

TO-263-2L Plastic-Encapsulate Transistors

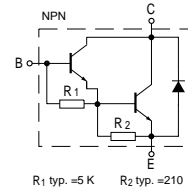
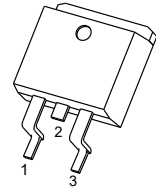
TIP122 Darlington TRANSISTOR (NPN)

FEATURES

- Medium Power Complementary Silicon Transistors

TO-263-2L

1. BASE
2. COLLECTOR
3. EMITTER



R₁ typ. =5 K R₂ typ. =210

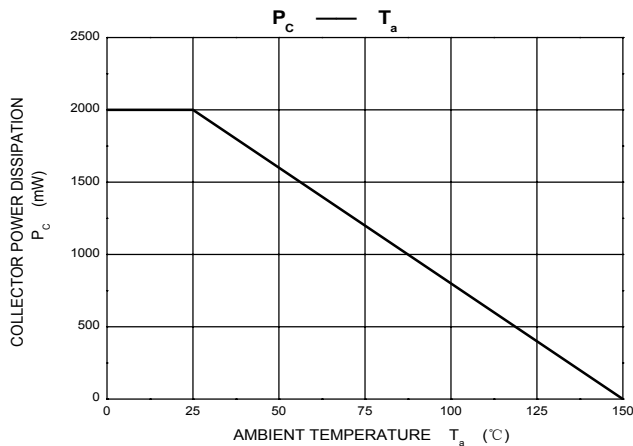
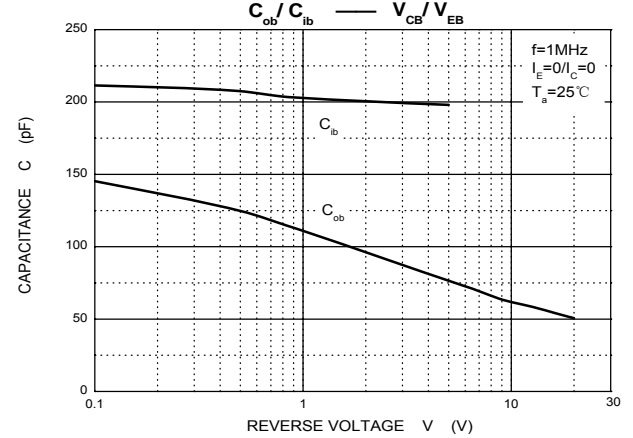
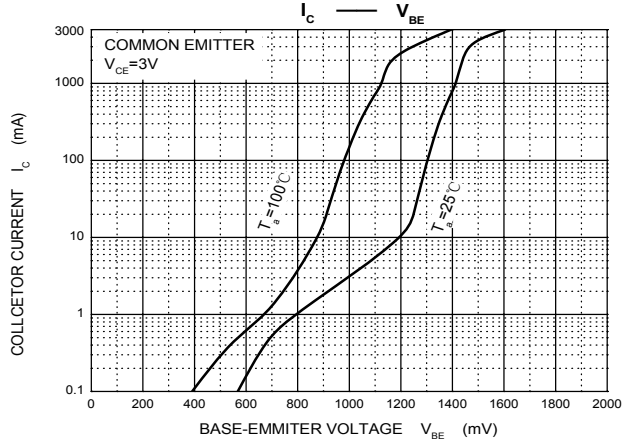
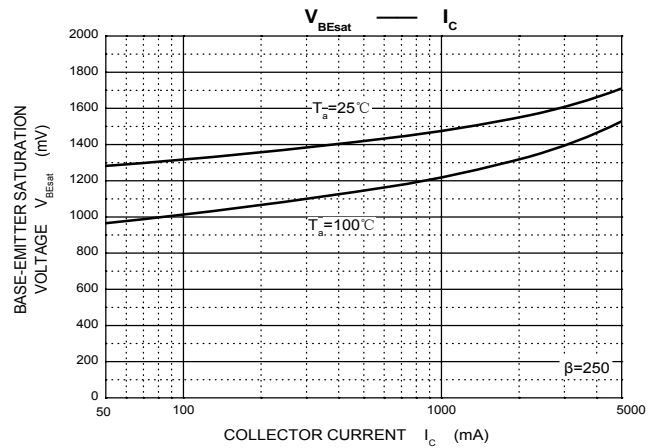
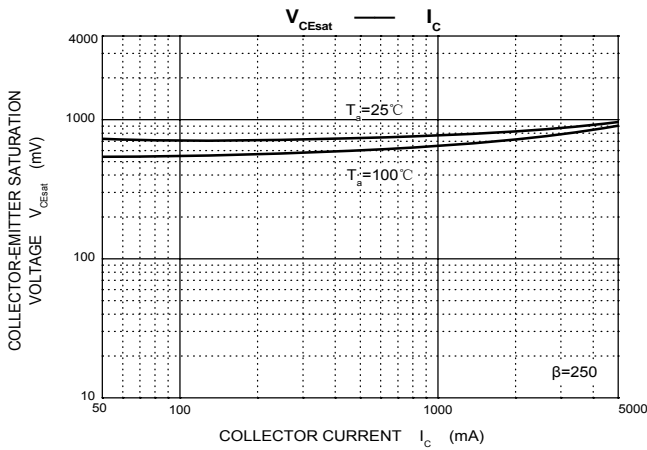
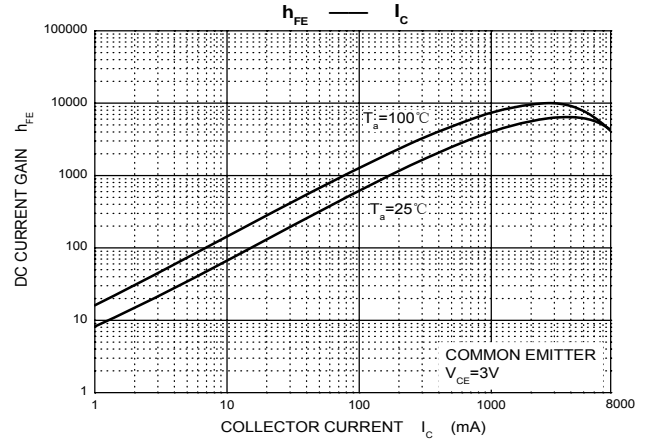
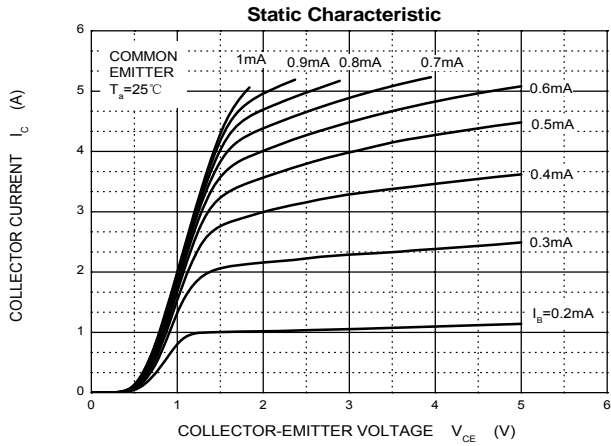
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	100	V
V _{CEO}	Collector-Emitter Voltage	100	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	5	A
P _C	Collector Power Dissipation	2	W
R _{θJA}	Thermal Resistance from Junction to Ambient	62.5	°C/W
R _{θJC}	Thermal Resistance from Junction to Case	1.92	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

