

TO-252-2L Plastic-Encapsulate Transistors TRANSISTOR (NPN)

FEATURES

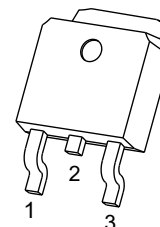
- Designed for General Purpose Amplifier and Low Speed Switching Applications.
- Lead Formed for Surface Mount Applications in Plastic Sleeves (No Suffix)
- Straight Lead Version in Plastic Sleeves ("–1" Suffix)
- Lead Formed Version in 16 mm Tape and Reel ("T4" Suffix)
- Monolithic Construction With Built-in Base-Emitter Resistors
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics

TO-252-2L

1.BASE

2.COLLECTOR

3.EMITTER



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

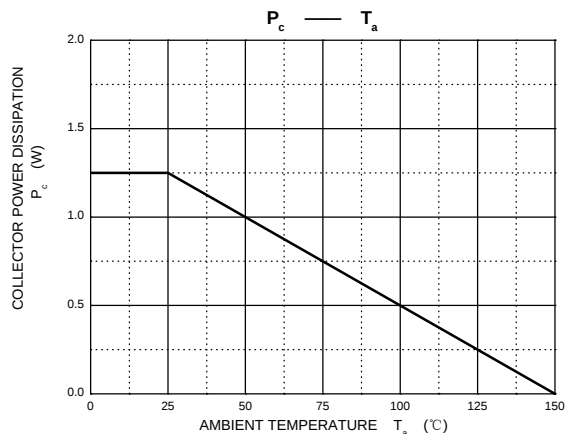
