



### FEATURES

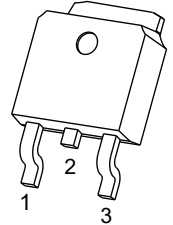
- Power Dissipation

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

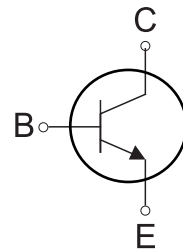
Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	40	V
V <sub>CEO</sub>	Collector-Emitter Voltage	30	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current -Continuous	3	A
P <sub>C</sub>	Collector Power Dissipation	1.25	W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55-150	°C

### TO-252-2L

1. BASE
2. COLLECTOR
3. EMITTER



### Equivalent Circuit



### ELECTRICAL CHARACTERISTICS ( T<sub>a</sub>=25°C unless otherwise specified )

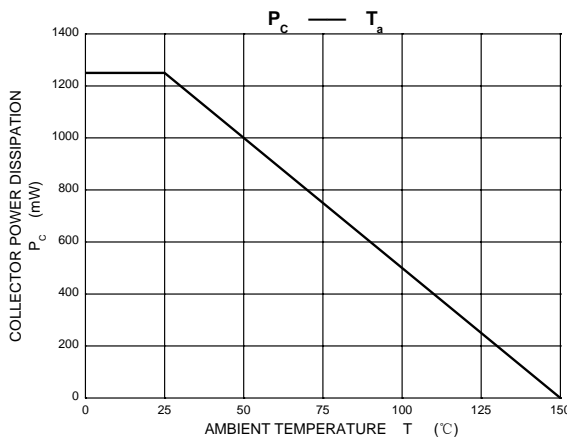
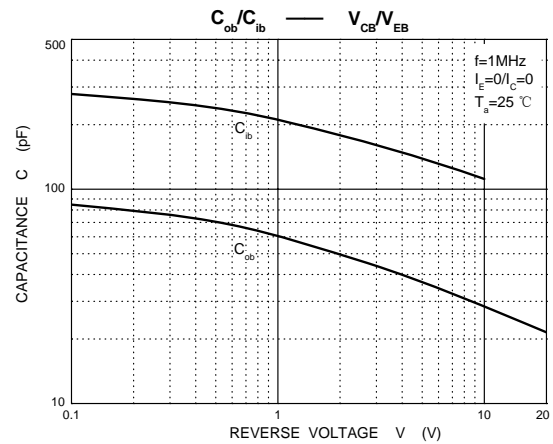
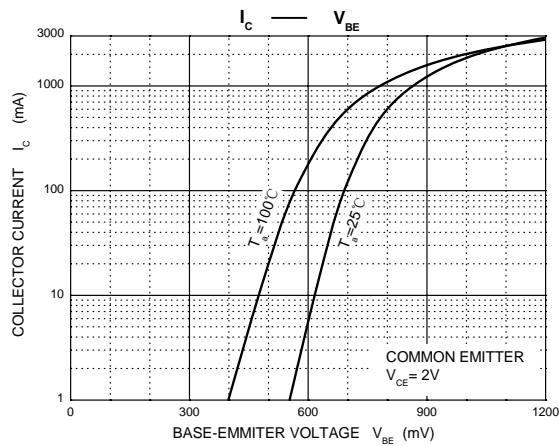
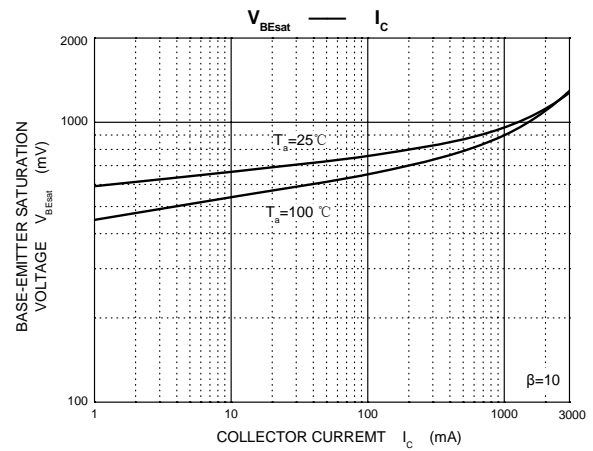
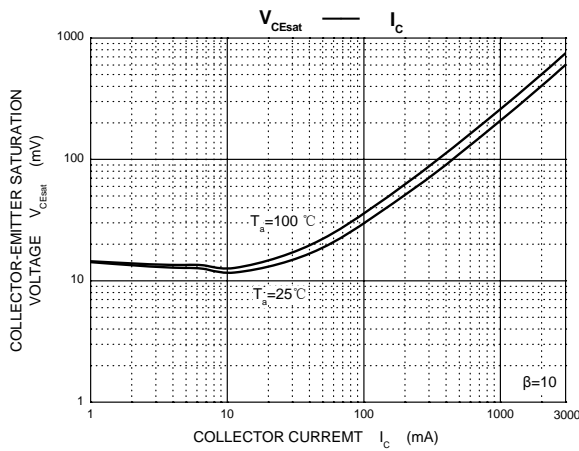
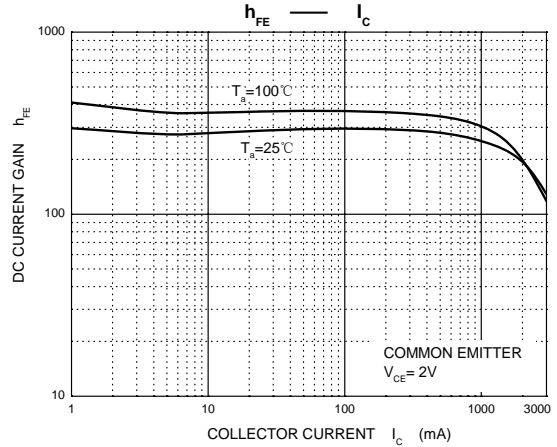
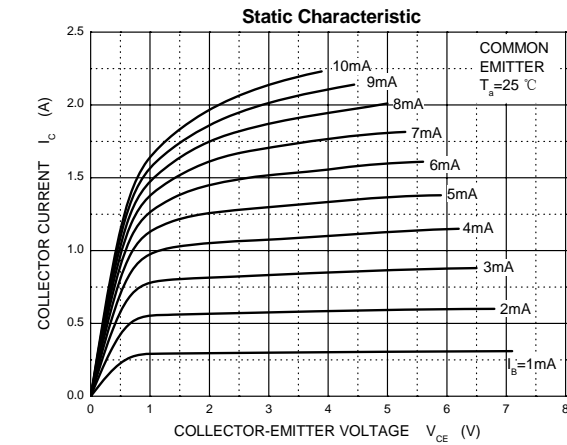
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR) <sub>CBO</sub>	I <sub>C</sub> = 100μA, I <sub>E</sub> =0	40			V
Collector-emitter breakdown voltage	V(BR) <sub>CEO</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> =0	30			V
Emitter-base breakdown voltage	V(BR) <sub>EBO</sub>	I <sub>E</sub> = 100μA, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 40 V, I <sub>E</sub> =0			1	μA
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> = 30 V, I <sub>B</sub> =0			10	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 6 V, I <sub>C</sub> =0			1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 2 V, I <sub>C</sub> = 1A	60		400	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A			1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> =0.1A f =10MHz		90		MHz

