

TO-252-2L Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

Features:

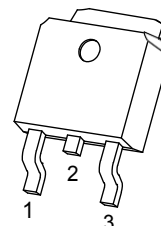
- Designed for General Purpose Amplifier and Low Speed Switching Applications.
- Lead Formed for Surface Mount Applications in Plastic Sleeves (No Suffix)
- Straight Lead Version in Plastic Sleeves ("–1" Suffix)
- Lead Formed Version in 16 mm Tape and Reel ("T4" Suffix)
- Electrically Similar to Popular TIP41 and TIP42 Series
- Monolithic Construction With Built-in Base-Emitter Resistors

TO-252-2L

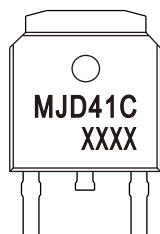
1.BASE

2.COLLECTOR

3.EMITTER

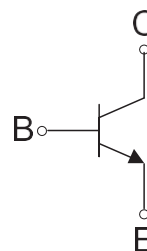


MARKING



MJD41C=Device code
XXXX=Code

Equivalent Circuit



MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

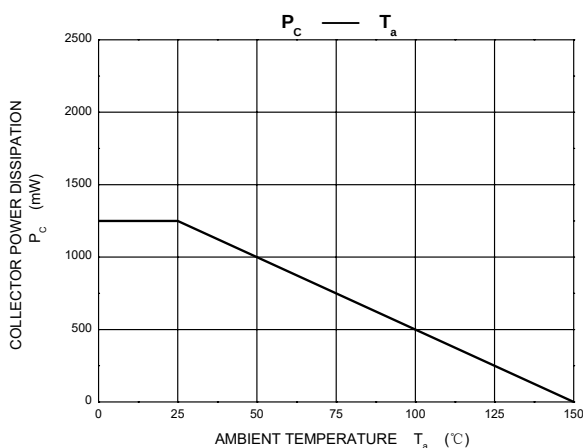
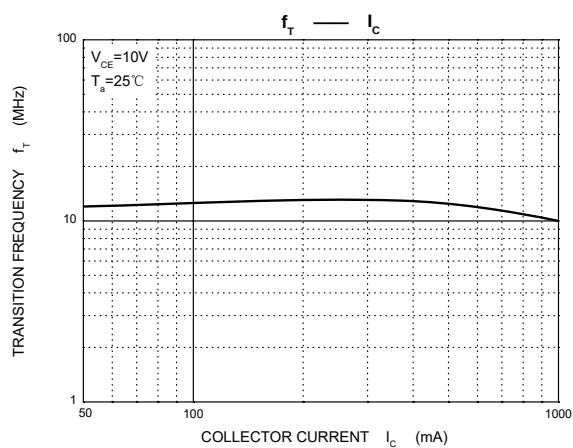
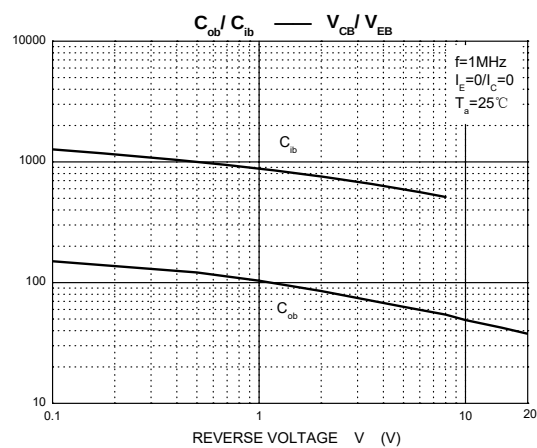
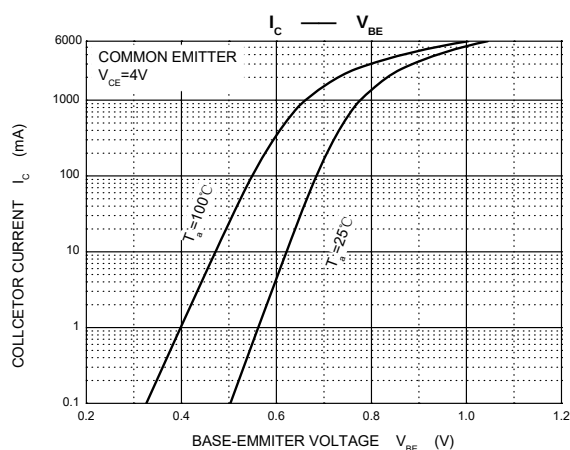
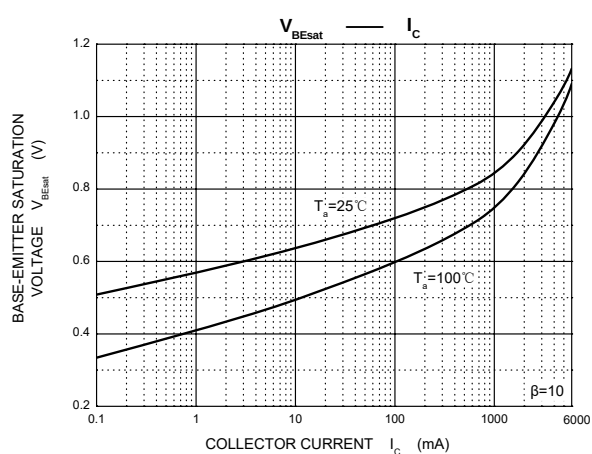
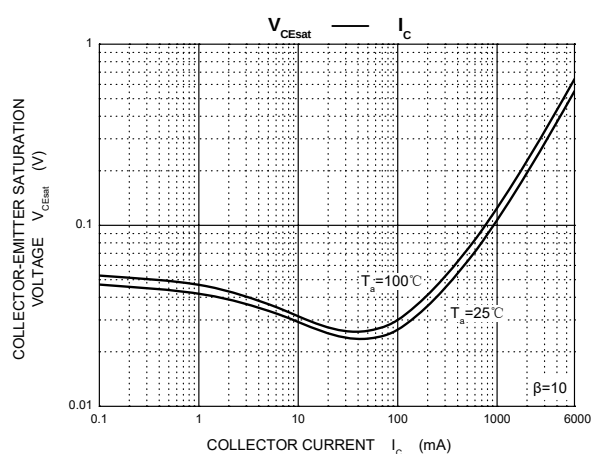
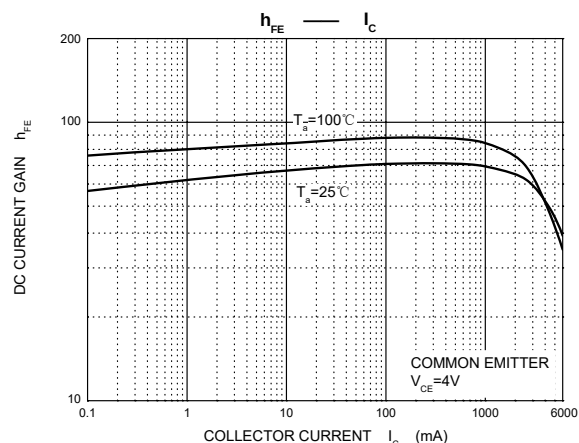
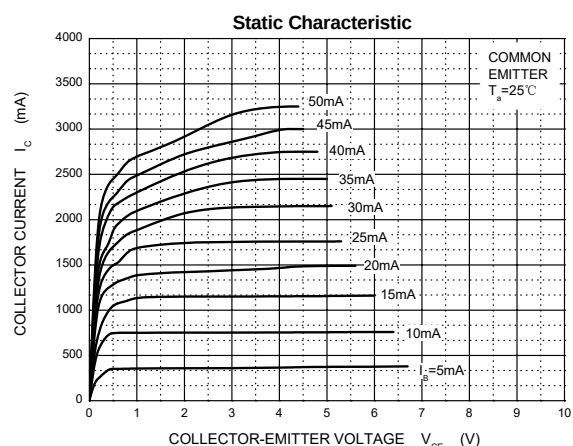
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	100	V
V _{CE0}	Collector-Emitter Voltage	100	V
V _{EB0}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	6	A
I _{CP} [*]	Collector Current -Pluse	10	A
P _C	Collector Power Dissipation	1.25	W
T _J , T _{stg}	Operating Junction and Storage Temperature Range	-55-150	°C

