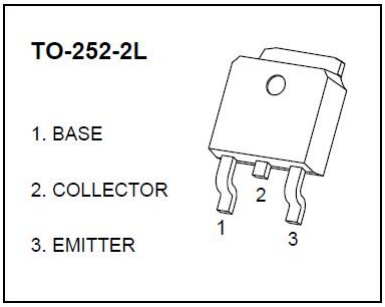
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

AD-MJD31C Plastic-Encapsulated Transistor

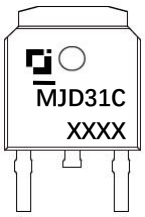
AD-MJD31C Transistor (NPN)



FEATURES

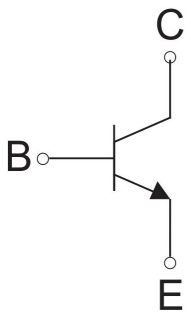
- Designed for general purpose amplifier and low speed switching applications
- Lead formed for surface mount applications in plastic sleeves (No Suffix)
- Straight lead version in plastic sleeves (“–1” Suffix)
- Lead formed version in 16 mm tape and reel (“T4” Suffix)
- Electrically similar to popular AD-TIP31 and AD-TIP32 series
- AEC-Q101 qualified

MARKING



$\bar{M}$JD31C = Device code
XXXX = Date code

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

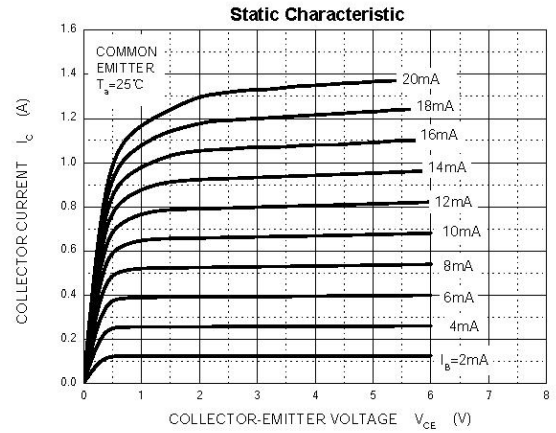
Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	100	V
Emitter-base voltage	V_{EBO}	5	V
Collector current-continuous	I_C	3	A
Collector power dissipation	P_C	1.25	W
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	°C

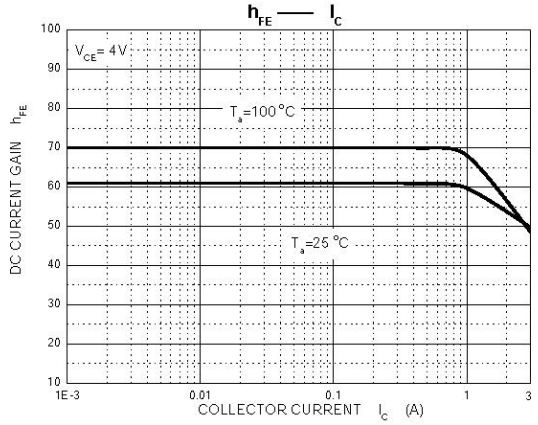
ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

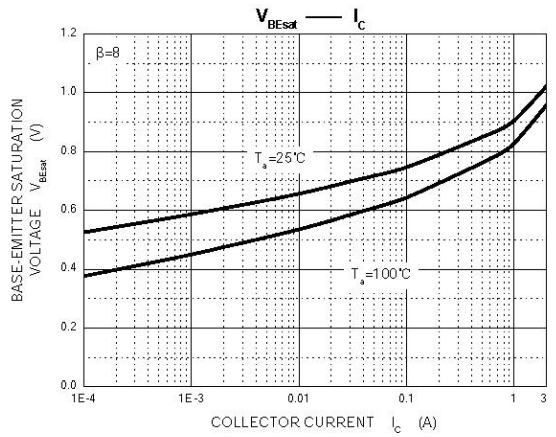
Parameter	Symbol	Test condition	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 1mA, I_E = 0A	100	-	V
Collector-emitter breakdown voltage *	$V_{CEO(SUS)}$	I_C = 30mA, I_B = 0A	100	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 1mA, I_C = 0A	5	-	V
Collector cut-off current	I_{CES}	V_{CE} = 100V, V_{EB} = 0V	-	20	μA
Collector cut-off current	I_{CEO}	V_{CE} = 60V, I_B = 0A	-	50	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V, I_C = 0A	-	1	mA
DC current gain	h_{FE}	V_{CE} = 4V, I_C = 1A	25	-	-
		V_{CE} = 4V, I_C = 3A	15	75	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 3A, I_B = 0.375A	-	1.2	V
Base-emitter saturation voltage	$V_{BE(on)}$	V_{CE} = 4V, I_C = 3A	-	1.8	V
Transition frequency	f_T	V_{CE} = 10V, I_C = 0.5A, f_T = 1KHz	-	-	MHz

