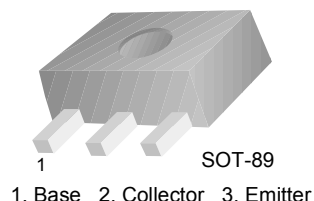


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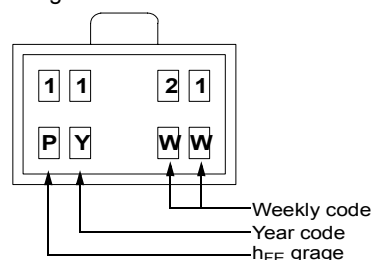
PNP Epitaxial Planar Silicon Transistor

High Current Driver Applications

- Low Collector-Emitter Saturation Voltage
- Large Current Capacity
- Fast Switching Speed
- Complement to KSD1621



Marking



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V _{CBO}	Collector-Base Voltage	-30	V
V _{CEO}	Collector-Emitter Voltage	-25	V
V _{EBO}	Emitter-Base Voltage	-6	V
I _C	Collector Current	-2	A
P _C P _C *	Collector Power Dissipation	500 1.3	mW W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 150	°C

* Mounted on Ceramic Board (250mm² x 0.8mm)

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	I _C = -10μA, I _E = 0	-30			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = -1mA, I _B = 0	-25			V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = -10μA, I _C = 0	-6			V
I _{CBO}	Collector Cut-off Current	V _{CB} = -20V, I _E = 0			-100	nA
I _{EBO}	Emitter Cut-off Current	V _{BE} = -4V, I _C = 0			-100	nA
h _{FE1} h _{FE2}	DC Current Gain	V _{CE} = -2V, I _C = -0.1A V _{CE} = -2V, I _C = -1.5A	100 65		560	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C = -1.5A, I _B = -75mA		-0.35	-0.6	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	I _C = -1.5A, I _B = -75mA		-0.85	-1.2	V

Electrical Characteristics (Continued) $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
f_T	Current Gain Bandwidth Product	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$		150		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		32		pF
t_{ON}	Turn On Time *	$V_{CC} = -12\text{V}, V_{BE} = -5\text{V}$ $I_{B1} = -I_{B2} = -25\text{mA}$ $I_C = -500\text{mA}, R_L = 24\Omega$		60		ns
t_{STG}	Storage Time *			350		ns
t_F	Fall time *			25		ns

 h_{FE} Classification

Classification	R	S	T	U
h_{FE1}	100 ~ 200	140 ~ 280	200 ~ 400	280 ~ 560

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
1121	KSB1121	SOT-89	13"	--	4,000

