



Plastic-Encapsulate Transistors(NPN)

TO-252W

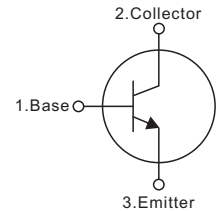
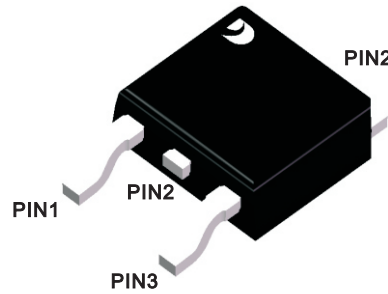


Features

- AEC-Q101 Qualified and PPAP Capable
- High breakdown voltage margin
- Abnormal leakage current
- High output power
- High secondary breakdown resistance and reliability

Mechanical data

- Case: TO-252W
- Approx. Weight: 0.33g (0.012oz)
- RoHS compliant
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.



Maximum Ratings (Ta=25°C unless otherwise noted)

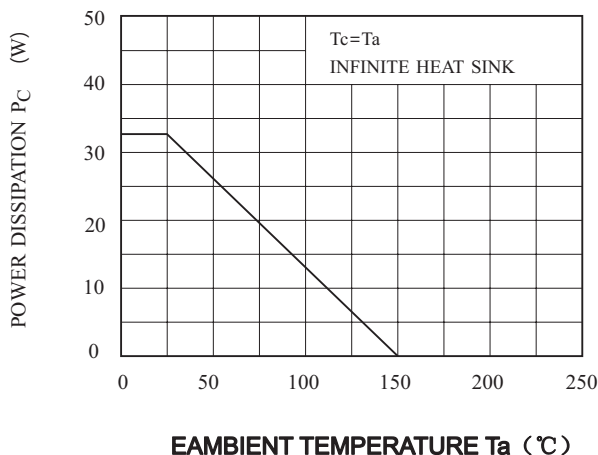
Parameter	Symbols	Ratings	Units
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current -Continuous	I_C	6	A
Collector Power Dissipation	P_C	33	W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	°C

Electrical Characteristics (Ta=25°C unless otherwise noted)

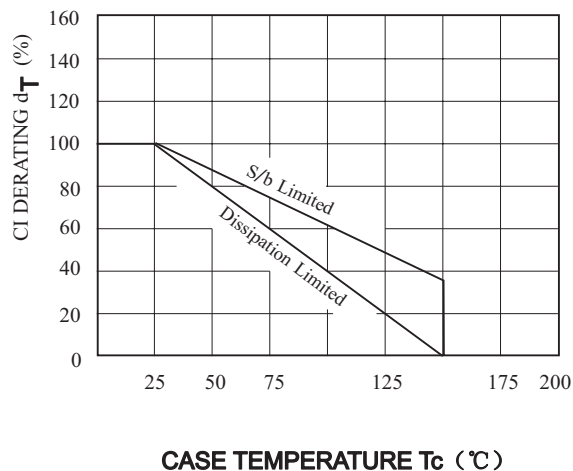
Parameter	Symbols	Test conditions	Min	Typ	Max	Units
Collector-base breakdown voltage	V_{CBO}	$I_C=0.1mA, I_E=0$	120			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=10mA, I_B=0$	100			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=0.1mA, I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=150V, I_E=0$			1	uA
Emitter cut-off current	I_{CEO}	$V_{CE}=120V, I_B=0$			1	uA
Emitter cut-off current	I_{EBO}	$V_{EB}=7V, I_C=0$			1	uA
DC current gain	h_{FE1}	$V_{CE}=5V, I_C=1A$	60		200	
	h_{FE2}	$V_{CE}=2V, I_C=3A$	80			
Collector-emitter saturation voltage	$V_{CE(SAT)}$	$I_C=4A, I_B=0.4A$		0.2	1.5	V
Base-emitter voltage	$V_{BE(SAT)}$	$I_C=4A, I_B=0.4A$			1.0	V



