

2SB772

PNP SILICON TRANSISTOR

GENERAL DESCRIPTION

The 2SB772 is a medium power low voltage transistor, designed for audio power amplifier, DC-DC converter and voltage regulator.

FEATURES

- *High current output up to 3A
- *Low saturation voltage
- *Complement to 2SD882

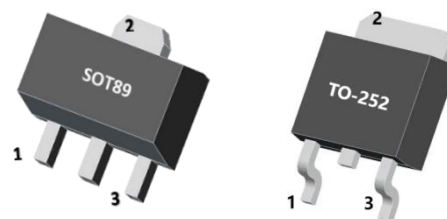
MARKING



B772=Device Code

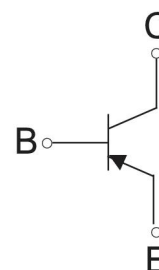
XXXX=Date Code

Solid Dot=Green molding compound



1. BASE
2. COLLECTOR
3. EMITTER

Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS (TA=25°C, unless otherwise specified)

SYMBOL	PARAMETER		VALUE	UNIT
VCBO	Collector-Base Voltage		-40	V
VCEO	Collector-Emitter Voltage		-30	V
VEBO	Emitter-Base Voltage	TO-252	-7	V
		SOT-89	-5	
IC	Collector Current (DC)		-3	A
ICP	Collector Current (Pulse)		-7	A
IB	Base Current		-0.6	A
Pc	Collector Dissipation	TO-252	1	W
		SOT-89	0.5	
Tj	Operating Junction Temperature		+150	°C
Tstg	Storage Temperature		-55 to +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

2. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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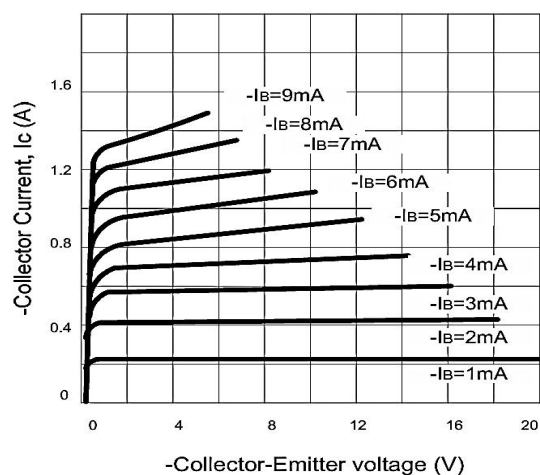
ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	V _{CBO}	I _C =-100μA, I _E =0	-40			V
Collector-Emitter Breakdown Voltage	V _{CEO}	I _C =-1mA, I _B =0	-30			V
Emitter-Base Breakdown Voltage	V _{EBO}	I _E =-100μA, I _C =0	TO-252	-7		V
			SOT-89	-5		
Collector Cut-Off Current	I _{CBO}	V _{CB} =-30V, I _E =0			-1	μA
Collector Cut-Off Current	I _{CEO}	V _{CE} =-30V, I _B =0			-1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-5V, I _C =0			-1	μA
DC Current Gain (Note) (CLASSIFICATION OF h _{FE2})	h _{FE1}	V _{CE} =-2V, I _C =-20mA	30	200		
	h _{FE2}	V _{CE} =-2V, I _C =-1A	A	100	200	
			B	160	320	
			C	200	400	
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =-2A, I _B =-0.2A		-0.3	-0.5	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =-2A, I _B =-0.2A		-1.0	-2.0	V
Current Gain Bandwidth Product	f _T	V _{CE} =-5V, I _C =-0.1A		80		MHz
Output Capacitance	C _{OB}	V _{CB} =-10V, I _E =0, f=1MHz		45		pF

