

ST 2SC2787

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NPN Silicon Epitaxial Planar Transistor

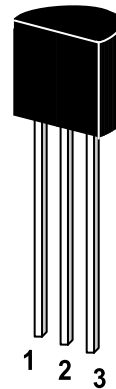
for FM RF amp, mixer, osc, converter and IF amplifier.

The transistor is subdivided into three groups M, L, and K according to its DC current gain.

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

Features

- 1) Small output capacitance
- 2) Low noise figure

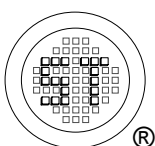


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package
Weight approx. 0.19g

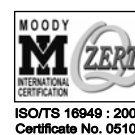
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	mA
Power Dissipation	P_{tot}	250	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$



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ISO/TS 16949 : 2002 Certificate No. 05103
ISO 14001:2004 Certificate No. 014
ISO 9001:2000 Certificate No. 014

Dated : 23/05/2002

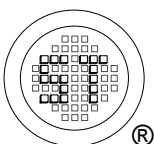
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Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

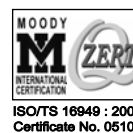
	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain* at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$					
Current Gain Group M	h_{FE}	40	-	80	-
L	h_{FE}	60	-	120	-
K	h_{FE}	90	-	180	-
Collector Cutoff Current at $V_{CB}=50\text{V}$	I_{CBO}	-	-	0.1	μA
Emitter Cutoff Current at $V_{EB}=5\text{V}$	I_{EBO}	-	-	0.1	μA
Base Emitter Voltage* at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$	V_{BE}	0.65	0.7	0.75	V
Collector Saturation Voltage* at $I_C=10\text{mA}$, $I_B=1\text{mA}$	$V_{CE(sat)}$	-	0.08	0.3	V
Gain Bandwidth Product at $V_{CE}=6\text{V}$, $I_E=-1\text{mA}$	f_T	150	250	-	MHz
Collector Base Time Constant at $V_{CB}=6\text{V}$, $I_E=-10\text{mA}$, $f=31.9\text{MHz}$	$C_C \cdot r_{b'b}$	-	10	15	Ps
Output Capacitance at $V_{CB}=6\text{V}$, $f=1\text{MHz}$	C_{OB}	-	1.9	2.2	pF
Noise Figure at $V_{CE}=6\text{V}$, $I_E=-1\text{mA}$ $f=1\text{MHz}$, $R_G=500\Omega$	NF	-	2	4	dB

* $PW \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$



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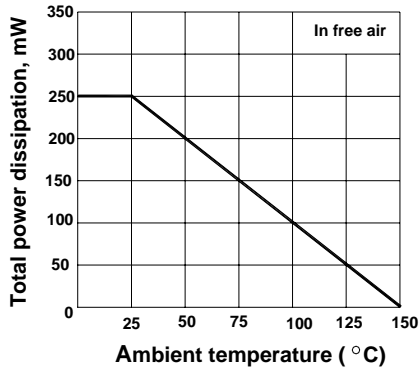
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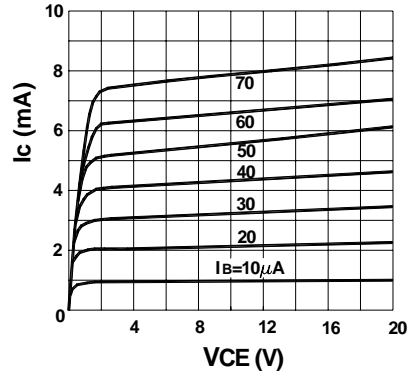
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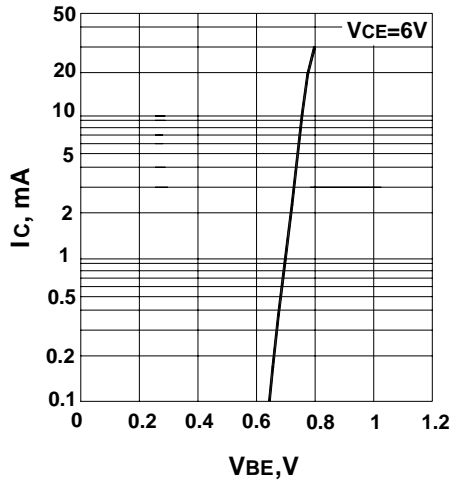
Total power dissipation vs. ambient temperature