### CLASSIFICATION OF h<sub>FE</sub>

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

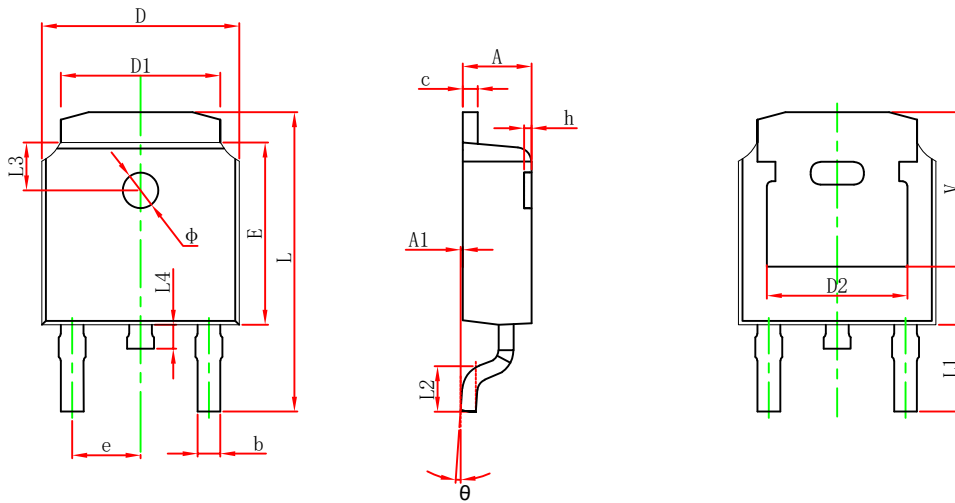


### Typical Characteristics



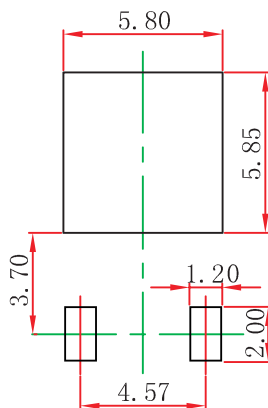


### TO-252-2L Package Outline Dimensions



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.

Package	Packing	Box Size LxWxH(mm)	Quantity(pcs/box)	Carton Size LxWxH(mm)	Quantity(pcs/carton)
TO-252	80pcs/Tube	560x150x50	4000	570x290x180	40000
TO-252	2500pcs/Reel	335x335x40	2500	370x370x440	12500/25000