



QNHCHIP

D882

Product Specification

D882

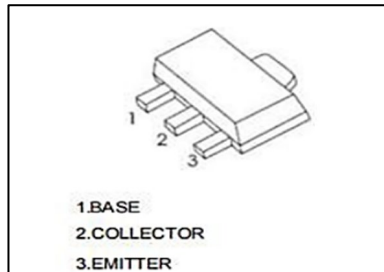
Plastic-Encapsulate NPN Transistors



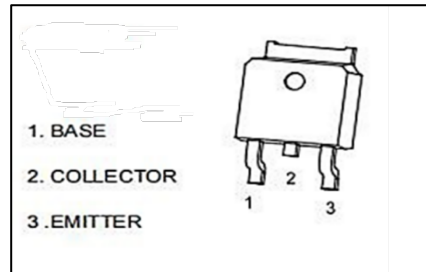
Features

- Power Dissipation of 0.5W (SOT-89)
- High stability and high reliability
- Different classification of hFE for sorting transistors

PIN Configuration



SOT-89



TO-252

PIN Function Description

PIN	PIN Function
1	BASE
2	COLLECTOR
3	EMITTER

Absolute Maximum Ratings

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	TO252/1.1	W
		SOP89/0.5	
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	$^{\circ}\text{C}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~150	$^{\circ}\text{C}$



Electrical Characteristics

($T_A=25^{\circ}\text{C}$ unless otherwise specified)

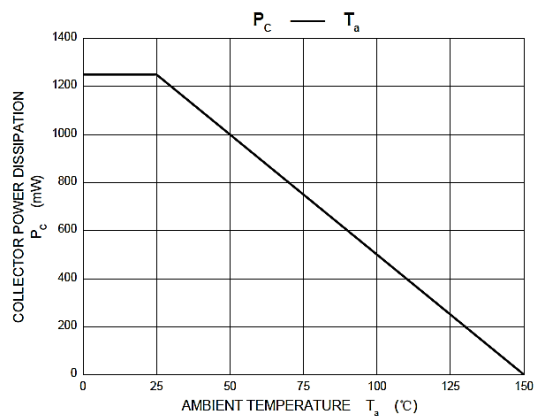
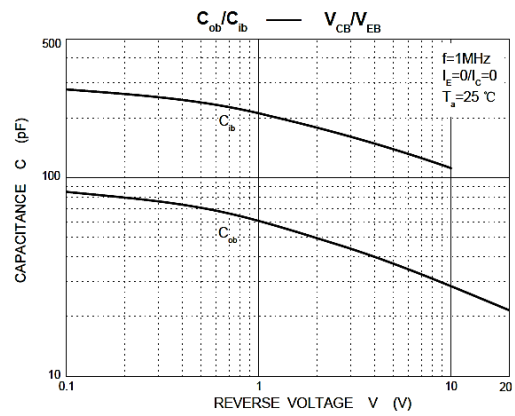
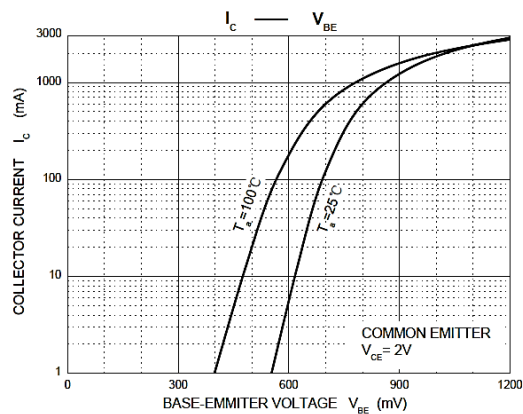
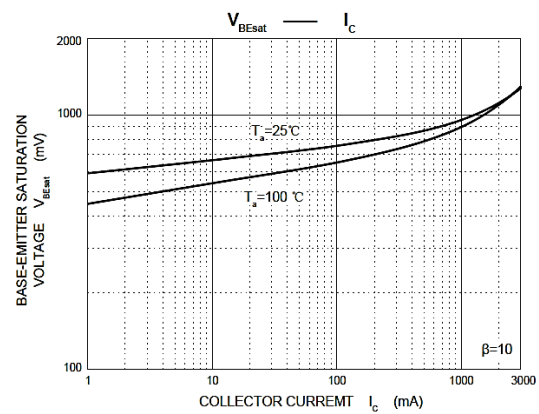
