

GENERAL DESCRIPTION

The B772 is a medium power low voltage transistor, designed for audio power amplifier, DC-DC converter and voltage regulator.

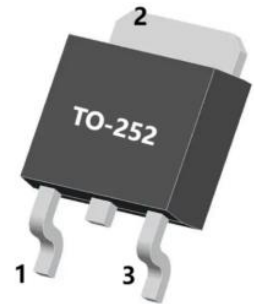
FEATURES

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

MARKING

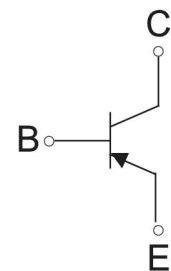


B772=Device Code



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. Absolutemaximum ratings are stress ratings only and functional device operation is not implied.

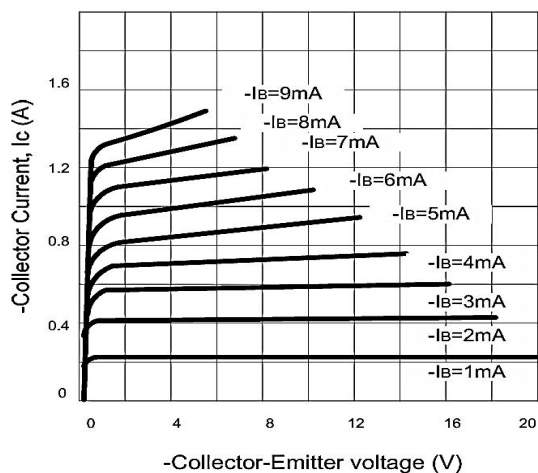
ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

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

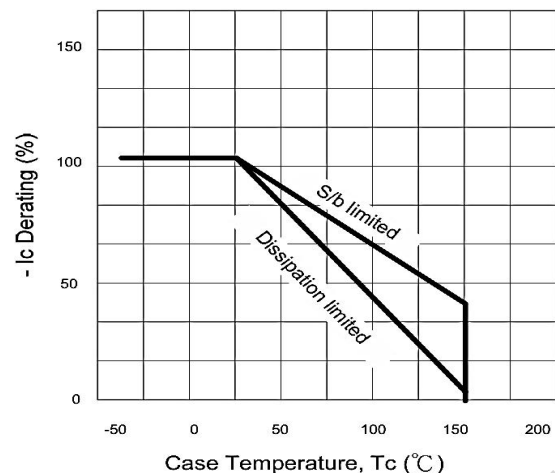
Note: Pulse test: Pw ≤ 300μs, Duty Cycle ≤ 2%

TYPICAL CHARACTERISTICS

Static Characteristics

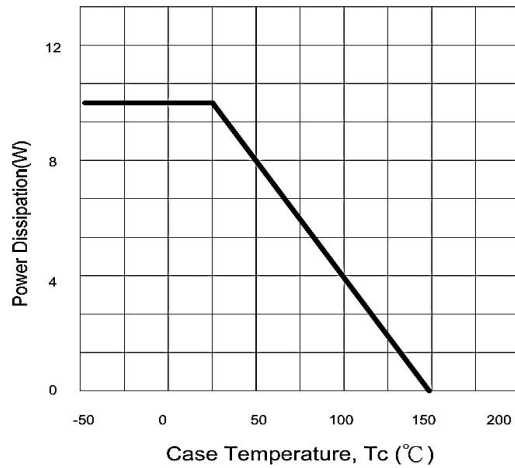


Derating Curve of Safe Operating Areas

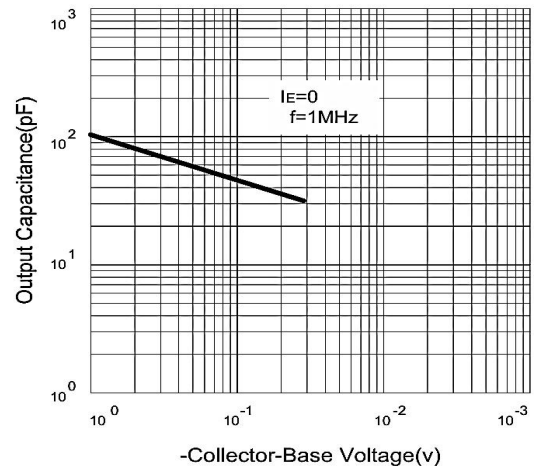


TYPICAL CHARACTERISTICS(Con.t)

