

## DATA SHEET

### B772

#### PNP GENERAL PURPOSE TRANSISTORS

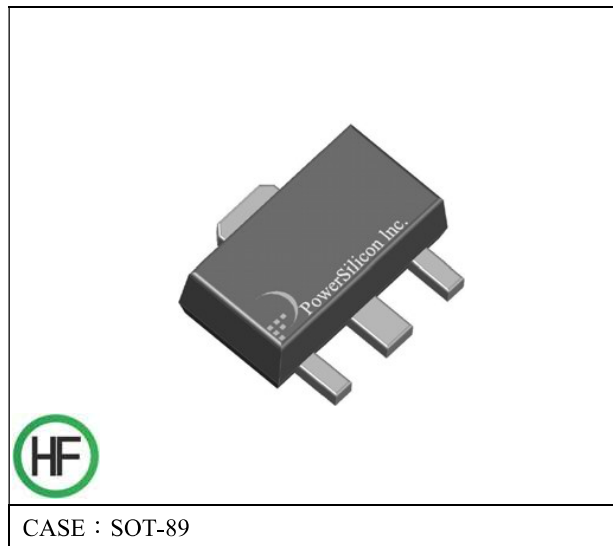
**VOLTAGE** -30 Volts **CURRENT** -3.0 Ampere

#### FEATURES

- COLLECTOR-EMITTER VOLTAGE  $V_{CE} = -30V$
- COLLECTOR CURRENT  $I_C = -3A$
- PNP EPITAXIAL SILICON, PLANAR DESIGN
- LEAD FREE AND HALOGEN FREE

#### MECHANICAL DATA

- CASE : SOT-89, PLASTIC
- TERMINALS : SOLDERABLE PER MIL-STD-202, METHOD 208
- APPROX. WEIGHT: 0.002 GRAMS



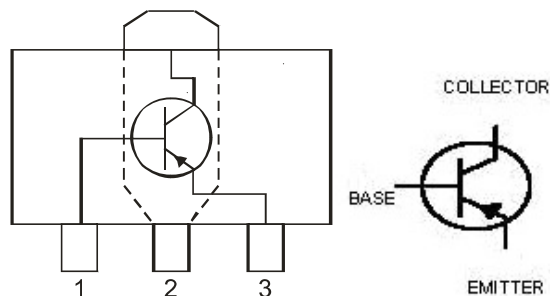
#### MAXIMUM RATINGS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.

PARAMETER	SYMBOL	VALUE	UNITS
COLLECTOR-EMITTER VOLTAGE	$V_{CEO}$	-30	V
COLLECTOR-BASE VOLTAGE	$V_{CBO}$	-40	V
EMITTER-BASE VOLTAGE	$V_{EBO}$	-5	V
COLLECTOR CURRENT-CONTINUOUS	$I_C$	-3.0	A
COLLECTOR POWER DISSIPATION	$P_C$	500	mW
JUNCTION AND STORAGE TEMPERATURE RANGE	$T_{J}, T_{STG}$	-55 TO +150	°C

NOTE: 1. INDICATES DATA IN ADDITION TO JEDEC REQUIREMENTS.

#### PNP



**ELECTRICAL CHARACTERISTICS**
**ELECTRICAL CHARACTERISTICS (At T<sub>A</sub> = 25°C UNLESS OTHERWISE NOTED)**
**OFF CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MIN.	MAX.	UNITS
COLLECTOR-EMITTER BREAKDOWN VOLTAGE (NOTE 2)	I <sub>C</sub> = -10mA, I <sub>B</sub> = 0	V <sub>(BR)CEO</sub>	-30	-	V
COLLECTOR-BASE BREAKDOWN VOLTAGE	I <sub>C</sub> = -100μA, I <sub>E</sub> = 0	V <sub>(BR)CBO</sub>	-40	-	V
EMITTER-BASE BREAKDOWN VOLTAGE	I <sub>E</sub> = -100μA, I <sub>C</sub> = 0	V <sub>(BR)EBO</sub>	-5.0	-	V
EMITTER CUT-OFF CURRENT	V <sub>EB</sub> = -6V, I <sub>C</sub> = 0	I <sub>EBO</sub>	-	-1	μA
COLLECTOR CUT-OFF CURRENT	V <sub>CB</sub> = -40V, I <sub>E</sub> = 0	I <sub>CBO</sub>	-	-1	μA
COLLECTOR CUT-OFF CURRENT	V <sub>CE</sub> = -30V, I <sub>B</sub> = 0	I <sub>CFO</sub>	-	-10	μA