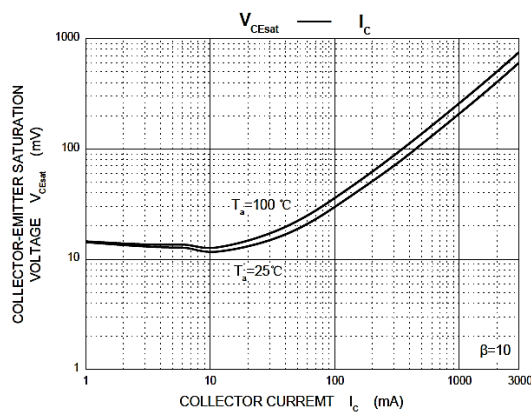
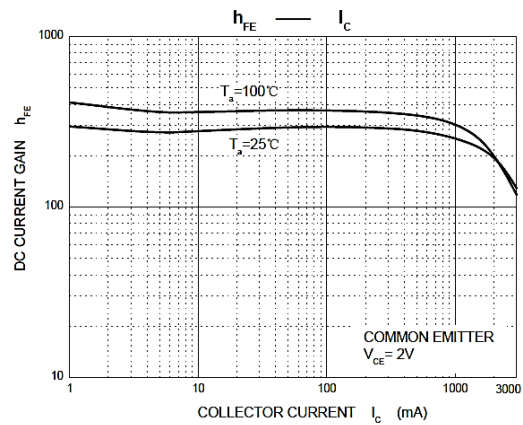
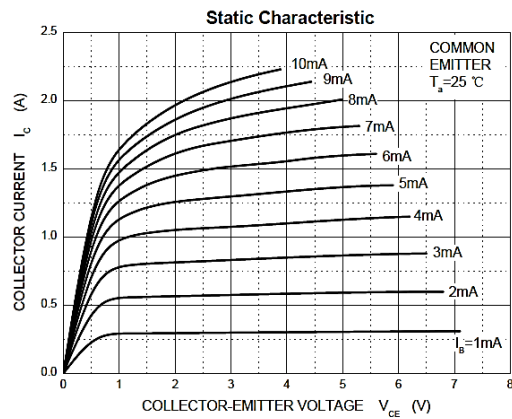
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu\text{A}, I_E=0$	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}, I_B=0$	30			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu\text{A}, I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=40\text{V}, I_E=0$			1	μA
I_{CEO}	Collector cut-off current	$V_{CE}=30\text{V}, I_B=0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=6\text{V}, I_C=0$			1	μA
$h_{FE(1)}$	DC current gain	$V_{CE}=2\text{V}, I_C=1\text{A}$	60		400	
$h_{FE(2)}$		$V_{CE}=2\text{V}, I_C=100\text{mA}$	32			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=2\text{A}, I_B=0.2\text{A}$			0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=2\text{A}, I_B=0.2\text{A}$			1.5	V
f_T	Transition frequency	$V_{CE}=5\text{V}, I_C=0.1\text{A}$ $f=10\text{MHz}$	50			MHz