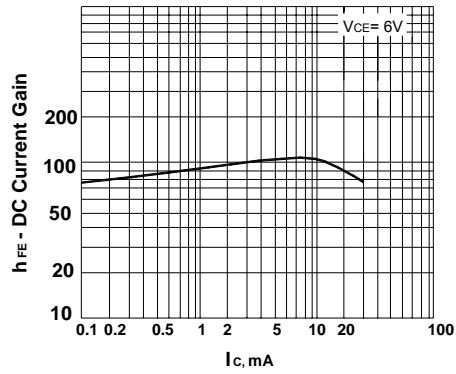
Collector current vs. collector emitter voltage



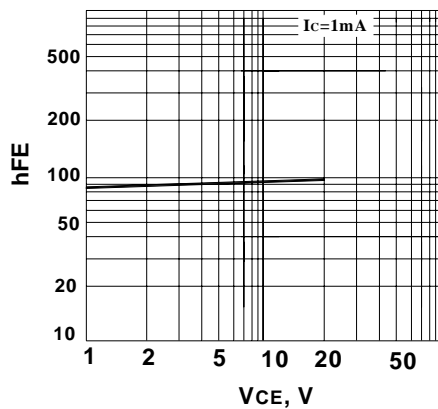
Collector current vs. base emitter voltage



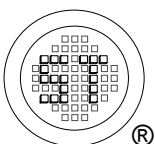
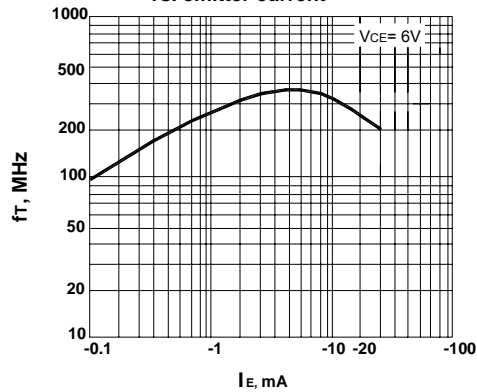
DC CURRENT GAIN vs. COLLECTOR CURRENT



DC current gain vs. collector emitter voltage



Gain bandwidth product vs. emitter current



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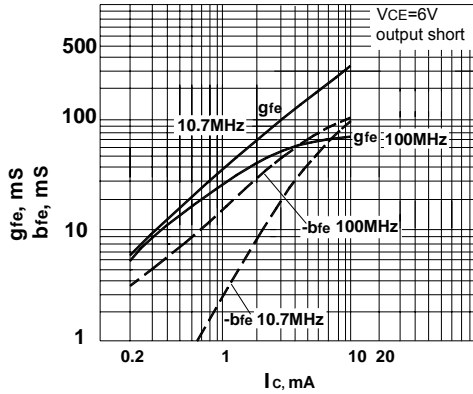


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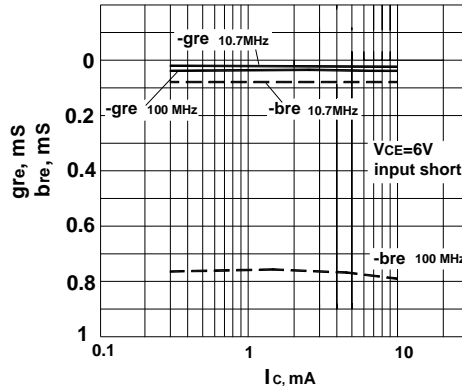
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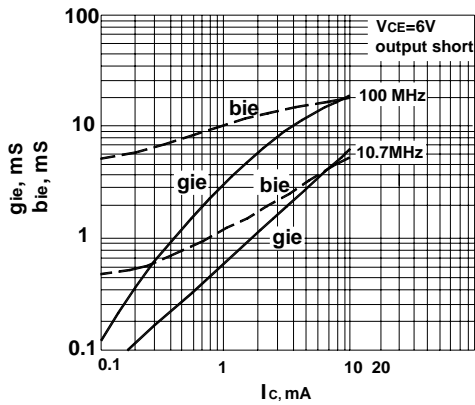
Forward transfer admittance vs. collector current



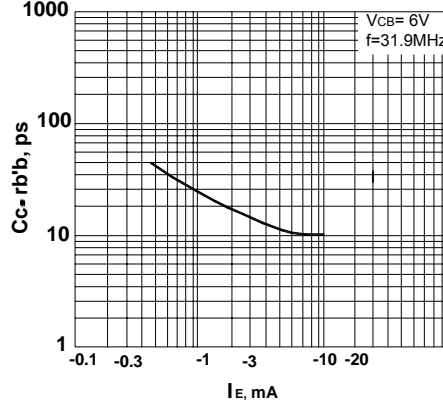
Reverse transfer admittance vs. collector current