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

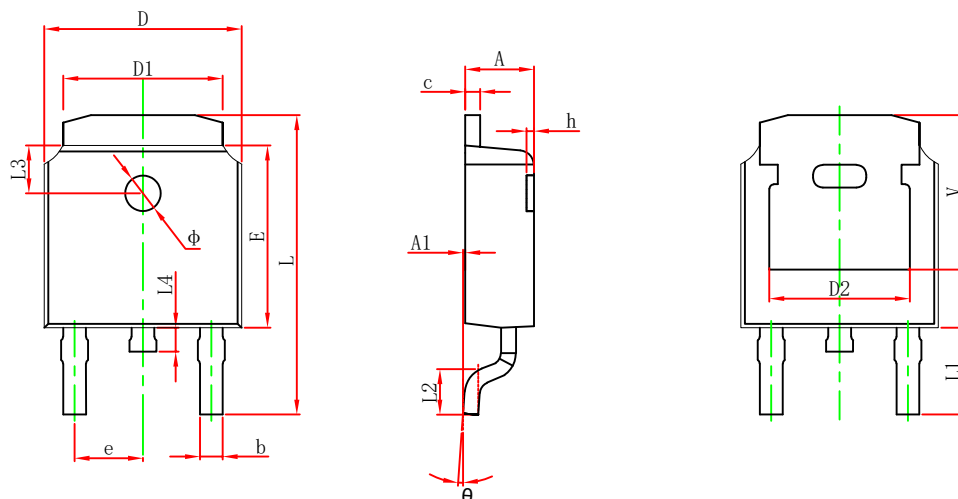
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	100			V
Collector-emitter breakdown voltage	$V_{CEO(sus)}$	$I_C=30\text{mA}, I_B=0$	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CEO}	$V_{CE}=60\text{V}, I_E=0$			50	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.5	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=4\text{V}, I_C=0.3\text{A}$	30			
	$h_{FE(2)}$	$V_{CE}=4\text{V}, I_C=3\text{A}$	15		75	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=6\text{A}, I_B=0.6\text{A}$			1.5	V
Base-emitter voltage	V_{BE}	$V_{CE}=4\text{V}, I_C=6\text{A}$			2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=1\text{MHz}$	3			MHz