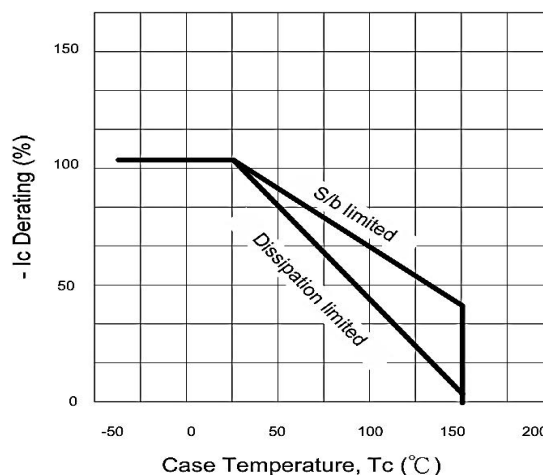
Note: Pulse test: Pw ≤ 300μs, Duty Cycle ≤ 2%

TYPICAL CHARACTERISTICS

Static Characteristics



Derating Curve of Safe Operating Areas

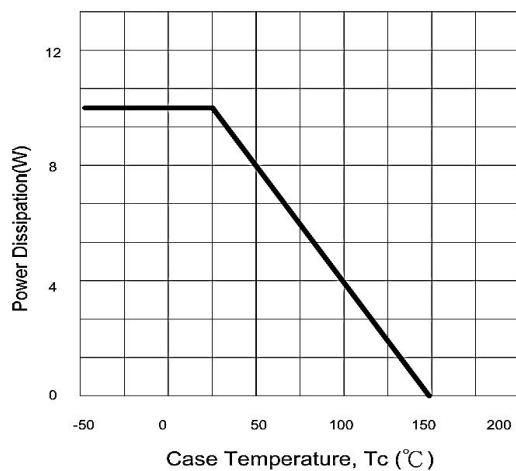


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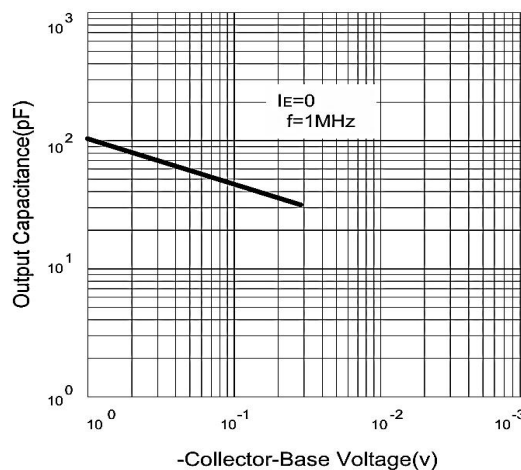
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■ TYPICAL CHARACTERISTICS(Con.t)

