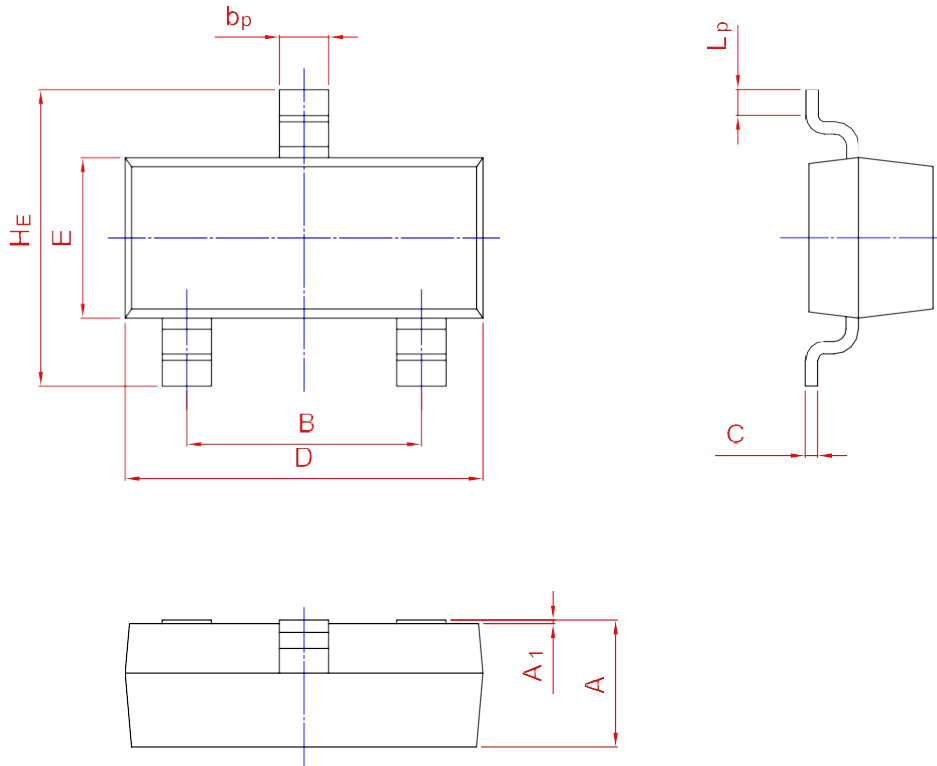
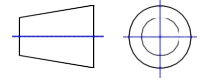
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20