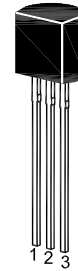


2SC1907

NPN Silicon Epitaxial Planar Transistor

for UHF TV Tuner and Local Oscillator.

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



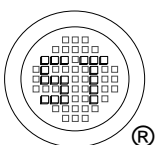
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	19	V
Emitter Base Voltage	V_{EBO}	2	V
Collector Current	I_C	50	mA
Emitter Current	$-I_E$	50	mA
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

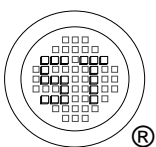
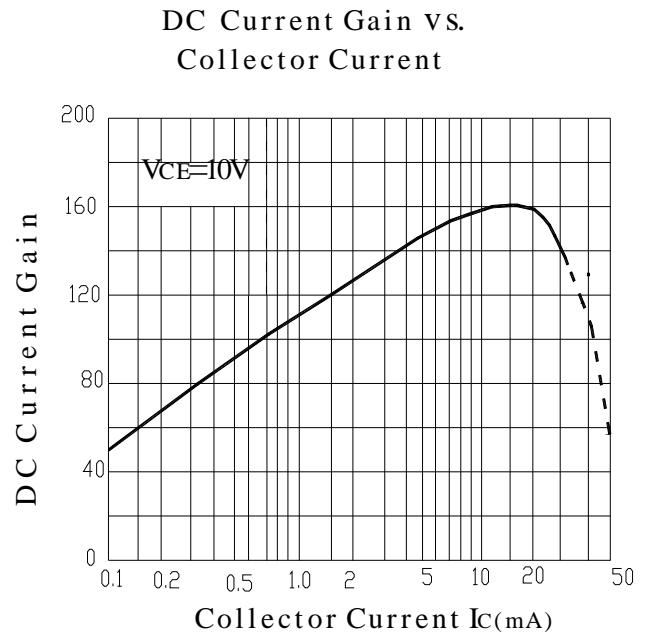
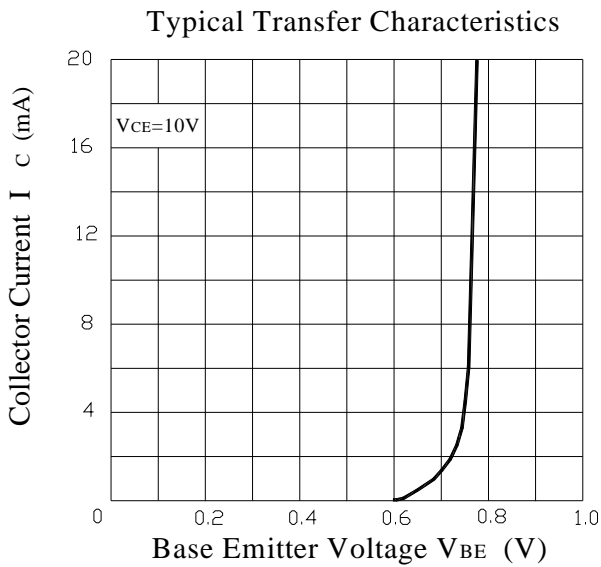
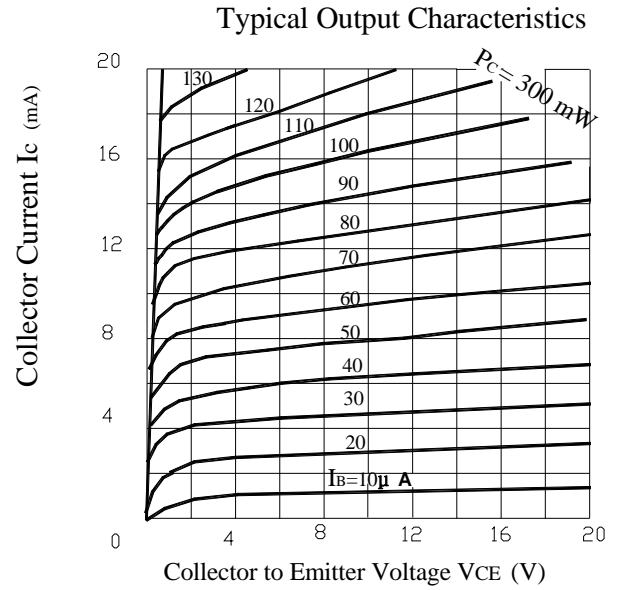
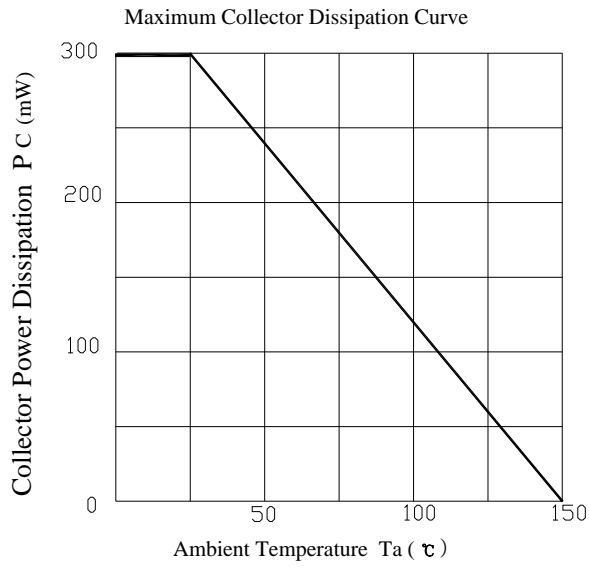
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	40	-	-	-
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	I_{CBO}	-	-	0.5	μA
Collector Base Breakdown voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 3\text{ mA}$	$V_{(BR)CEO}$	19	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	2	-	-	V
Collector Emitter Saturation Voltage at $I_C = 20\text{ mA}$, $I_B = 4\text{ mA}$	$V_{CE(sat)}$	-	0.2	1	V
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$	f_T	900	1100	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{OB}	-	1	2	pF
Base Time Constant at $V_{CB} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 31.8\text{ MHz}$	$r_{bb'} \cdot C_c$	-	10	25	ps
Oscillation Output Power at $V_{CB} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 930\text{ MHz}$	P_{out}	-	8	-	mW