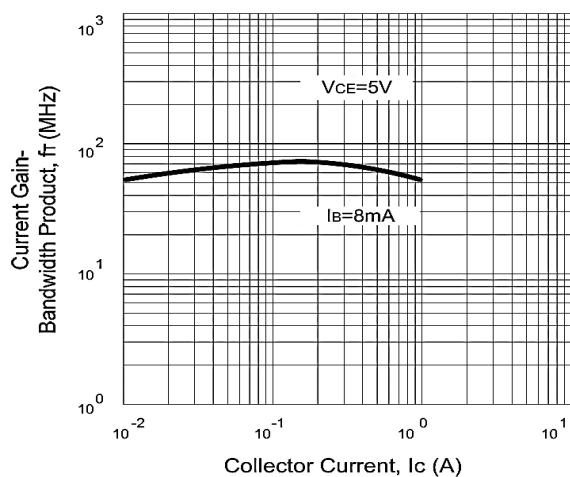
Power Derating



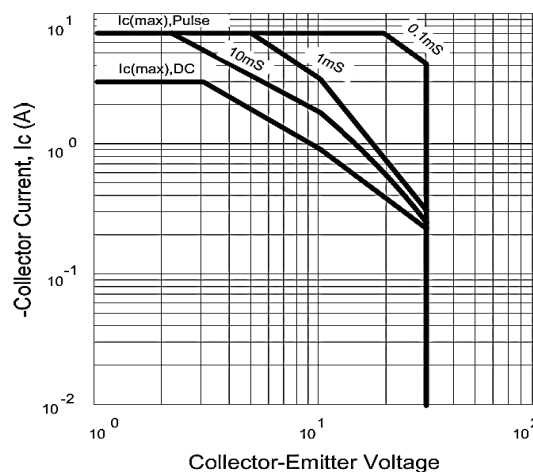
Collector Output Capacitance



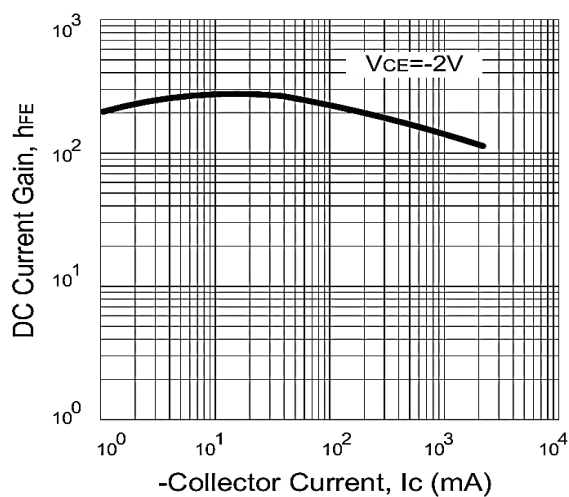
Current Gain-Bandwidth Product



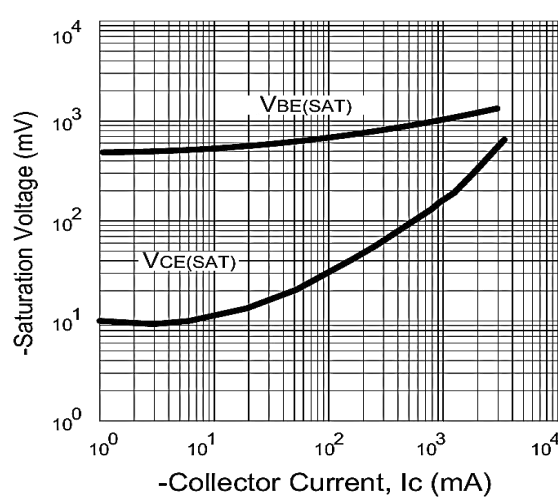
Safe Operating Area



DC Current Gain



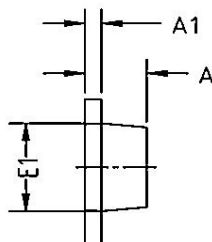
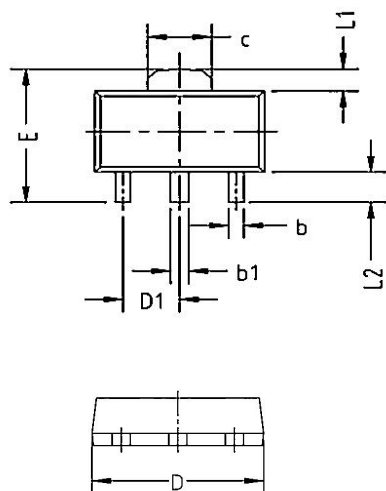
Saturation Voltage



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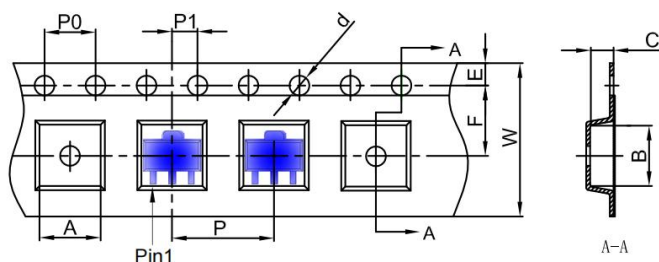
SOT89 PACKAGE OUTLINE DIMENSIONS