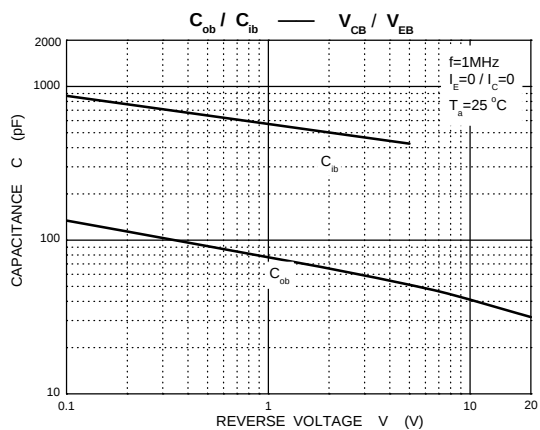
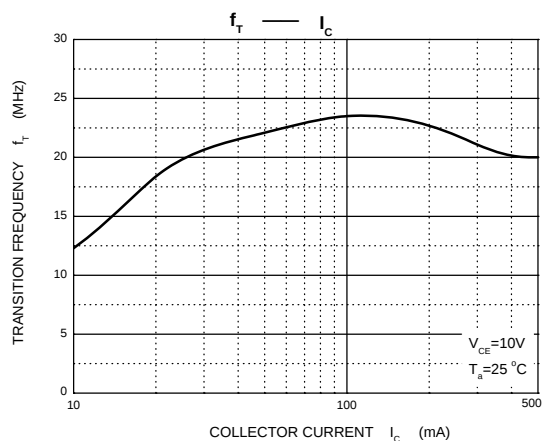
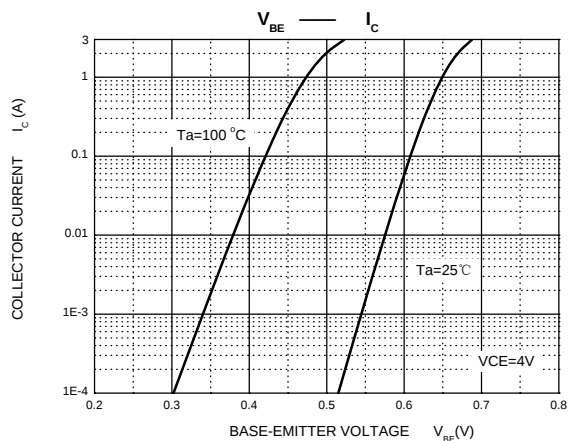
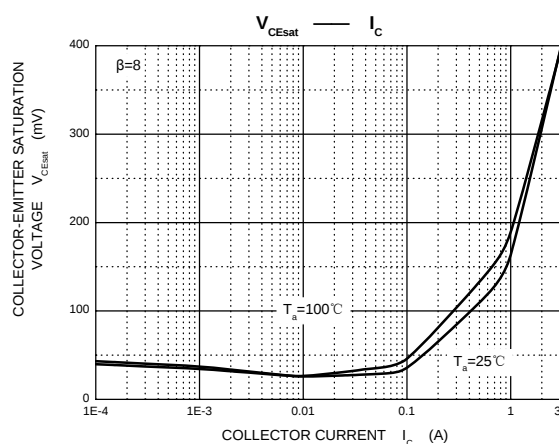
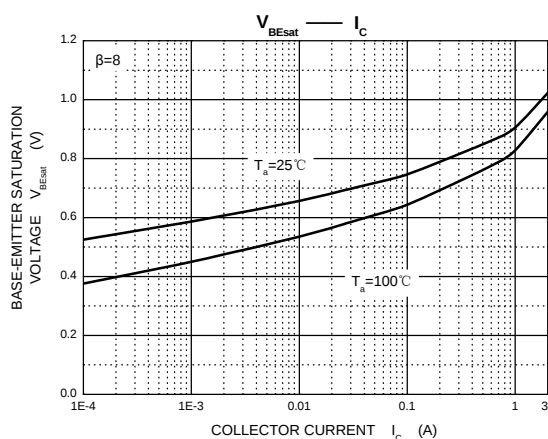
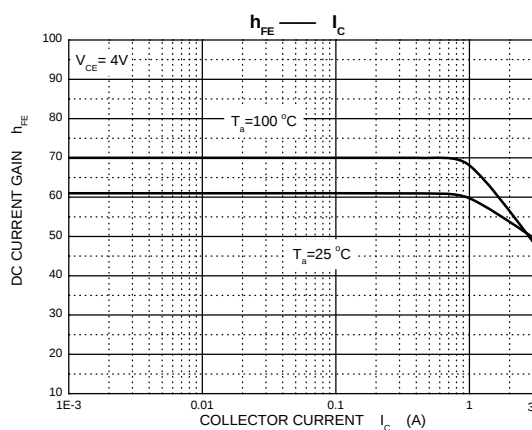
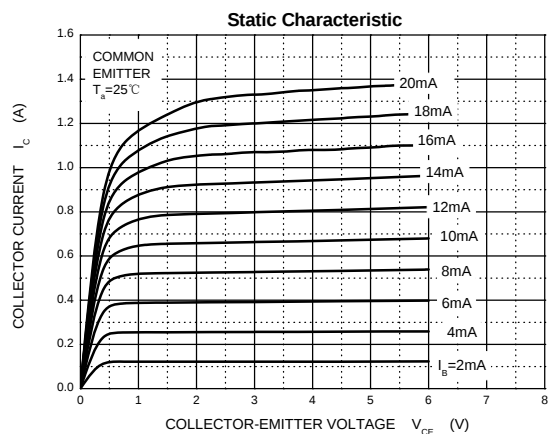
Symbol	Parameter	Max	Unit
V _{CBO}	Collector-Base Voltage	100	V
V _{CEO}	Collector-Emitter Voltage	100	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	3	A
I _{CM}	Collector Current -Pulsed	5	A
P _C	Collector Power Dissipation	2	W
P _{tot}	Total Power Dissipation (T _C =25°C)	15	W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55-150	°C