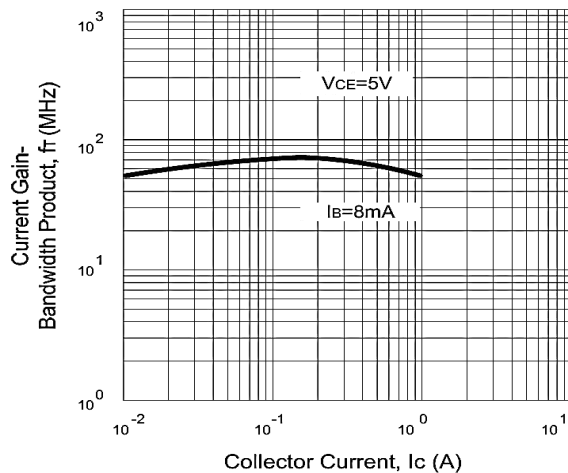
Power Derating



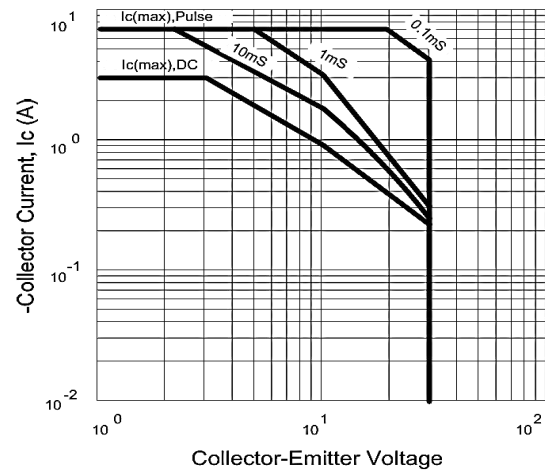
Collector Output Capacitance



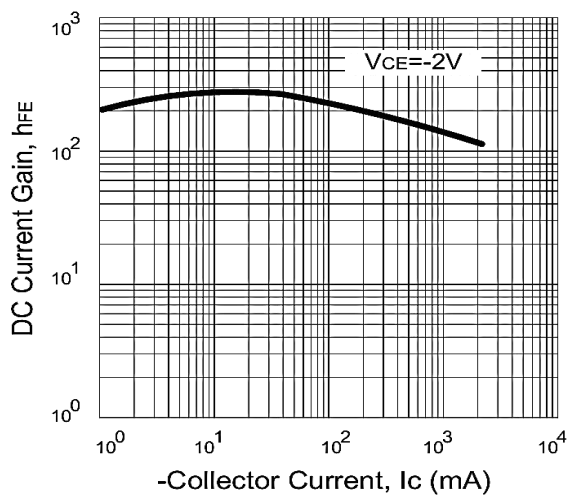
Current Gain-Bandwidth Product



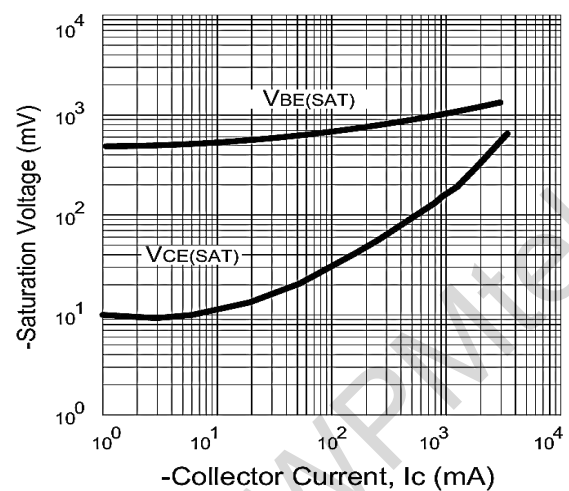
Safe Operating Area



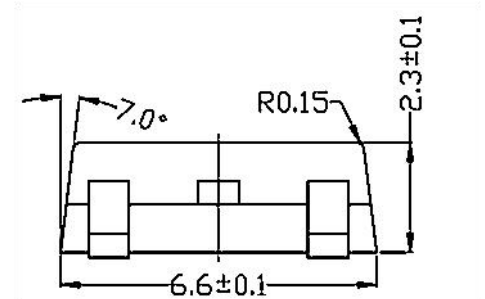
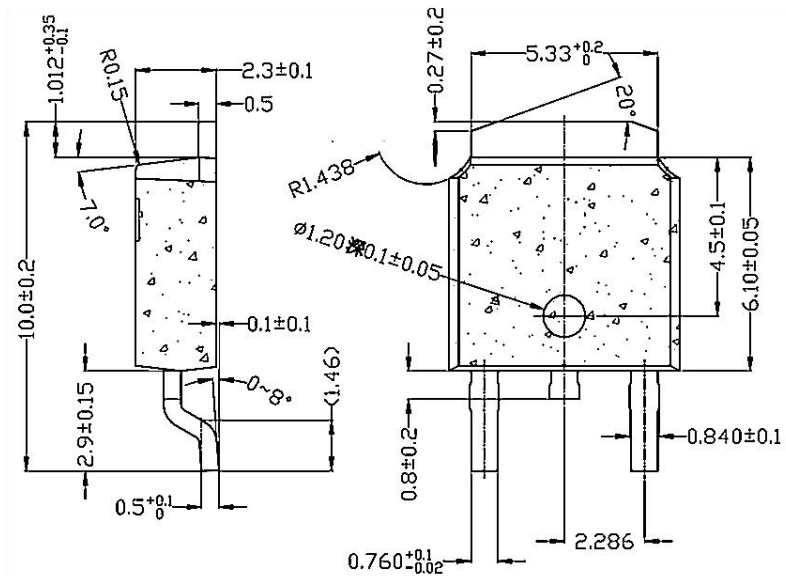
DC Current Gain



