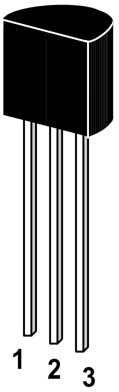
ST 2SC380

NPN Silicon Epitaxial Planar Transistor
High frequency amplifier application

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

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Collector 3. Base

TO-92 Plastic Package
Weight approx. 0.19g

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

	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
Emitter Current	$-I_E$	50	mA
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	125	^{O}C
Storage Temperature Range	T_S	-55 to +125	^{O}C

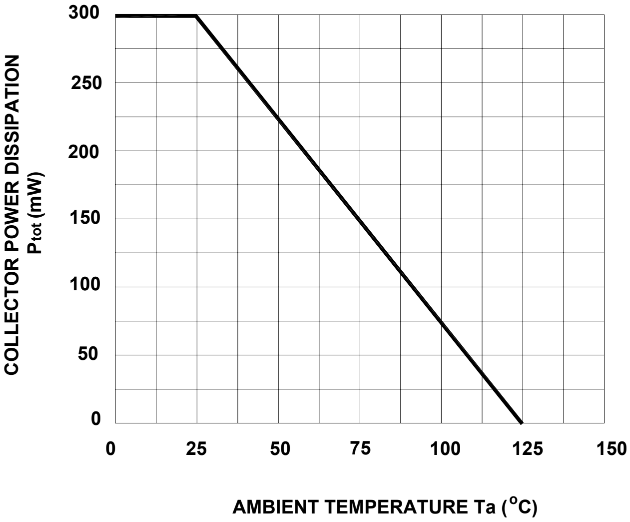
G S P FORM A IS AVAILABLE

Characteristics at T_{amb}=25 ^{O}C

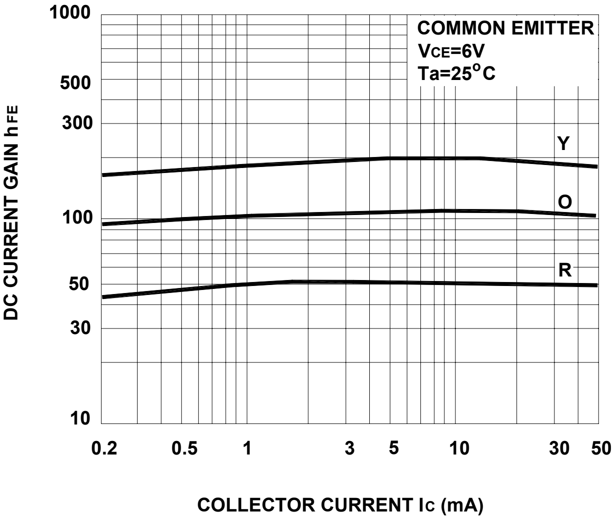
	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE}=12V, I_C=2mA					
Current Gain Group R	h_{FE}	40	-	80	-
O	h_{FE}	70	-	140	-
Y	h_{FE}	120	-	240	-
Collector Cutoff Current at V_{CB}=35V	I_{CBO}	-	-	0.1	µA
Emitter Cutoff Current at V_{EB}=4V	I_{EBO}	-	-	0.1	µA
Collector Saturation Voltage at I_C=10mA, I_B=1mA	$V_{CE(sat)}$	-	-	0.4	V
Base Emitter Voltage at I_C=10mA, I_B=1mA	V_{BE}	-	-	1	V
Transition Frequency at V_{CE}=10V, I_C=1mA	f_T	100	-	400	MHz
Collector Output Capacitance at V_{CB}=10V, f=1MHz	C_{ob}	1.4	2.0	3.2	pF
Collector Base Time Constant at V_{CE}=10V, I_E=-1mA, f=30MHz	$C_{c},r_{bb'}$	10	-	50	ps
Power Gain at V_{CC}=6V, f=10.7MHz, I_E=-1mA	G_{pe}	27	29	33	dB

G S P FORM A IS AVAILABLE

Pc-Ta


COLLECTOR POWER DISSIPATION
P_{tot} (mW)
300
250
200
150
100
50
0
0
25
50
75
100
125
150
AMBIENT TEMPERATURE Ta (°C)

h_{FE}-I_C


DC CURRENT GAIN h_{FE}
1000
500
300
100
50
30
10
COMMON EMITTER
V_{CE}=6V
Ta=25°C
Y
O
R
0.2
0.5
1
3
5
10
30
50
COLLECTOR CURRENT I_C (mA)