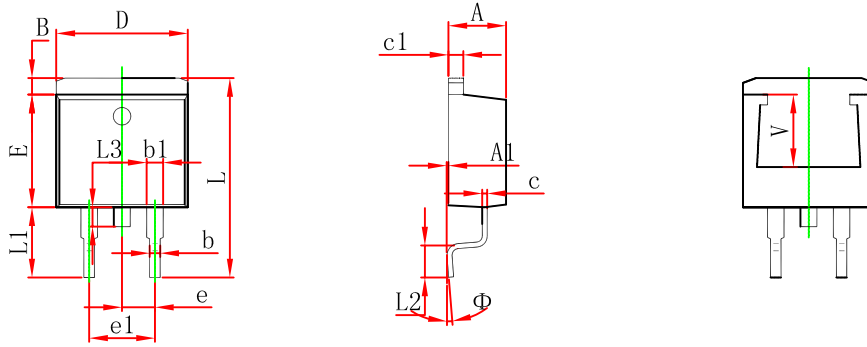
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	100			V
Collector-emitter breakdown voltage	V _{CEO(SUS)}	I _C =30mA, I _B =0	100			V
Collector cut-off current	I _{CB0}	V _{CB} =100V, I _E =0			0.2	mA
Collector cut-off current	I _{CEO}	V _{CE} =50V, I _B =0			0.5	mA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			2	mA
DC current gain	h _{FE (1)}	V _{CE} =3V, I _C =0.5A	1000			
	h _{FE (2)}	V _{CE} =3V, I _C =3A	1000		12000	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3A, I _B =12mA			2	V
		I _C =5A, I _B =20mA			4	V
Base-emitter voltage	V _{BE}	V _{CE} =3V, I _C =3A			2.5	V
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz			200	pF