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

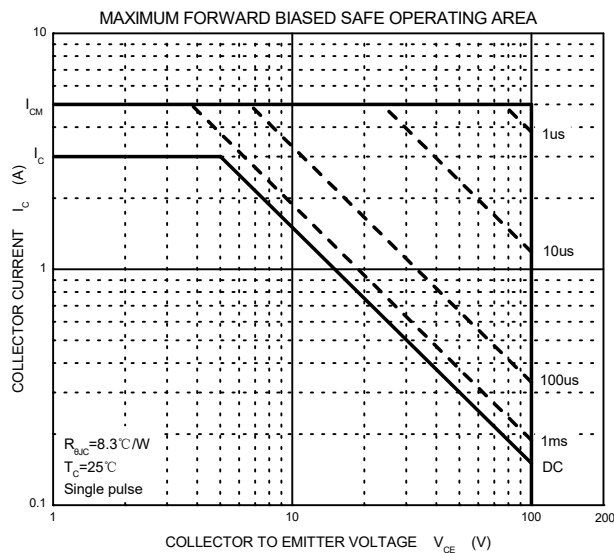
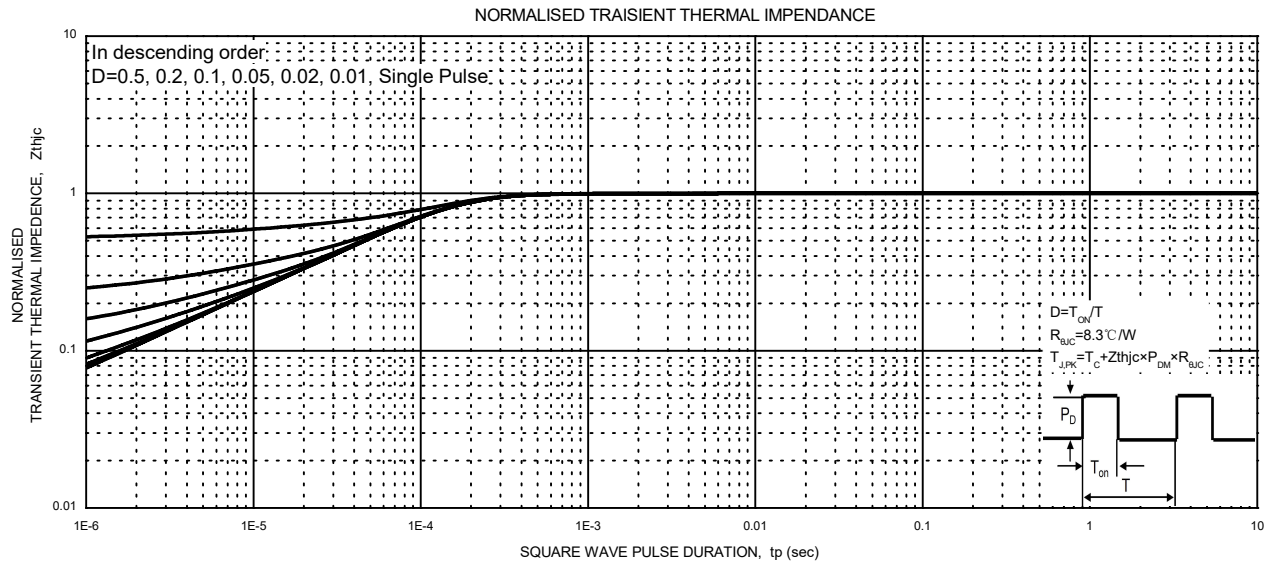
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 1mA, I _E =0	100		V
Collector-emitter breakdown voltage *	V _{CEO(sus)}	I _C = 30mA, I _B =0	100		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 1mA, I _C =0	5		V
Collector cut-off current	I _{CES}	V _{CE} =100V, V _{EB} =0		20	μA
Collector cut-off current	I _{CEO}	V _{CE} = 60V, I _B = 0		50	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0		1	mA
DC current gain	h _{FE(1)}	V _{CE} = 4V, I _C = 1A	25		
	h _{FE(2)}	V _{CE} =4 V, I _C = 3A	10	100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3A, I _B =0.375A		1.2	V
Base-emitter 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	3		MHz

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

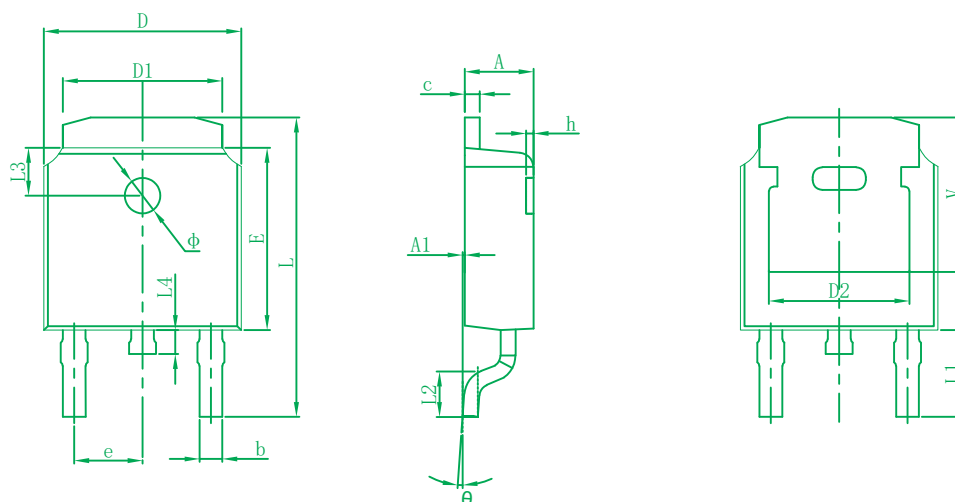
Typical Characteristics



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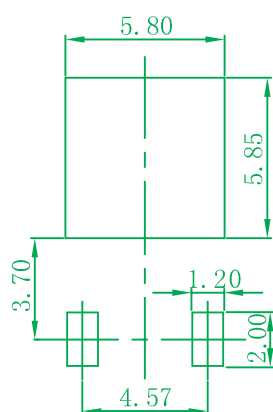


TO-252-2L Package Outline Dimensions



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.