Classification of $h_{FE(1)}$

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400



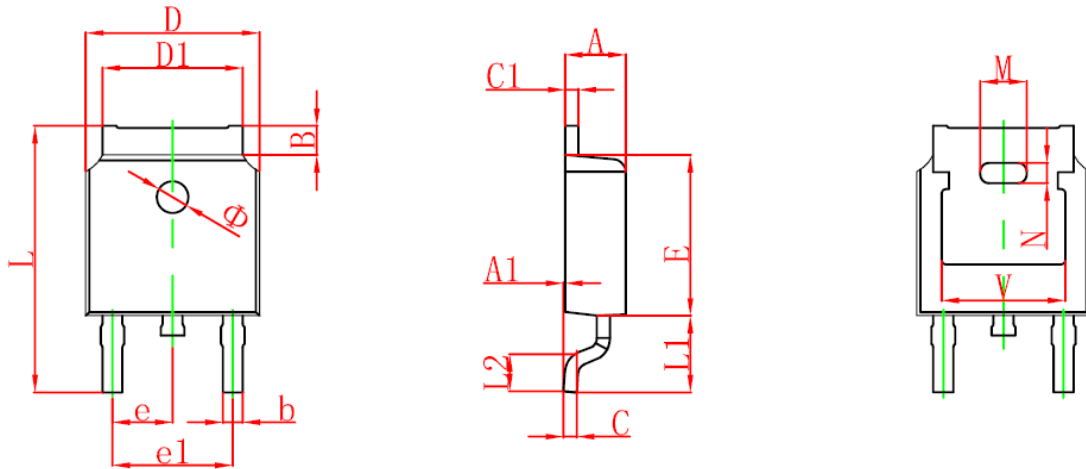
Typical Characteristics





Packaging Information

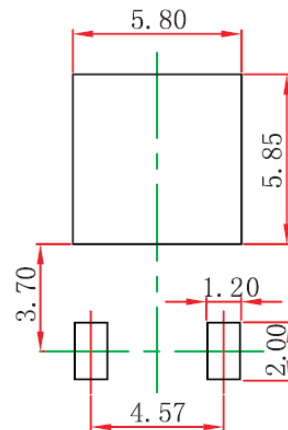
T0-252



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
B	0.800	1.400	0.031	0.055
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
c1	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
E	6.000	6.200	0.236	0.244
e	2.286 TYP.		0.090 TYP.	
e1	4.327	4.727	0.170	0.186
M	1.778REF.		0.070REF.	
N	0.762REF.		0.018REF.	
L	9.800	10.400	0.386	0.409
L1	2.9REF.		0.114REF.	
L2	1.400	1.700	0.055	0.067
V	4.830 REF.		0.190 REF.	
ȳ	1.100	1.300	0.043	0.051



Suggested Pad Layout

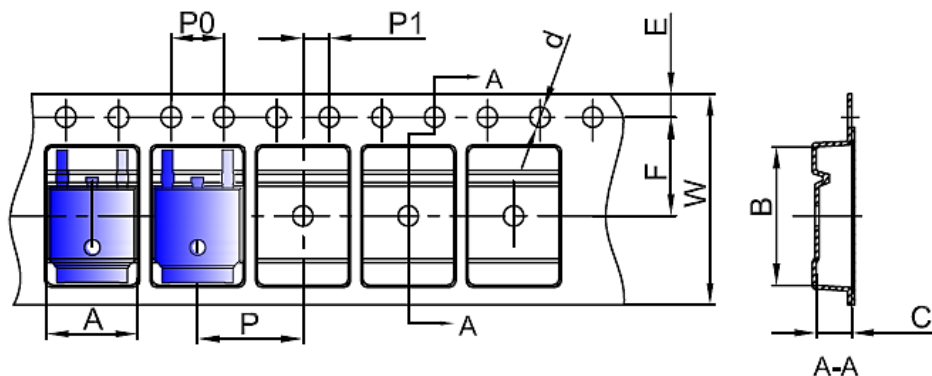


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

Tape and Reel

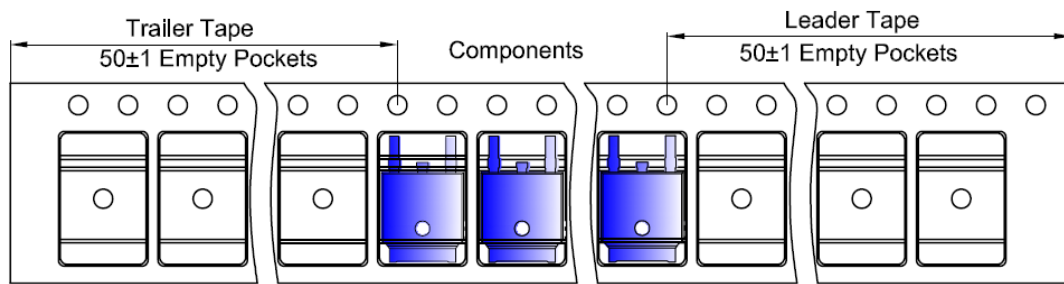
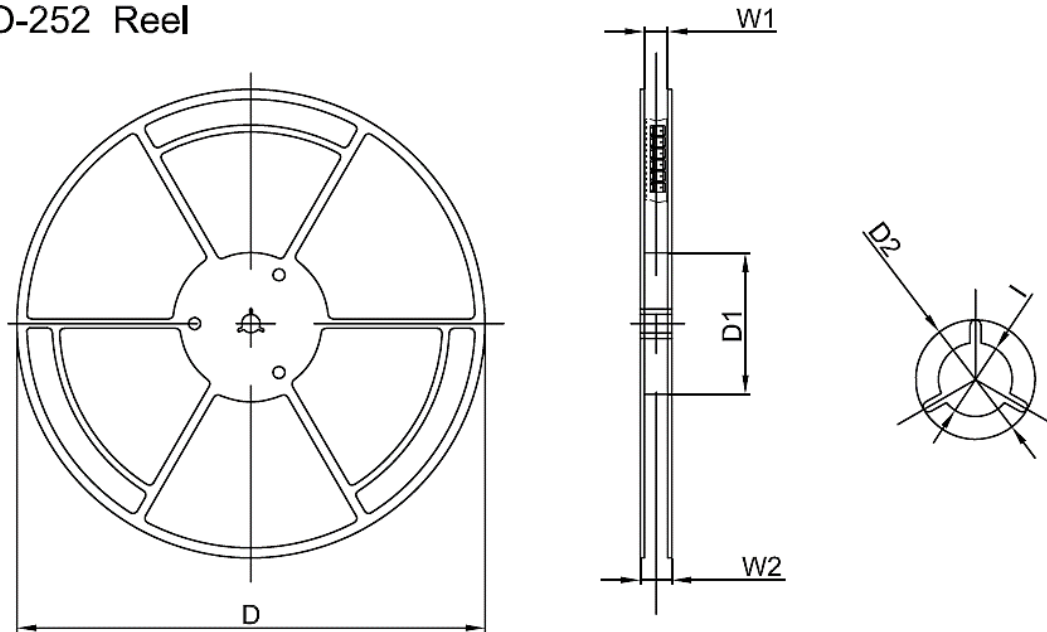
TO-252 Embossed Carrier Tape