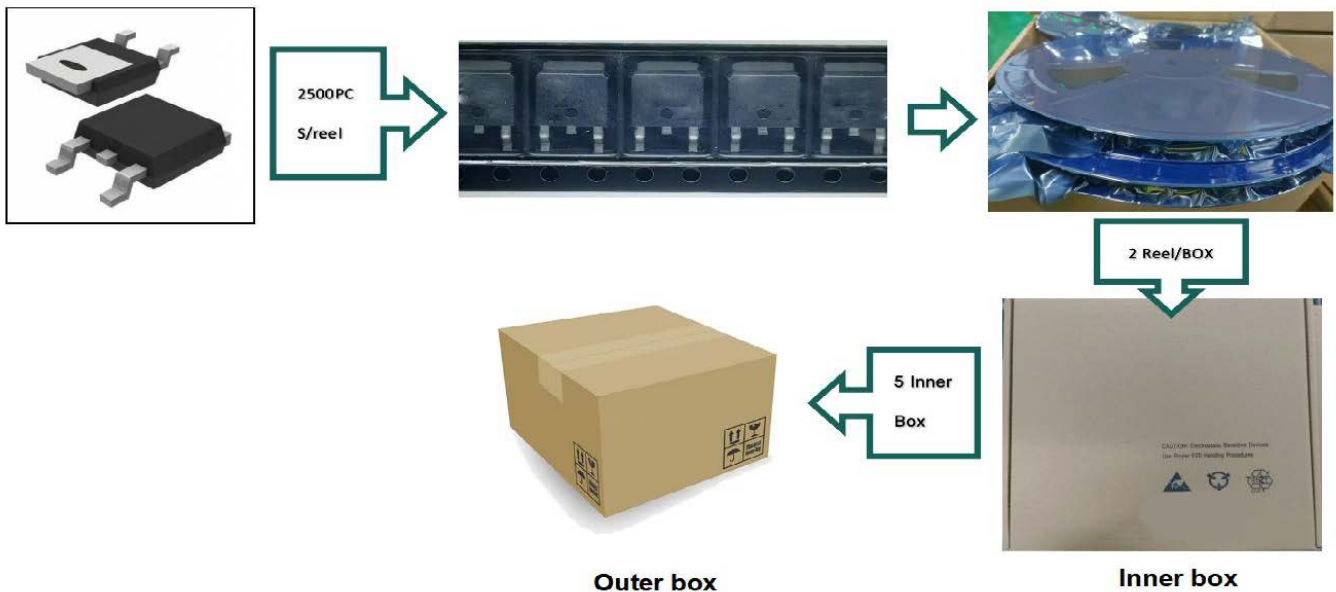
Saturation Voltage



TO - 252 PACKAGE OUTLINE DIMENSIONS

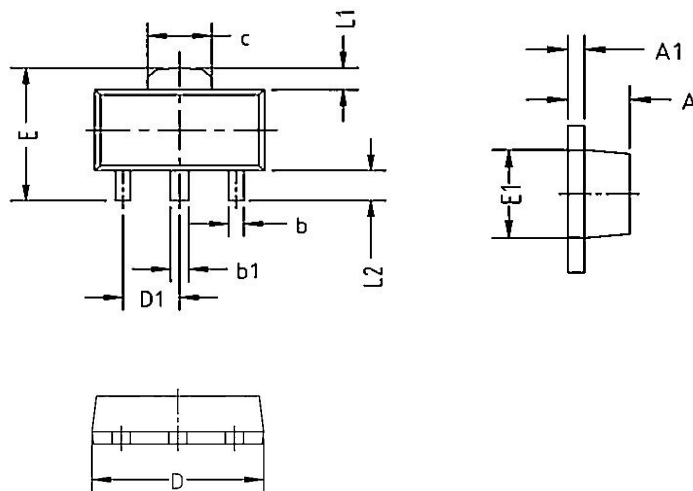


TO - 252 PACKING INFORMATION



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)
T0-252	$\phi 330 \times 20$	2500	2	$360 \times 340 \times 50$	25000	$375 \times 375 \times 280$

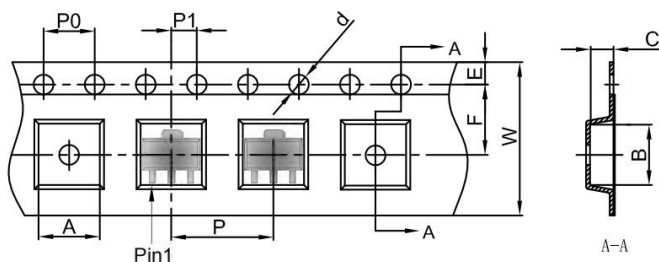
SOT89 PACKAGE OUTLINE DIMENSIONS



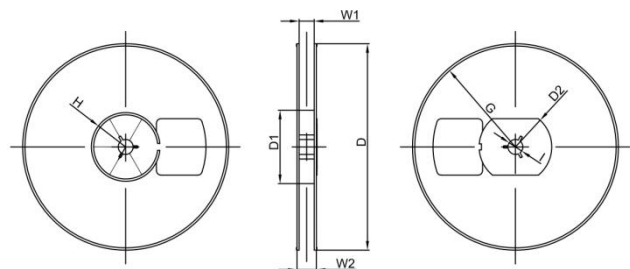
COMMON DIMENSION(MM)			