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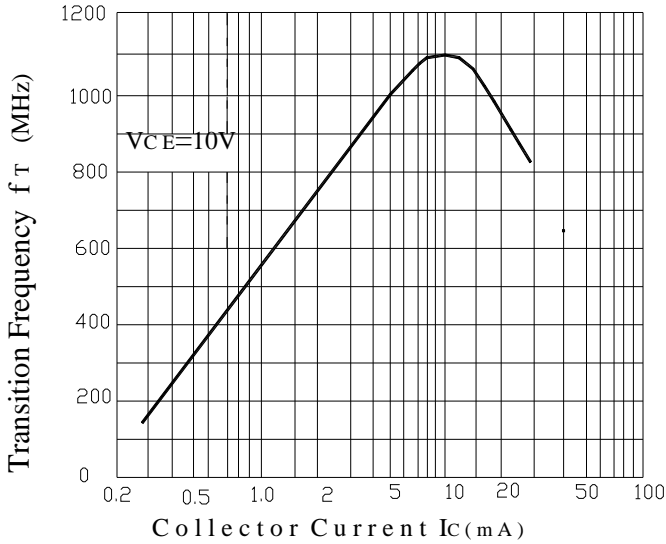




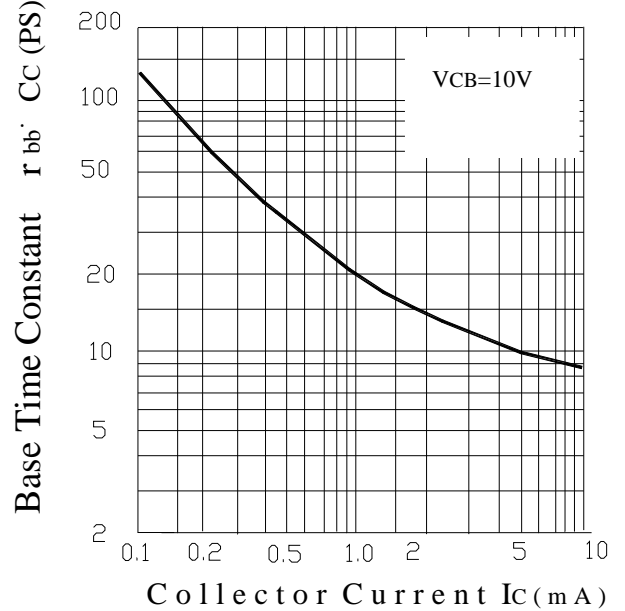
SEMTECH ELECTRONICS LTD.



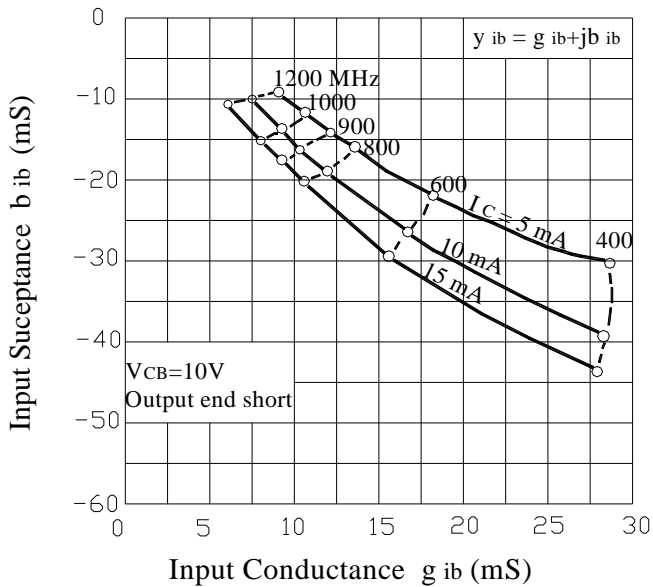
Transition Frequency vs. Collector Current