Typical Performance Characteristics

Figure 1. Static Characteristic

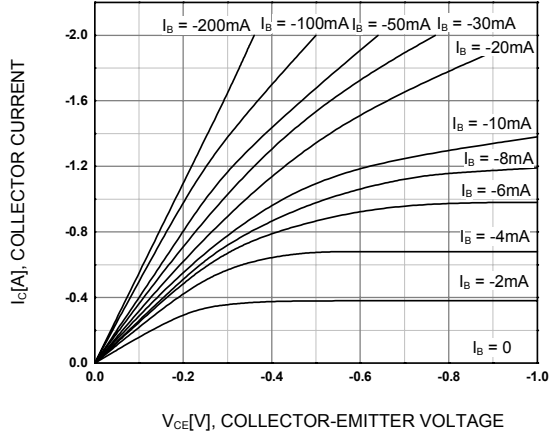


Figure 2. DC Current Gain

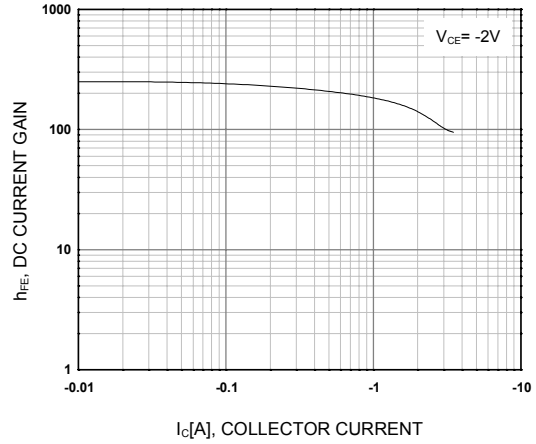


Figure 3. Collector-Emitter Saturation Voltage

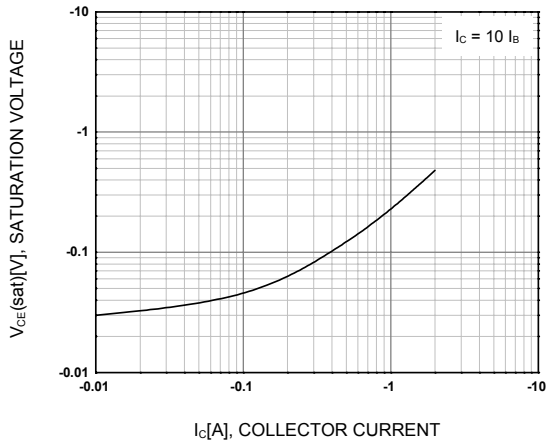


Figure 4. Base-Emitter On Voltage

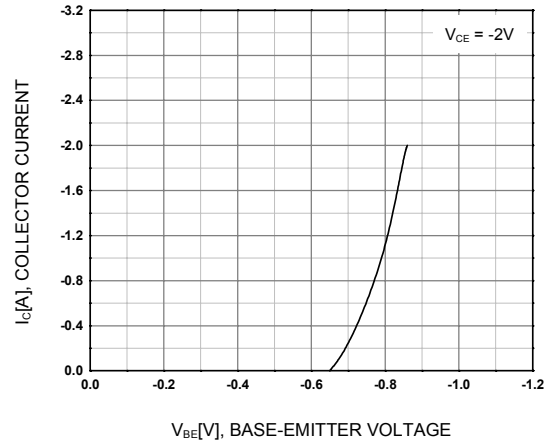


Figure 5. Collector Output Capacitance

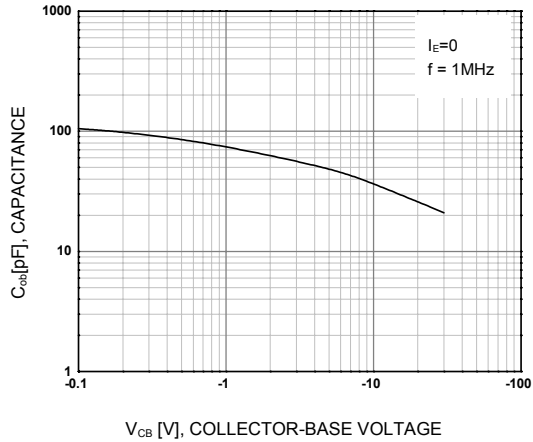
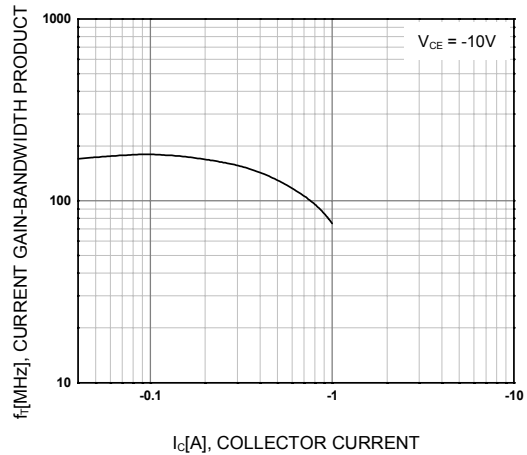


Figure 6. Current Gain Bandwidth Product



Technical drawing of a mechanical part showing three views: front, side, and top.

Front View Dimensions:

- Overall width: 4.50 ± 0.20
- Top feature width: 1.65 ± 0.10
- Top feature height: 0.50
- Feature radius: $R0.2$
- Central hole diameter: 2.50 ± 0.20
- Overall height: 4.10 ± 0.20
- Bottom feature height: 1.10
- Bottom feature width (left): 0.50 ± 0.10
- Bottom feature width (right): 0.40 ± 0.10
- Bottom feature spacing (typical): 1.50 TYP

Side View Dimensions:

- Overall width: 1.50 ± 0.20
- Feature width: 0.40
- Feature height: $+0.10$ to -0.05

Top View:

- Shows the top surface of the part with three rectangular features.

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