Typical Characteristics

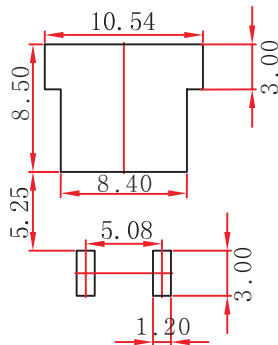


TO-263-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.470	4.670	0.176	0.184
A1	0.000	0.150	0.000	0.006
B	1.120	1.420	0.044	0.056
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
L	14.940	15.500	0.588	0.610
L1	4.950	5.450	0.195	0.215
L2	2.340	2.740	0.092	0.108
L3	1.300	1.700	0.051	0.067
Φ	0°	8°	0°	8°
V	5.600 REF.		0.220 REF.	

TO-263-2L Suggested Pad Layout



Note:

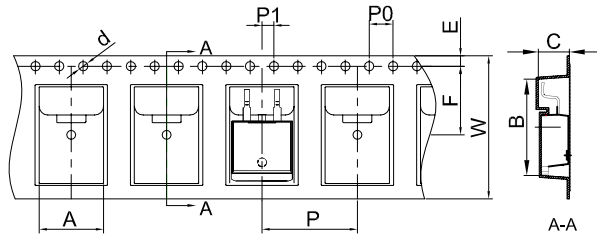
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

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TO-263-2L Tape and Reel

TO-263-2L Embossed Carrier Tape

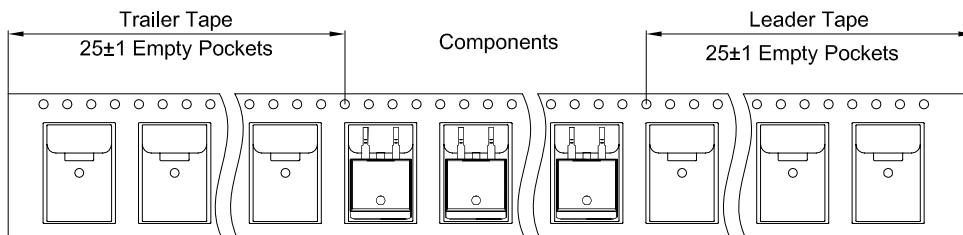


Packaging Description:

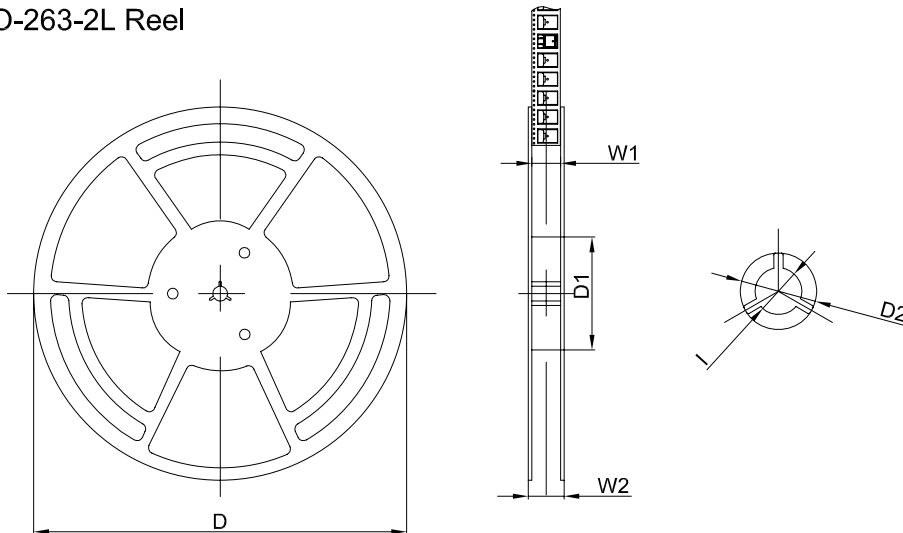
TO-263-2L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 800 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-263-2L	10.80	16.13	5.21	Ø1.55	1.75	11.50	4.00	16.00	2.00	24.00
(Tolerance)	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

TO-263-2L Tape Leader and Trailer



TO-263-2L Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	I
13" Dia	Ø330.00	100.00	Ø21.00	24.4	30.4	Ø13.00
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
800 pcs	13 inch	800 pcs	340×336×36	8,000 pcs	400×353×365	

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