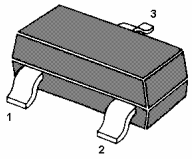
MMBTSC2714

NPN Silicon Epitaxial Planar Transistor
for high frequency amplifier at FM,RF,MIX, and IF amplifier applications.

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



1. Base 2. Emitter 3. Collector

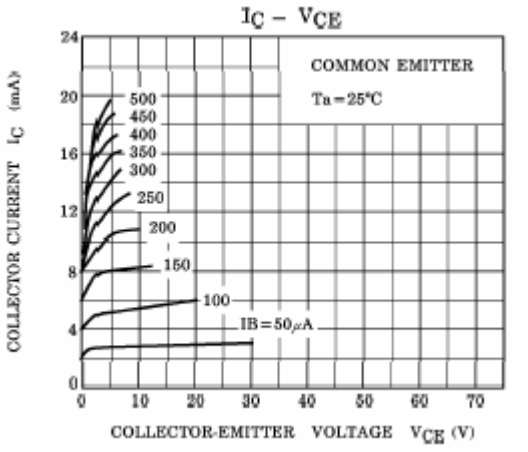
SOT-23 Plastic Package

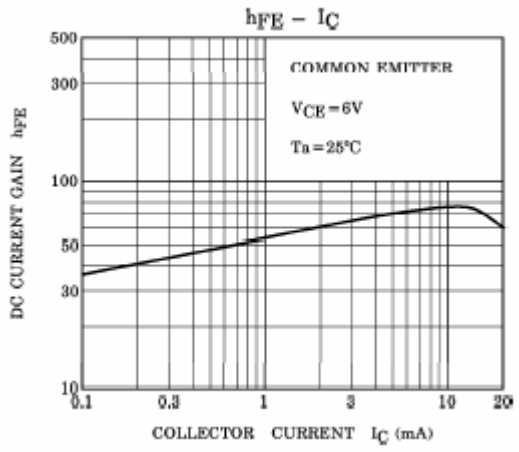
Absolute Maximum Ratings (T_a = 25 °C)

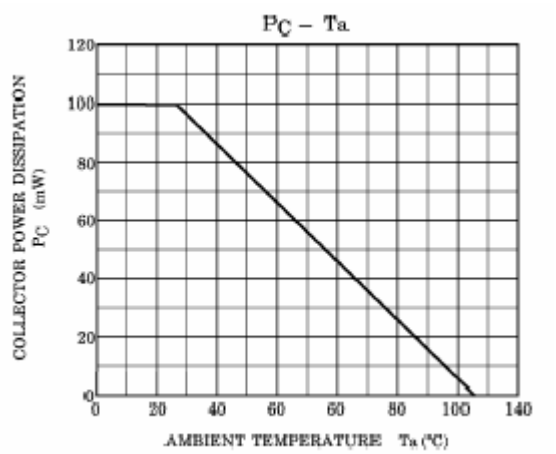
	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	4	V
Collector Current	I_C	20	mA
Base Current	I_B	4	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_S	-55 to +125	°C

Characteristics at T_{amb}=25 °C

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at V_{CE}=6V, I_C=1mA					
Current Gain Group R	h_{FE}	40	-	80	-
O	h_{FE}	70	-	140	-
Y	h_{FE}	100	-	200	-
Collector Cutoff Current					
at V_{CB}=18V	I_{CBO}	-	-	0.5	µA
Emitter Cutoff Current					
at V_{EB}=4V	I_{EBO}	-	-	0.5	µA
Transition Frequency					
at V_{CE}=6V, I_C=1mA	f_T	-	550	-	MHz
Reverse Transfer Capacitance					
at V_{CB}=6V, f=1MHz	C_{re}	-	0.7	-	pF
Collector-Base Time Constant	C_c.rbb'	-	-	30	ps
Noise Figure					
at V_{CE}=6V, I_E=-1mA, f=100MHz	NF	-	2.5	5	dB
Power Gain					
at V_{CE}=6V, I_E=-1mA, f=100MHz	G_{pe}	17	23	-	dB


$I_C - V_{CE}$
COMMON EMITTER
Ta = 25°C
500
450
400
350
300
250
200
150
100
$I_B = 50\mu A$
COLLECTOR CURRENT I_C (mA)
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)


$h_{FE} - I_C$
COMMON EMITTER
V_{CE} = 6V
Ta = 25°C
DC CURRENT GAIN h_{FE}
COLLECTOR CURRENT I_C (mA)


$P_C - Ta$
COLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE Ta (°C)