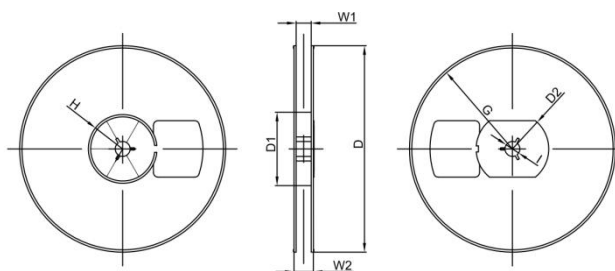
COMMON DIMENSION(MM)			
PKG	SOT-89		
Symbol	MIN	MON	MAX
A	1.450	1.500	1.550
A1	0.350	0.400	0.450
b	0.350	0.400	0.48
b1	0.430	0.480	0.550
C	1.500	1.550	1.650
D	4.450	4.550	4.700
D1	1.470	1.500	1.550
E	4.100	4.200	4.300
E1	2.500	2.550	2.650
L1	0.650	0.700	0.750
L2	0.900	0.950	1.000

SOT89 PACKAGING INFORMATION

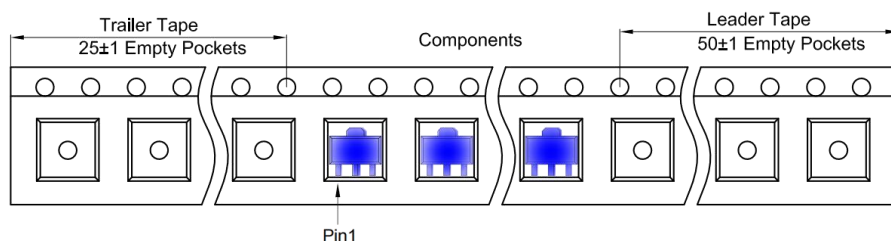
SOT-89 Embossed Carrier Tape



SOT-89 Reel



SOT-89 Tape Leader and Trailer



REEL	Reel Size
1000 pcs	7 inch

Dimensions are in millimeter

Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø180.00	60.00	R32.00	R86.50	R30.00	Ø13.00	13.20	16.50

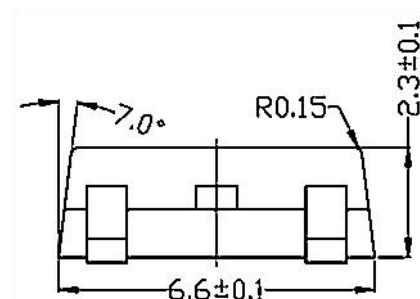
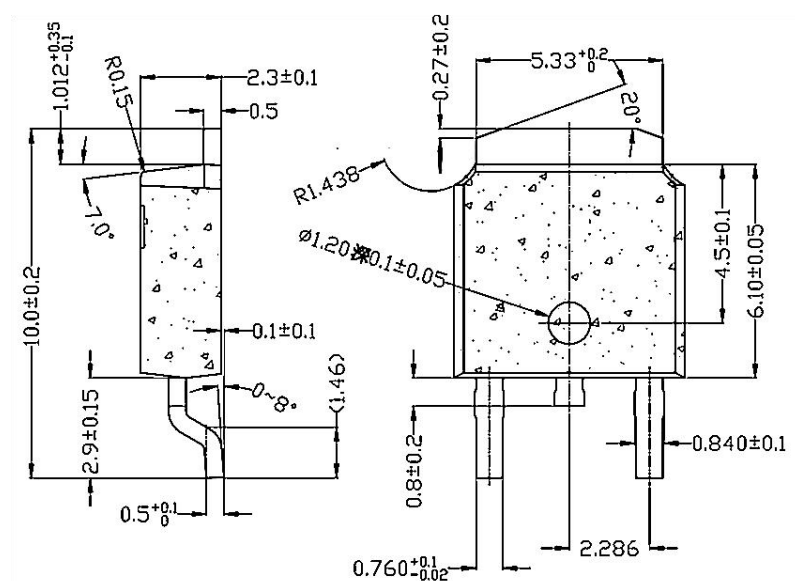
Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

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TO - 252 PACKAGE OUTLINE DIMENSIONS



TO - 252 PACKING INFORMATION

Package version	Reel dimensions $\phi \times H$ (mm)	Per Reel (pcs)	Reels per box	Inner box dimensions $L \times W \times H$ (mm)	Outer box (pcs)	Outer box dimensions $L \times W \times H$ (mm)
TO-252	$\phi 330 \times 20$	2500	2	360*340*50	25000	375*375*280