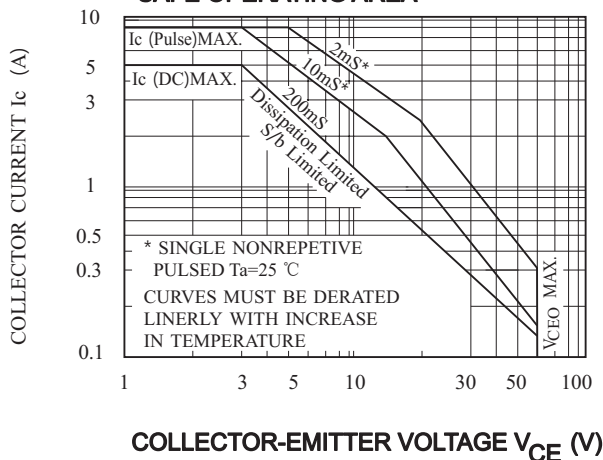
powerIDissipationVs.AAmbient



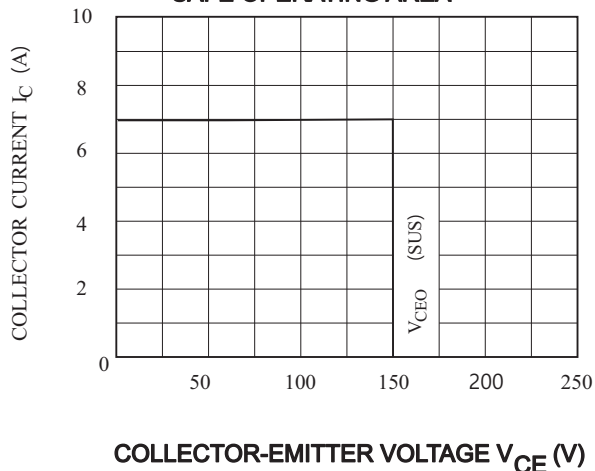
Ic Derating Vs.ccase Temperature



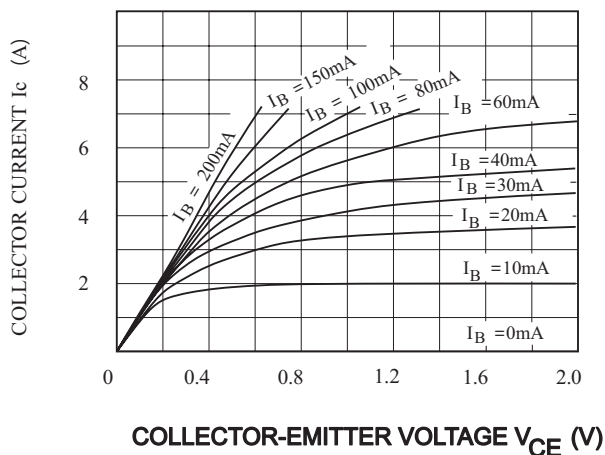
SAFE OPERATING AREA



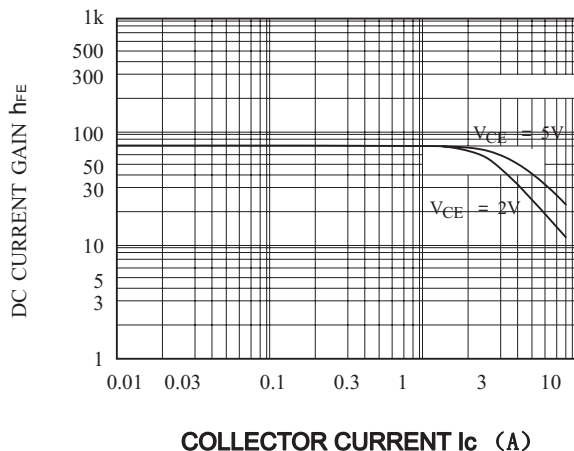
REVERSE BIAS SAFE OPERATING AREA

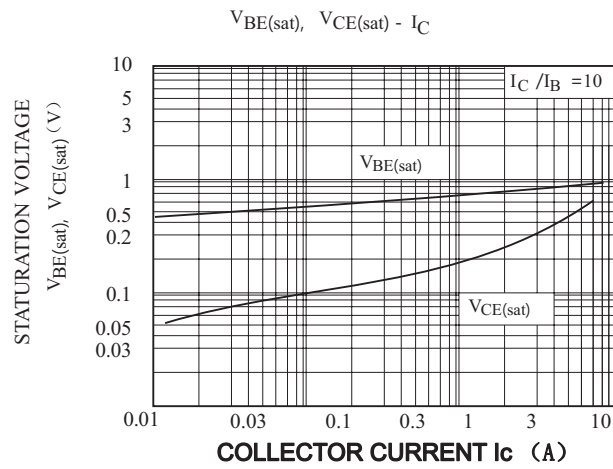


voltage



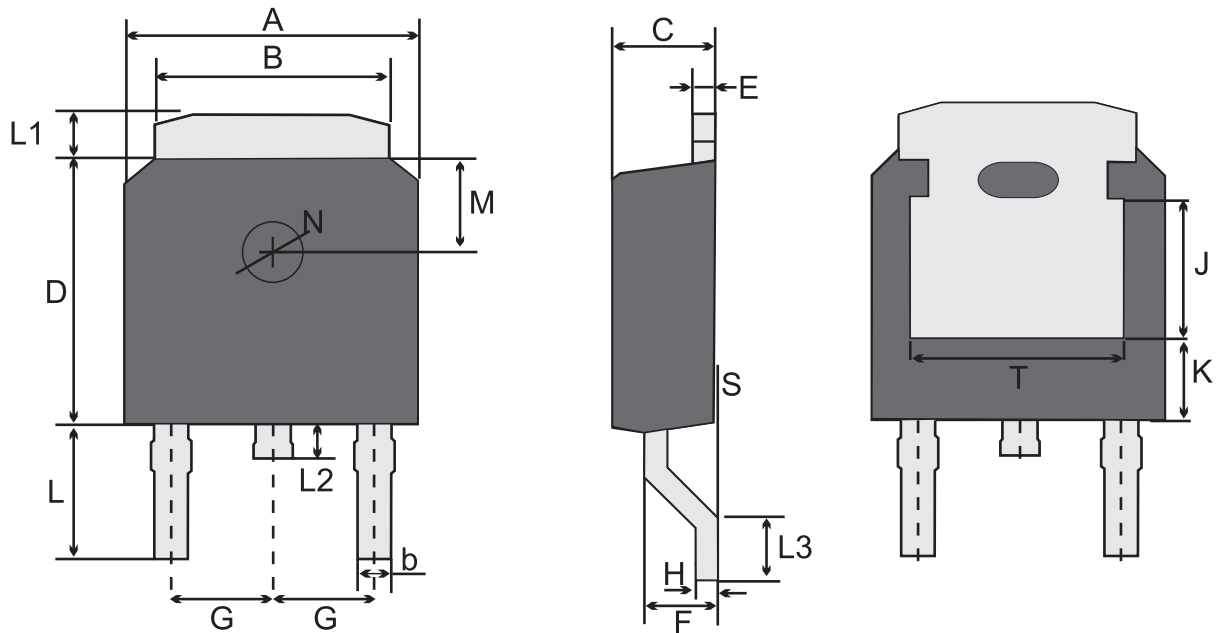
Dc current Gain vs. ccollector current







TO-252W(D-PAK) Package Outline Dimensions



TO-252W(D-PAK)Mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	T	K
mm	max	6.7	5.53	0.86	2.5	6.3	0.61	1.87	2.3 typ.	0.55	3.0	1.2	1.0	1.75	0.1	1.8 typ.	1.3 typ.	3.2 ref.	4.83 ref.	1.8 ref.
	typ	6.6	5.33	0.76	2.3	6.1	0.51	1.57		0.50	2.8	1.0	0.8	1.30	0.05					
	min	6.3	5.13	0.66	2.1	5.9	0.41	1.27		0.45	2.6	0.8	0.6	1.0	/					
mil	max	264	218	34	98	248	24	74	91 typ.	22	118	47	39	69	3.9	71 typ.	51 typ.	126 ref.	190 ref.	71 ref.
	typ	260	210	30	91	240	20	62		20	110	39	31	51	2.0					
	min	248	202	26	83	232	16	50		18	102	31	24	39	/					

Marking

Type number	Marking code
D2SC1C31	D2SC1C31



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