**ON CHARACTERISTICS (NOTE 2)**

DC CURRENT GAIN	I <sub>C</sub> = -1A, V <sub>CE</sub> = -2V	h <sub>FE</sub>	60	400	
COLLECTOR-EMITTER SATURATION VOLTAGE	I <sub>C</sub> = -2A, I <sub>B</sub> = -200mA	V <sub>CE(SAT)</sub>	-	-0.5	V
BASE-EMITTER SATURATION VOLTAGE	I <sub>C</sub> = -2A, I <sub>B</sub> = -200mA	V <sub>BE(SAT)</sub>	-	-1.5	V

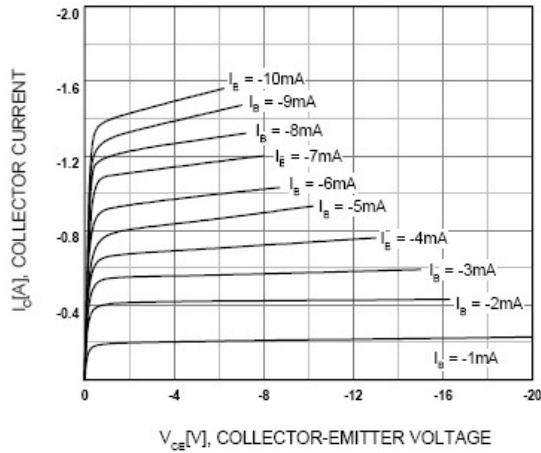
**SMALL-SIGNAL CHARACTERISTICS**

CURRENT-GAIN-BANDWIDTH PRODUCT	I <sub>C</sub> = -100mA, V <sub>CE</sub> = -5V, f = 10MHz	f <sub>T</sub>	80 (TYP.)		MHz
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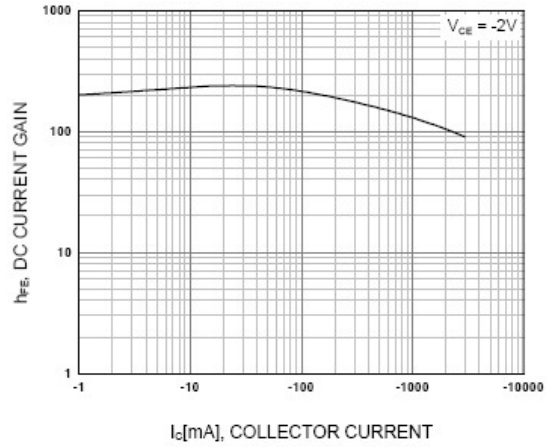
NOTE: 2. PULSE TEST: PULSE WIDTH ≤ 300μs; DUTY CYCLE ≤ 2%.

**CLASSIFICATION OF h<sub>FE</sub>**

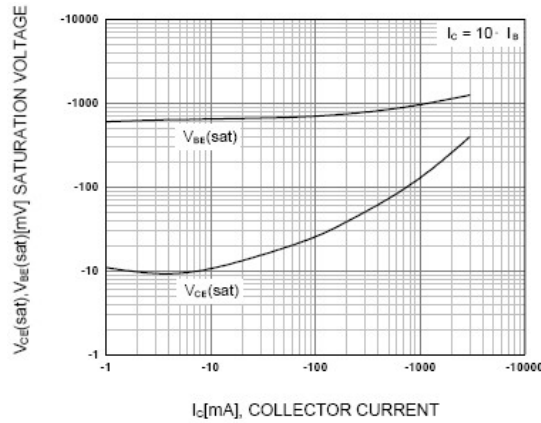
RANK	R	O	Y	GR
RANGE	60~120	100~200	160~320	200~400