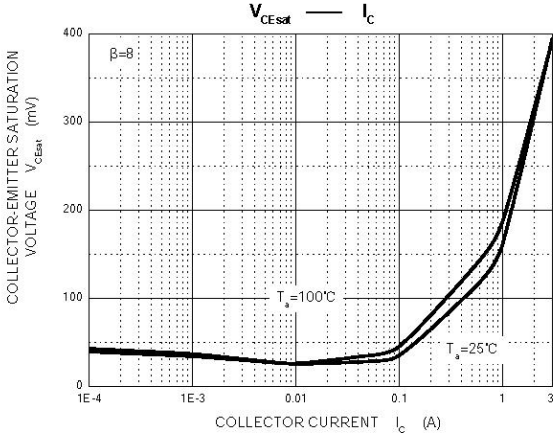
* Pulse Test: PW≤300μs, Duty Cycle≤2%.

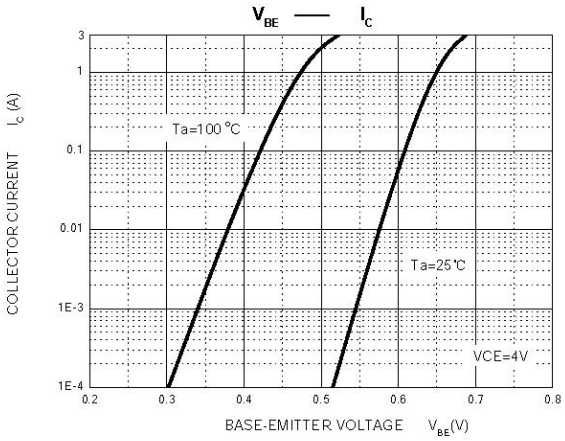
TYPICAL CHARACTERISTICS

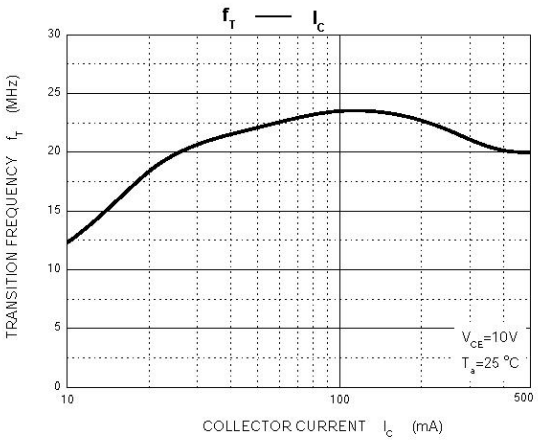


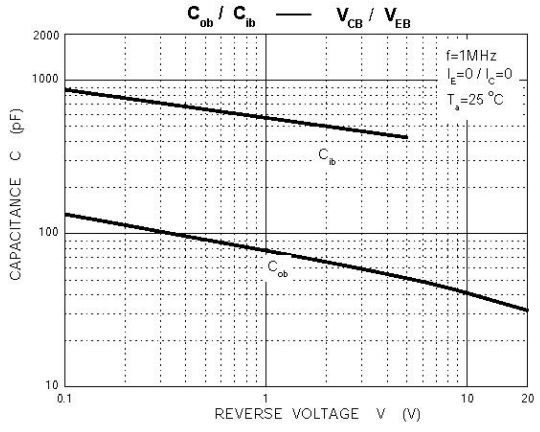


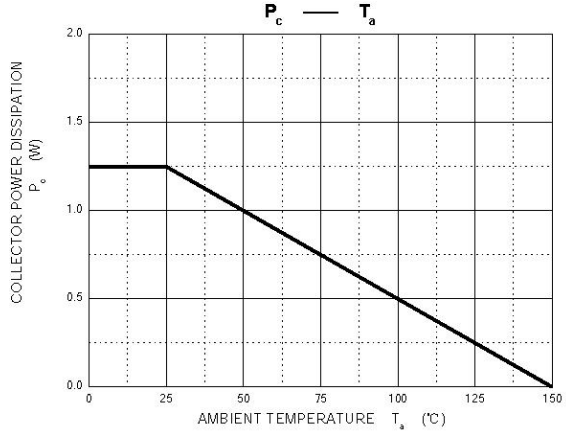




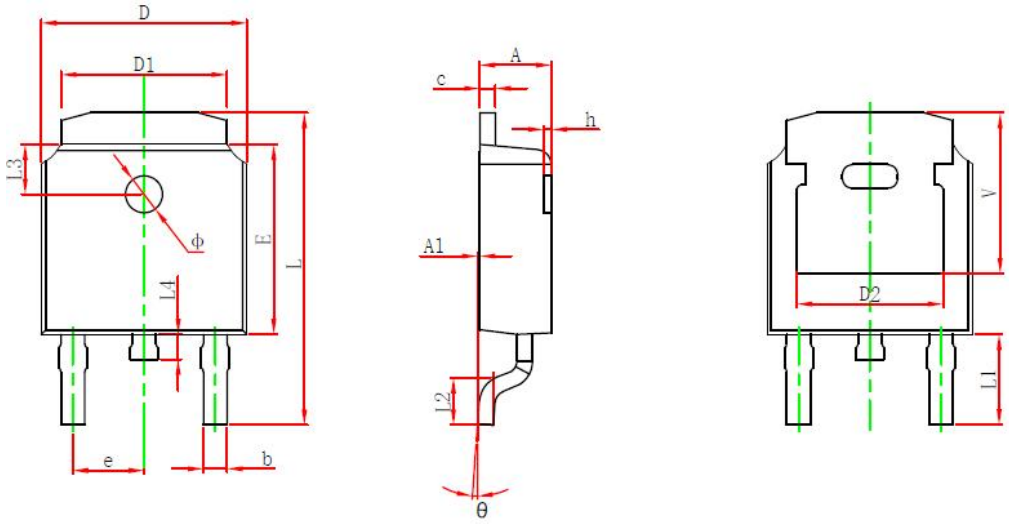






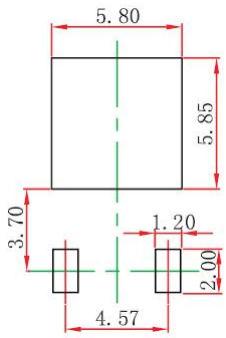


TO-252-2L PACKAGE OUTLINE DIMENSIONS



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

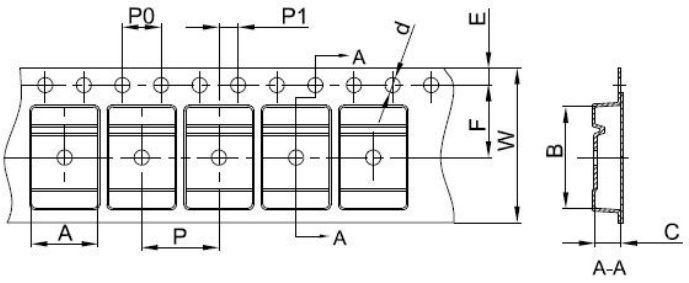