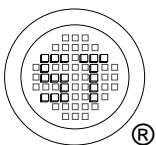
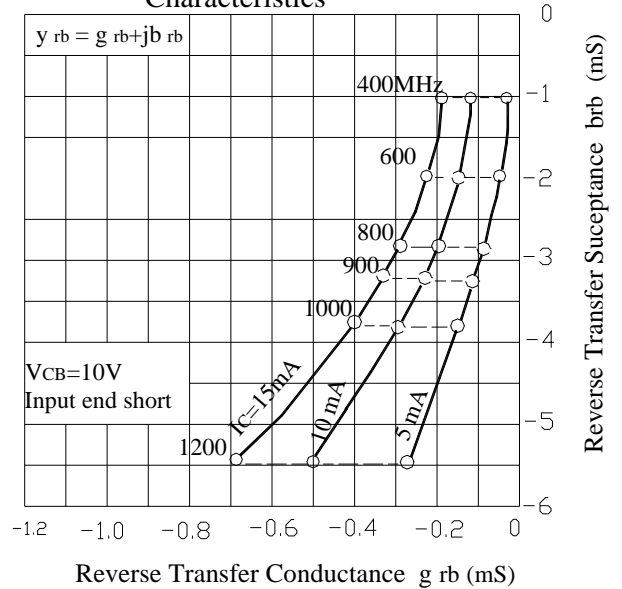
Base Time Constant vs Collector Current



Input Admittance Characteristics



Reverse Transfer Admittance Characteristics



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ISO/TS 16949 : 2009
Certificate No. 180713000

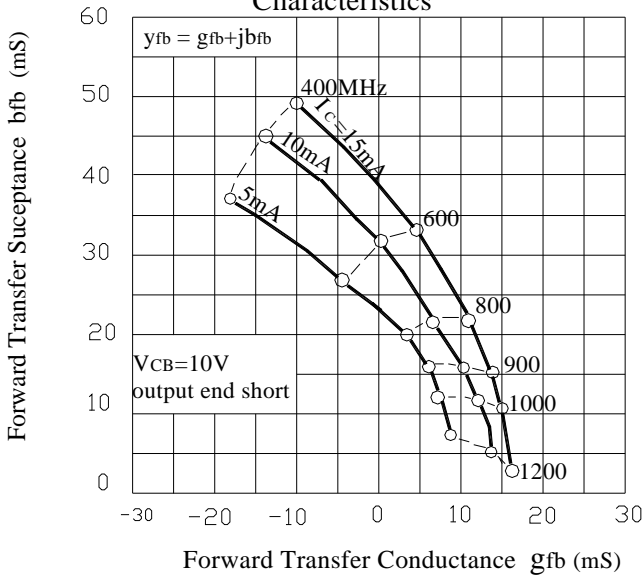
ISO 14001 : 2004
Certificate No. 7116

ISO 9001 : 2008
Certificate No. 50713410

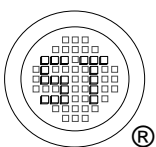
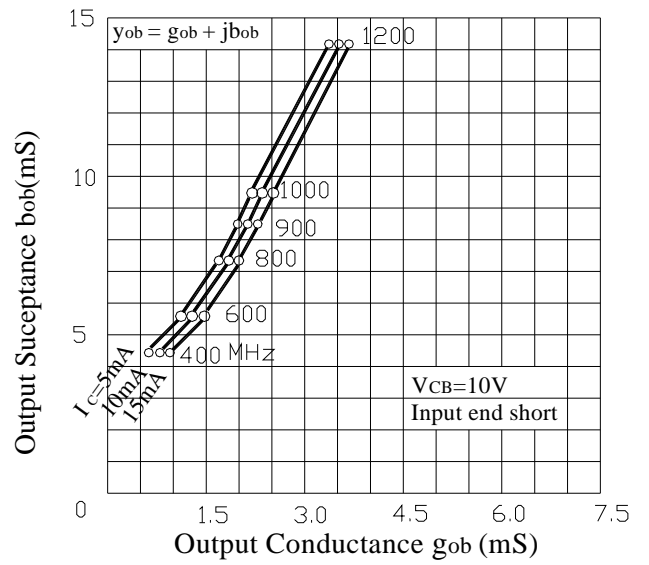
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Certificate No. 7116

IECQ QC 080000
Certificate No. FPC-18294-1483-1

Forward Transfer Admittance Characteristics



Output Admittance Characteristics



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