PKG	SOT-89		
Symbol	MIN	MON	MAX
A	1.450	1.500	1.550
A1	0.350	0.400	0.450
b	0.350	0.400	0.48
b1	0.430	0.480	0.550
C	1.500	1.550	1.650
D	4.450	4.550	4.700
D1	1.470	1.500	1.550
E	4.100	4.200	4.300
E1	2.500	2.550	2.650
L1	0.650	0.700	0.750
L2	0.900	0.950	1.000

SOT89 PACKAGING INFORMATION

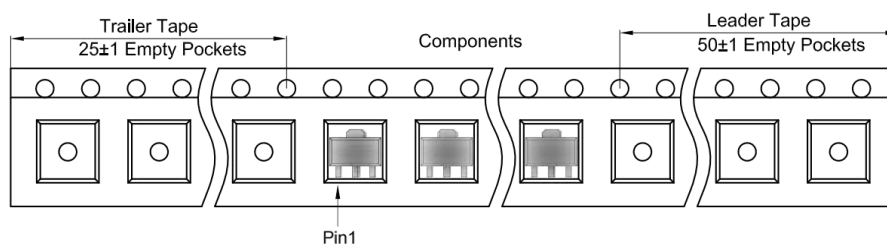
SOT-89 Embossed Carrier Tape



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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