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Typical Characteristics

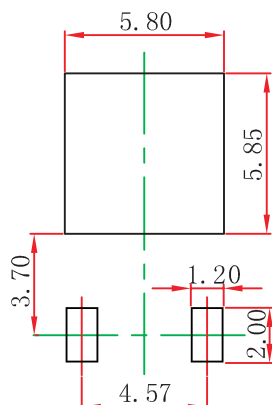


TO-252-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

TO-252-2L Suggested Pad Layout

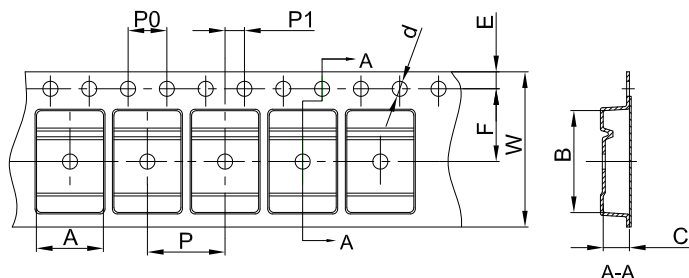


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

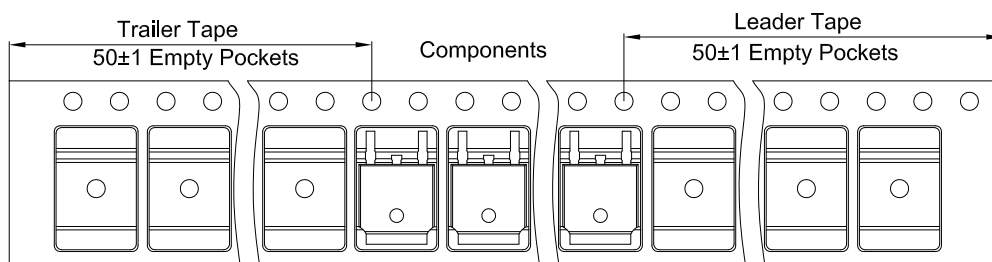
TO-252-2L Tape and Reel

TO-252 Embossed Carrier Tape

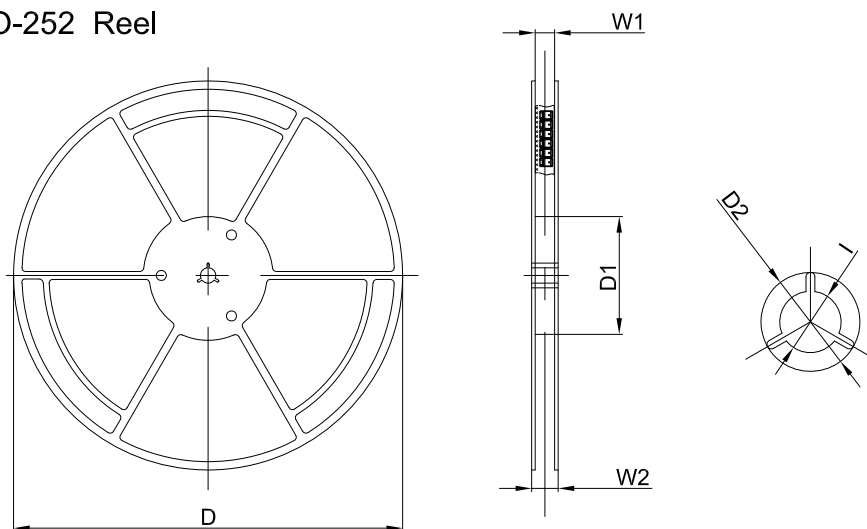


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-252	6.90	10.50	2.70	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00

TO-252 Tape Leader and Trailer



TO-252 Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	I
13"Dia	330.00	100.00	Ø21.00	16.40	21.00	Ø13.00

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2,500 pcs	13inch	2,500 pcs	340×336×29	25,000 pcs	353×346×365	