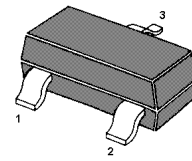


MMBTSC2715

NPN Silicon Epitaxial Planar Transistor

for high frequency amplifier applications
for FM IF, OSC stage and AM CONV. IF stage

The transistor is subdivided into three groups, R, O and Y, according to its DC current gain.



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}	35	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	4	V
Collector Current	I_{C}	50	mA
Base Current	I_{B}	10	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_{j}	125	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	-55 to +125	$^\circ\text{C}$

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

Parameter				Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = 12 V, I _C = 2 mA		Current Gain Group	R O Y	h _{FE}	40	-	80	-
				h _{FE}	70	-	140	-
				h _{FE}	120	-	240	-
Collector Cutoff Current at V _{CB} = 35 V				I _{CBO}	-	-	0.1	μA
Emitter Cutoff Current at V _{EB} = 4 V				I _{EBO}	-	-	0.1	μA
Collector Emitter Saturation Voltage at I _C = 10 mA, I _B = 1 mA				V _{CE(sat)}	-	-	0.4	V
Base Emitter Saturation Voltage at I _C = 10 mA, I _B = 1 mA				V _{BE(sat)}	-	-	1	V
Current Gain Bandwidth Product at V _{CE} = 10 V, I _C = 1 mA				f _T	100	-	400	MHz
Output Capacitance at V _{CB} = 10 V, f = 1 MHz				C _{ob}	-	2	3.2	pF
Power Gain at V _{CE} = 6 V, -I _E = 1 mA, f = 10.7 MHz				G _{pe}	27	30	33	dB

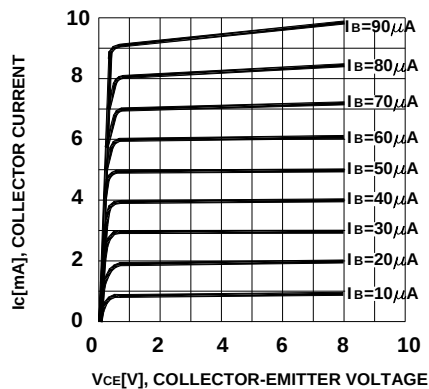


Figure 1. Static Characteristic

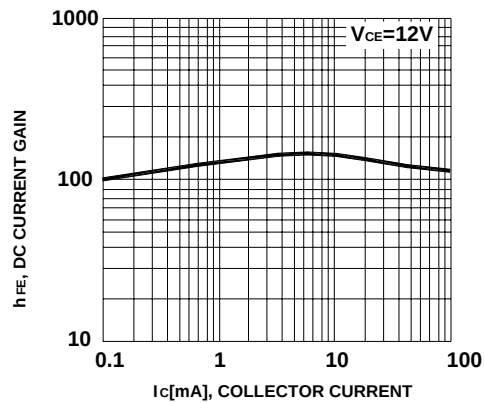


Figure 2. DC Current Gain

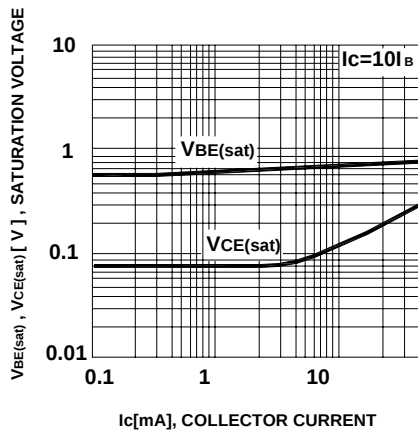


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Satruation Voltage

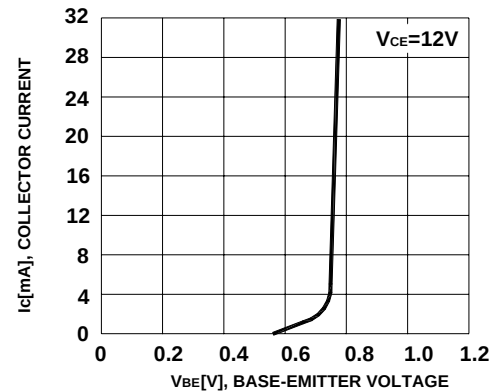


Figure 4. Base-Emitter On Voltage

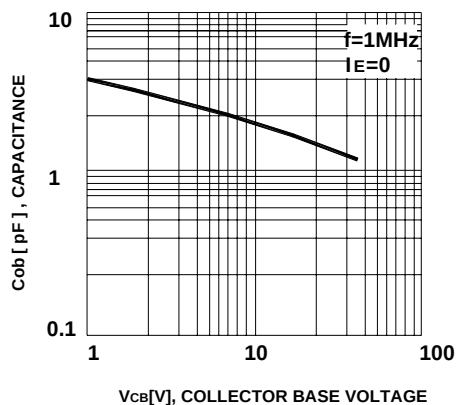


Figure 5. Collector Output Capacitance

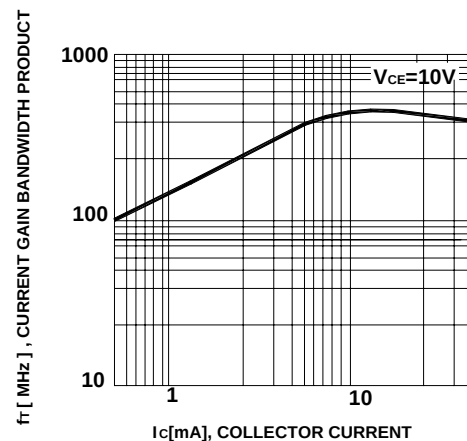


Figure 6. Current Gain Bandwidth Product