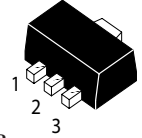


**PNP Plastic-Encapsulate Transistor**

 Lead(Pb)-Free

**SOT-89**


1. BASE  
2. COLLECTOR  
3. EMITTER

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V <sub>CEO</sub>	-80	V <sub>dc</sub>
Collector-Base Voltage	V <sub>CBO</sub>	-80	V <sub>dc</sub>
Emitter-Base Voltage	V <sub>EBO</sub>	-5.0	V <sub>dc</sub>
Collector Current	I <sub>C</sub>	1.0	A <sub>dc</sub> (DC)
	I <sub>CP</sub>	2.0	A <sub>dc</sub> (Pulse)
Collector Power Dissipation	P <sub>C</sub>	0.5	W
Junction Temperature, Storage Temperature	T <sub>j</sub> , T <sub>stg</sub>	150, -55 to +150	°C

**Device Marking**

2SB1260=ZL

**ELECTRICAL CHARACTERISTICS**

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = -1.0 mA <sub>dc</sub> , I <sub>B</sub> =0)	V <sub>(BR)CEO</sub>	-80	-	V <sub>dc</sub>
Collector-Base Breakdown Voltage (I <sub>C</sub> = -50 μA <sub>dc</sub> , I <sub>E</sub> =0)	V <sub>(BR)CBO</sub>	-80	-	V <sub>dc</sub>
Emitter-Base Breakdown Voltage (I <sub>E</sub> = -50 μA <sub>dc</sub> , I <sub>C</sub> =0)	V <sub>(BR)EBO</sub>	-5.0	-	V <sub>dc</sub>
Collector Cutoff Current (V <sub>CB</sub> = -60 V <sub>dc</sub> , I <sub>E</sub> =0)	I <sub>CBO</sub>	-	-1	μA <sub>dc</sub>
Emitter Cutoff Current (V <sub>EB</sub> =-4.0 V <sub>dc</sub> , I <sub>C</sub> =0)	I <sub>EBO</sub>	-	-1	μA <sub>dc</sub>

1.FR-5=1.0 x 0.75 x 0.062 in.

# 2SB1260



## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted) (Continued)

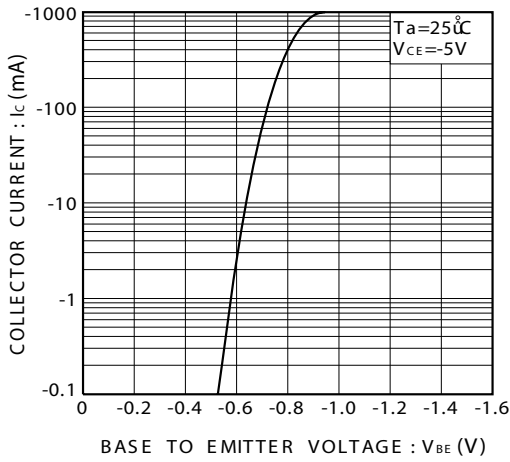
Characteristics	Symbol	Min	Typ	Max	Unit
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### ON CHARACTERISTICS

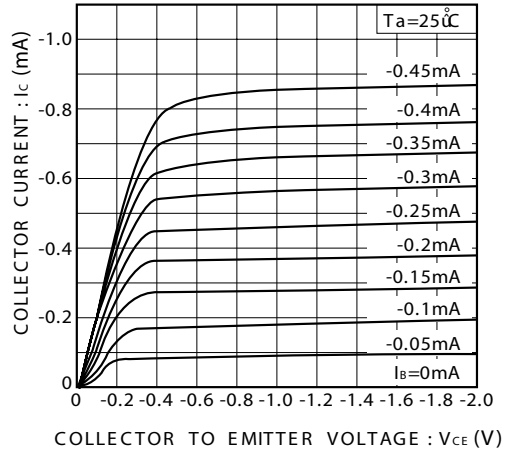
DC Current Gain ( $I_C=-0.1\text{ A dc}, V_{CE}=-3.0\text{ V dc}$ )	$h_{FE}$	82	-	390	-
Collector-Emitter Saturation Voltage ( $I_C=-500\text{ mA dc}, I_B=-50\text{ mA dc}$ )	$V_{CE(sat)}$	-	-	-0.4	Vdc
Transition Frequency ( $I_C=-50\text{ mA dc}, V_{CE}=-5.0\text{ V dc}, f=30\text{ MHz}$ )	$f_T$	80	-	-	MHz

### CLASSIFICATION OF $h_{FE}$

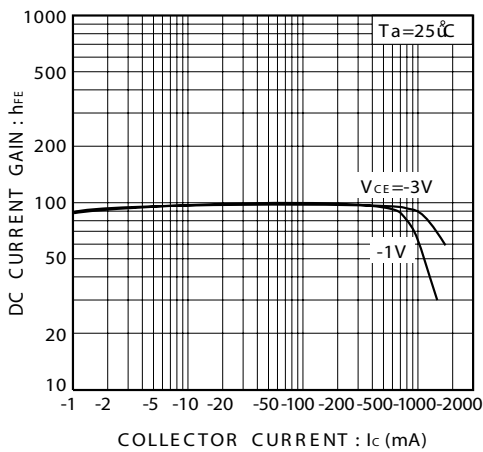
Item	P	Q	R
Range	82-180	120-270	180-390



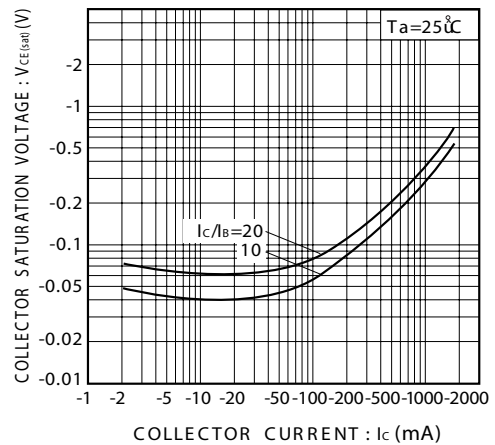
**FIG.1** Grounded Emitter Propagation Characteristics



