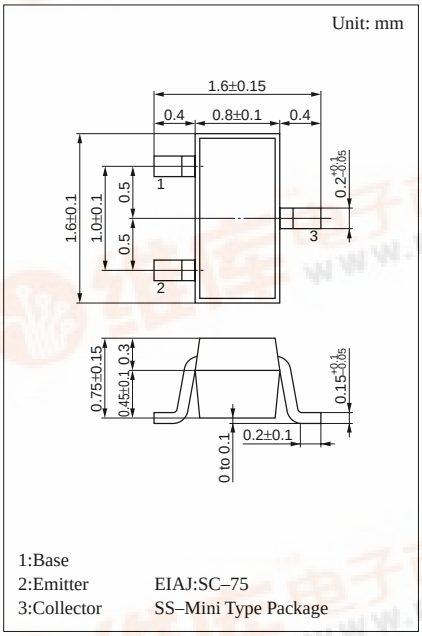
2SC5379

Silicon NPN epitaxial planer type

For low-voltage low-noise high-frequency oscillation



Marking symbol : HT

Features

- Low noise figure NF.
- High gain.
- High transition frequency f_T.
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	15	V
Collector to emitter voltage	V_{CEO}	8	V
Emitter to base voltage	V_{EBO}	2	V
Collector current	I_C	80	mA
Collector power dissipation	P_C	125	mW
Junction temperature	T_j	125	˚C
Storage temperature	T_{stg}	–55 ~ +125	˚C

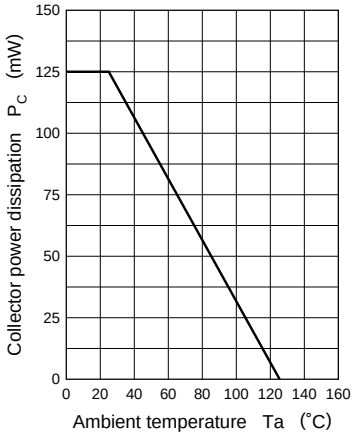
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 10V, I_E = 0			1	µA
Emitter cutoff current	I_{EBO}	V_{EB} = 1V, I_C = 0			1	µA
Forward current transfer ratio	h_{FE}*	V_{CE} = 5V, I_C = 10mA	80		200	
Transition frequency	f_T	V_{CE} = 5V, I_C = 10mA, f = 2GHz		7.0		GHz
Collector output capacitance	C_{ob}	V_{CB} = 5V, I_E = 0, f = 1MHz		0.6	1.0	pF
Foward transfer gain	$\|S_{21e}\|^2$	V_{CE} = 5V, I_C = 10mA, f = 1GHz	8.5	11.0		dB
Noise figure	NF	V_{CE} = 5V, I_C = 3mA, f = 1GHz		1.6	2	dB

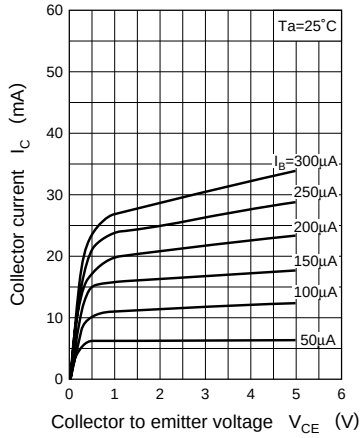
*h_{FE} Rank classification

Rank	Q	R	S
h_{FE}	80 ~ 115	95 ~ 155	135 ~ 200
Marking Symbol	HTQ	HTR	HTS

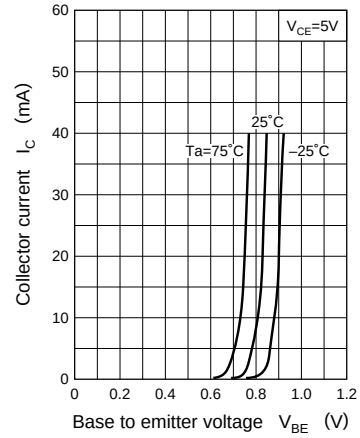
P_C — Ta



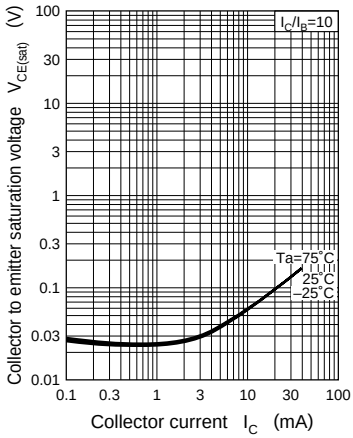
I_C — V_{CE}



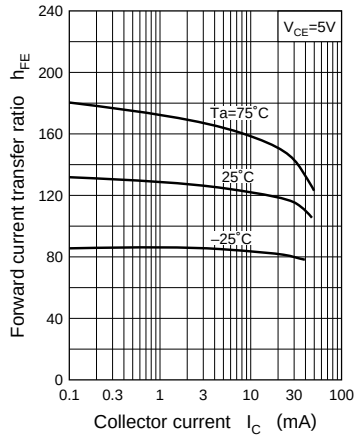
I_C — V_{BE}



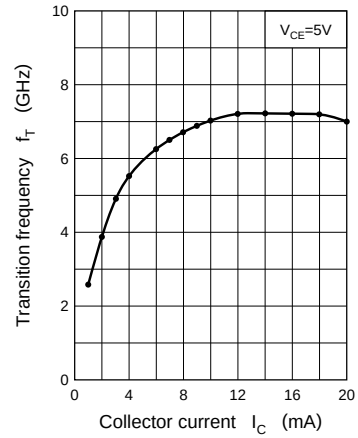
$V_{CE(sat)}$ — I_C



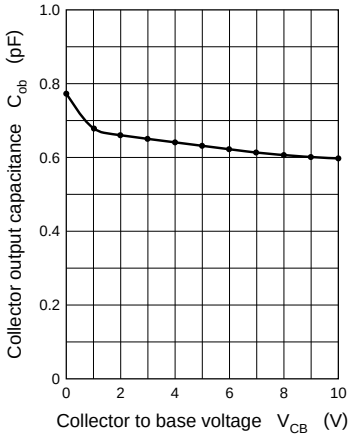
h_{FE} — I_C



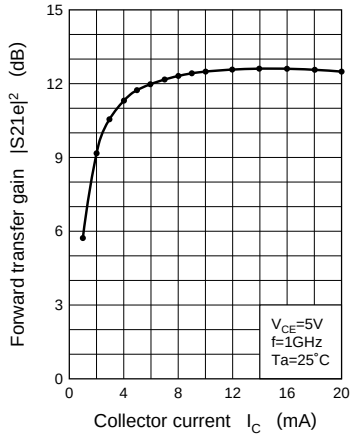
f_T — I_C



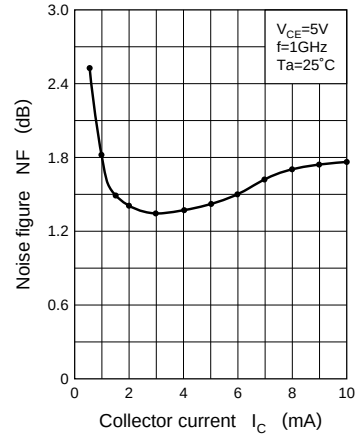
C_{ob} — V_{CB}



$|S_{21e}|^2$ — I_C



NF — I_C



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