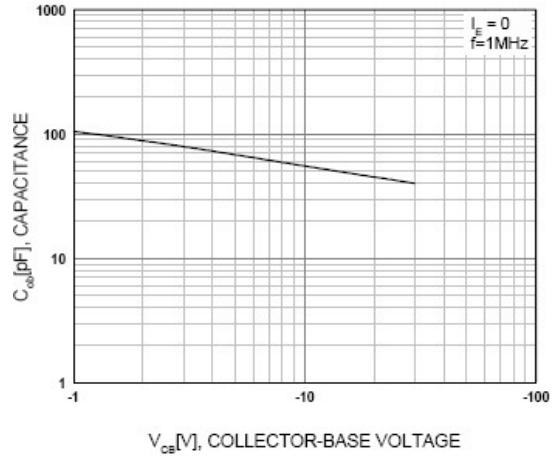
**Figure 1. Static Characteristic**



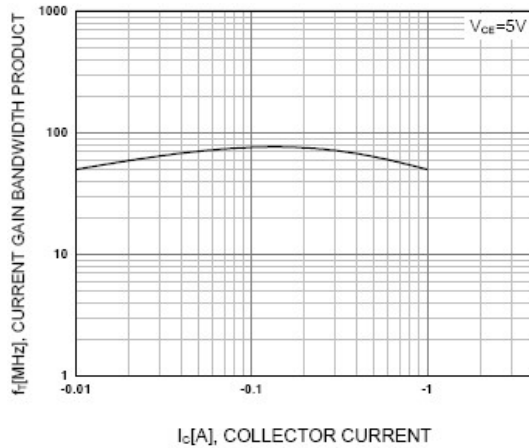
**Figure 2. DC current Gain**



**Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**

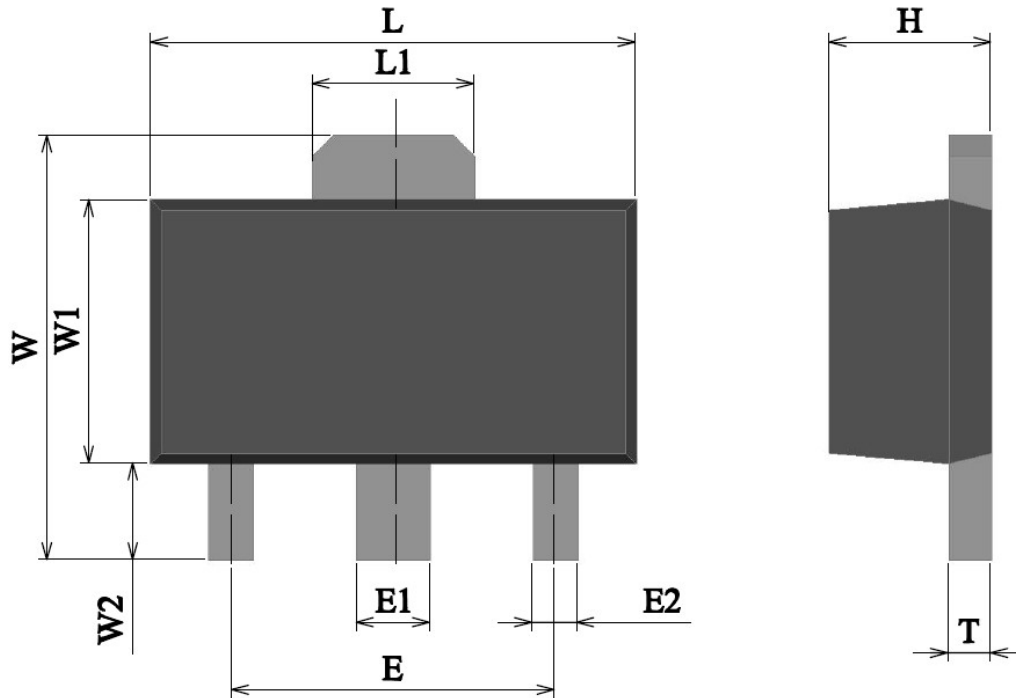


**Figure 4. Collector Output Capacitance**



**Figure 5. Current Gain Bandwidth Product**

## SOT-89 DIMENSION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
L	4.40	4.50	0.173	0.177
L1	1.55 REF		0.061 REF	
E	3.00 TYP		0.118 TYP	
E1	0.40	0.58	0.016	0.023
E2	0.32	0.52	0.013	0.020
W	3.94	4.25	0.155	0.167
W1	2.30	2.60	0.091	0.102
W2	0.90	1.20	0.035	0.047
H	1.45	1.60	0.057	0.063
T	0.35	0.44	0.014	0.017