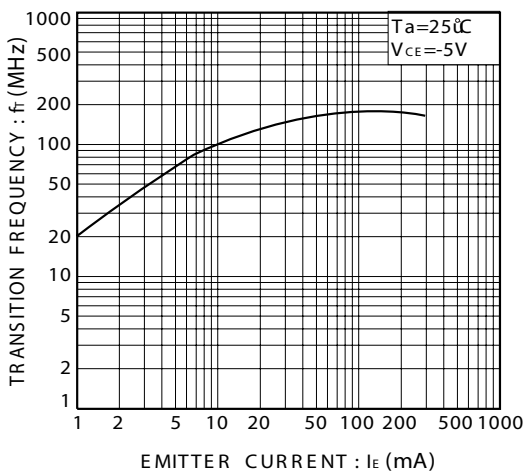
**FIG.2** Grounded Emitter Output Characteristics



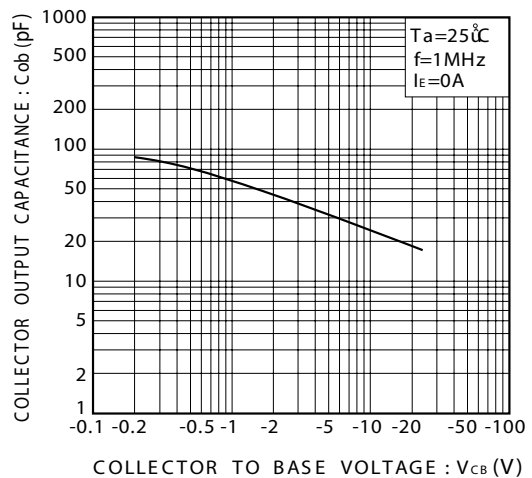
**FIG.3** DC Current Gain vs. Collector Current



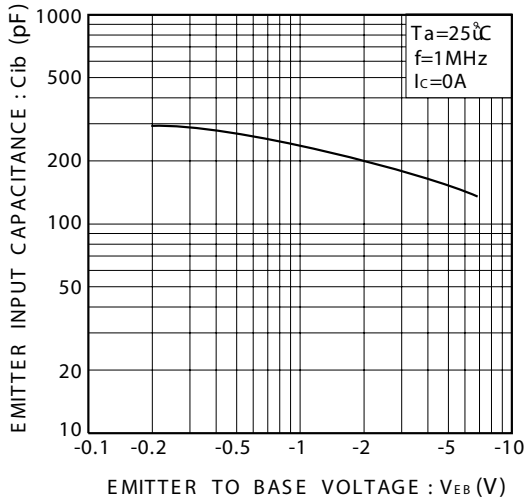
**FIG.4** Collector-Emitter Saturation Voltage vs. Collector Current



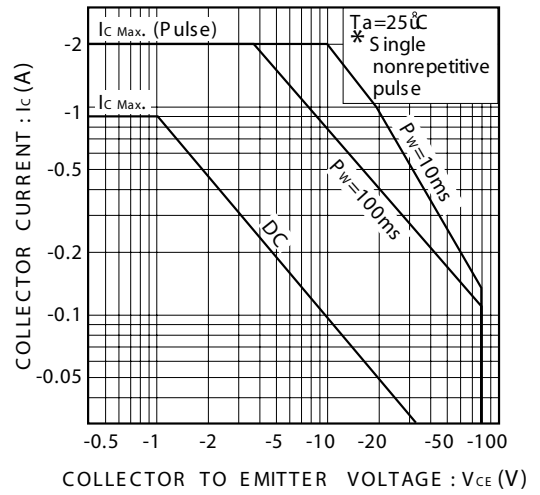
**FIG.5** Gain Bandwidth Product vs. Emitter Current



**FIG.6** Collector Output Capacitance vs. Collector-Base Voltage



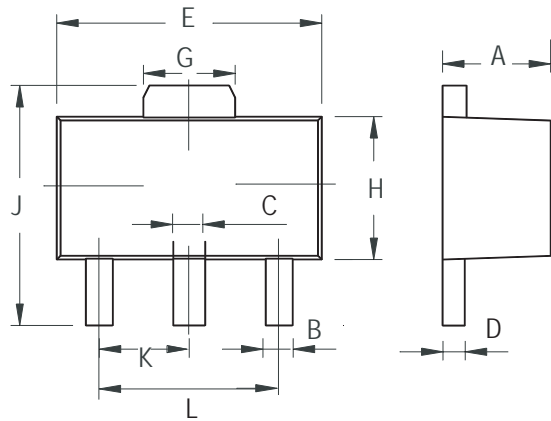
**FIG. 7 Emitter Input Capacitance vs. Emitter-Base Voltage**



**FIG. 8 Safe Operating Area**

## SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	Min	Max
A	1.400	1.600
B	0.320	0.520
C	0.360	0.560
D	0.350	0.440
E	4.400	4.600
G	1.400	1.800
H	2.300	2.600
J	3.940	4.250
K	1.500TYP	
L	2.900	3.100