Note:

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

TO-252-2L TAPE AND REEL

TO-252 Embossed Carrier Tape

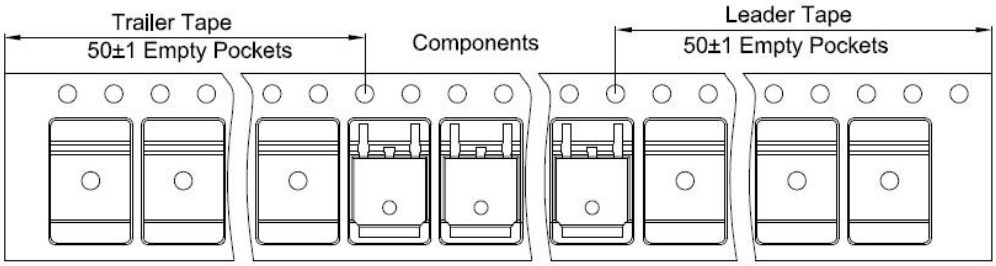


Packaging Description:

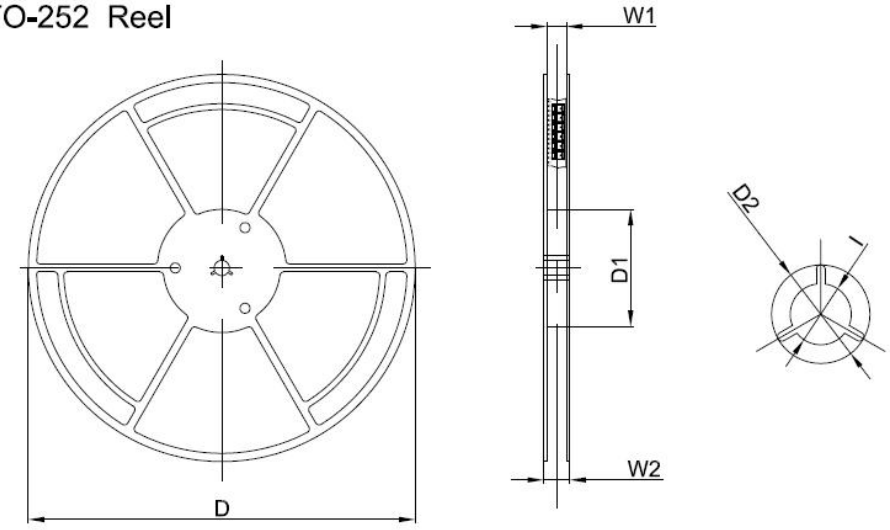
TO-252 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in 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

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	

PUBLISHED BY

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