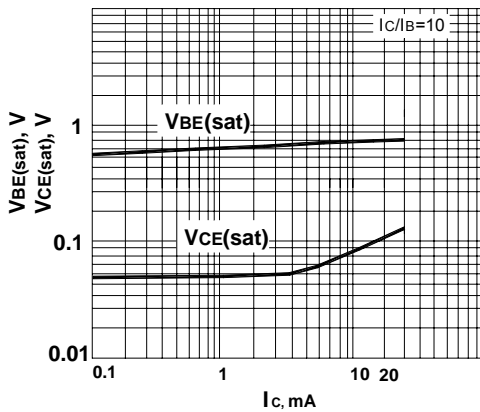
Input admittance vs. collector current



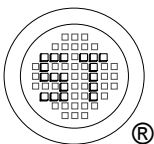
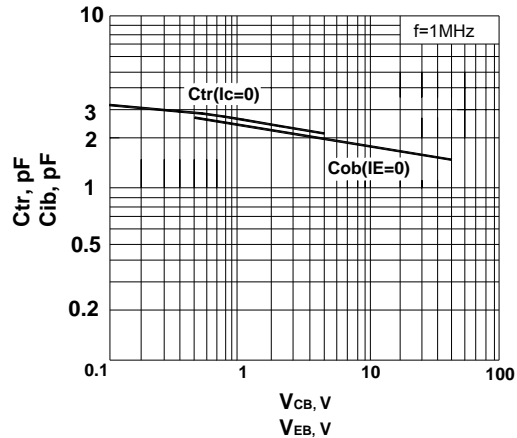
Collector base time constant vs. emitter current



Base collector saturation voltage vs. collector current



Input & output capacitance vs. reverse voltage



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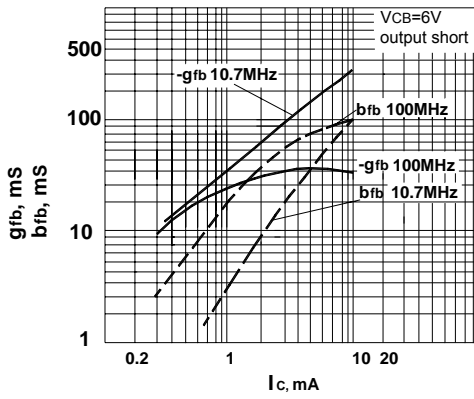


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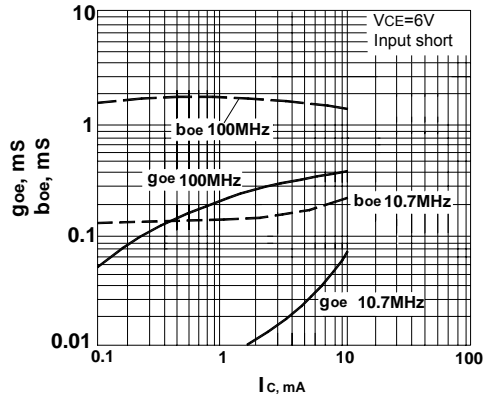
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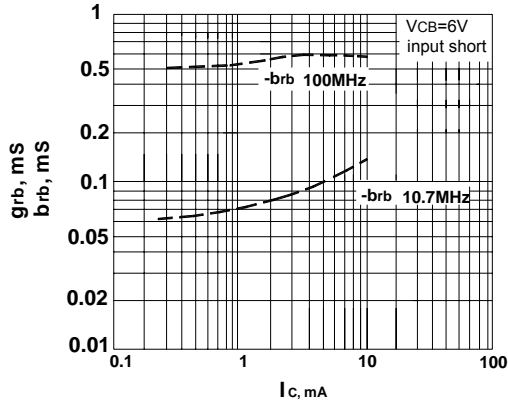
Forward transfer amittance vs. collector current



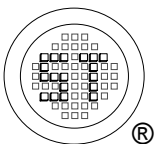
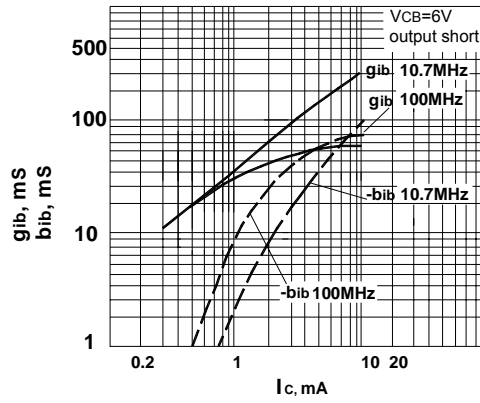
Output amittance vs. collector current



Reverse transfer amittance vs. collector current



Input amittance vs. collector current



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