Packaging Description

TO-252 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (HeatActivated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 25,00 units per 13" or 33.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-252	6.90	10.50	2.70	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00
(Tolerance)	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	$\pm 0.3/-0.1$

**Tape Leader and Trailer****TO-252 Reel**

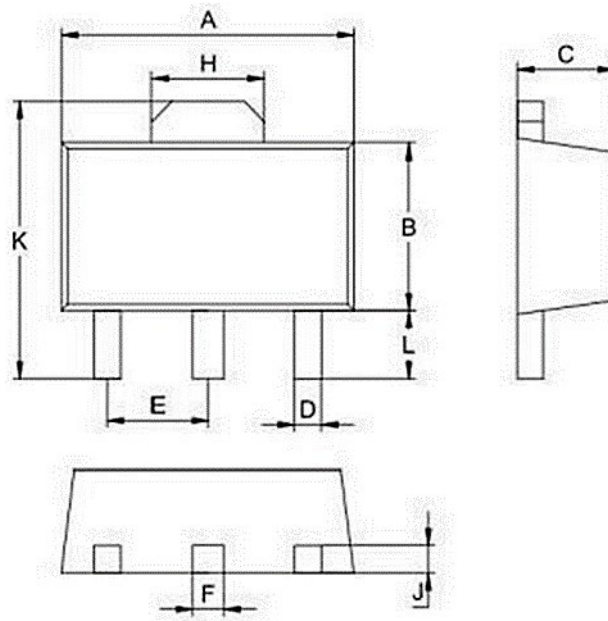
Dimensions are in millimeter

Reel Option	D	D1	D2	W1	W2	l
13"Dia	330.00	100.00	Ø21.00	16.40	21.00	Ø 13.00
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2,500 pcs	13inch	2,500 pcs	340x336x29	25,000 pcs	353x346x365	14.04

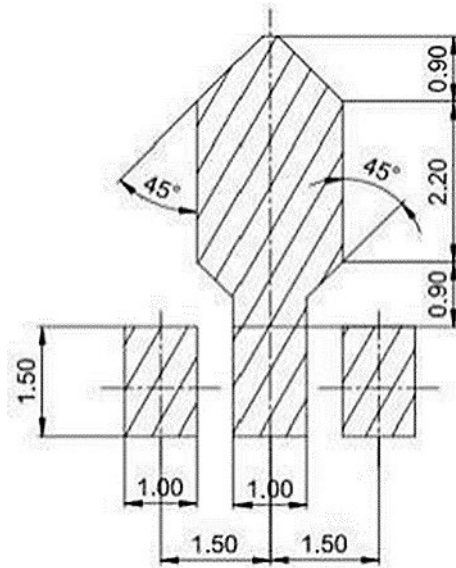


SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.20	2.70
C	1.30	1.70
D	0.30	0.60
E	1.40	1.60
F	0.30	0.60
H	1.40	1.80
J	0.30	0.60
L	0.90	1.10
K	3.75	4.35
All Dimensions in mm		

Suggested Pad Layout



Ordering information

Equipment Name	Package Type	Minimum Packing QTY	Belivery Mode
D882M	TO-252	2500	Tape & Reel
D882	SOT-89	1000	Tape & Reel