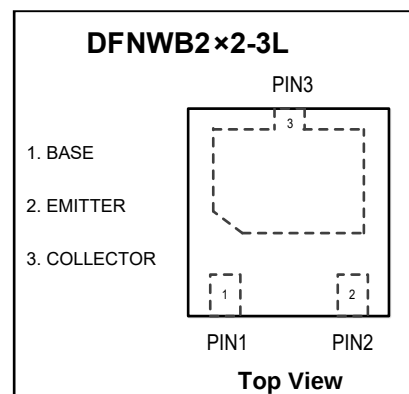


DFNWB2×2-3L Plastic-Encapsulate Transistors

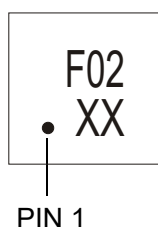
CJRF02 TRANSISTOR (NPN)

FEATURES

- Low $V_{CE(sat)}$
- Large current capacity

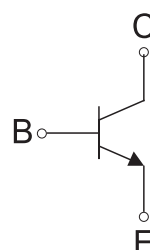


MARKING



F02 = Device code.
Solid dot = Pin1 indicator.
XX = Date code.

EQUIVALENT CIRCUIT



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	70	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	2	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}^{①}$	Thermal Resistance Junction to Ambient	100	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

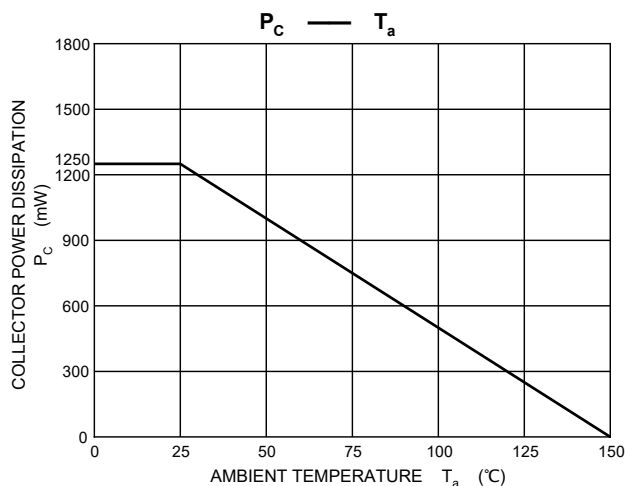
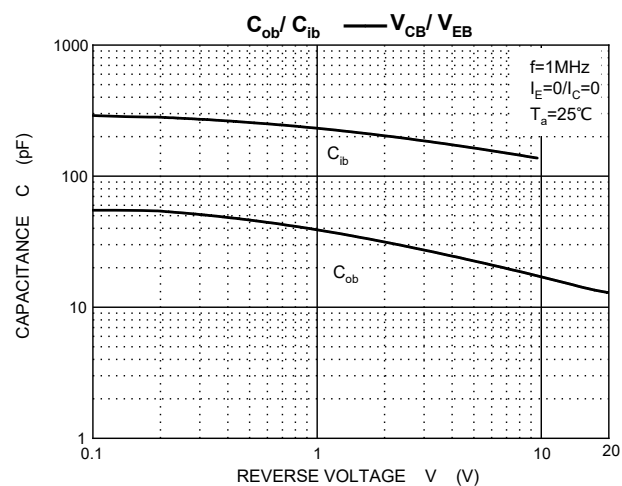
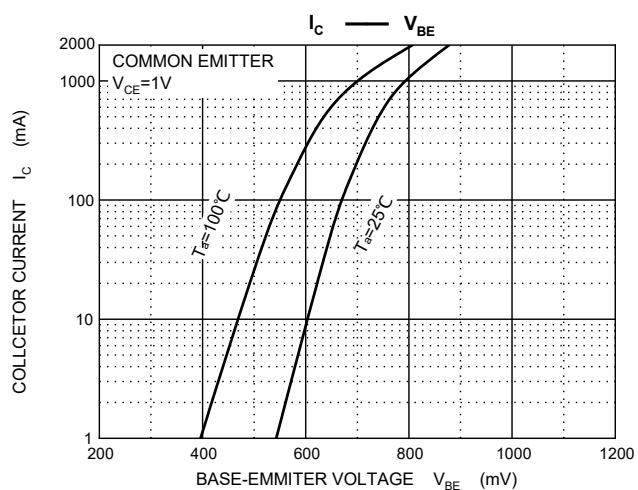
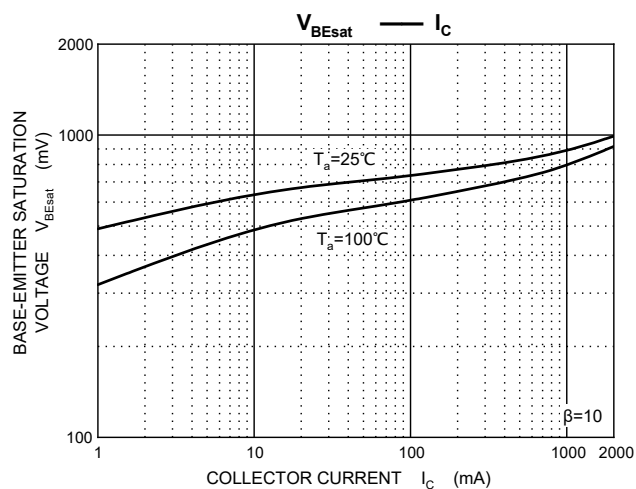
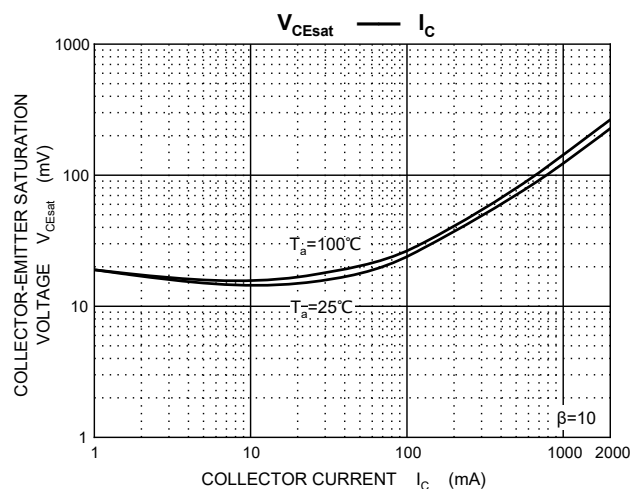
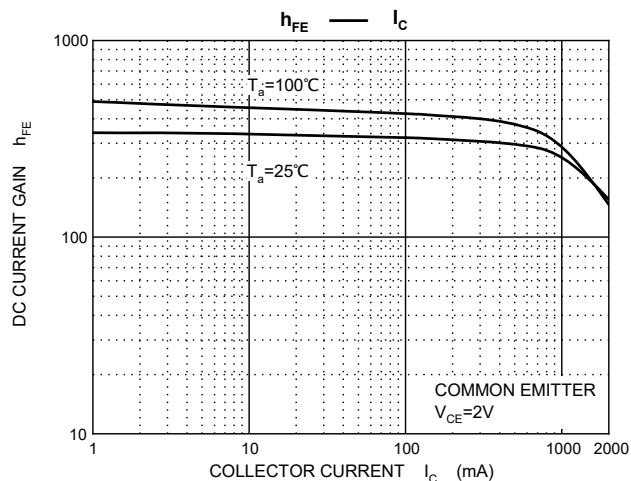
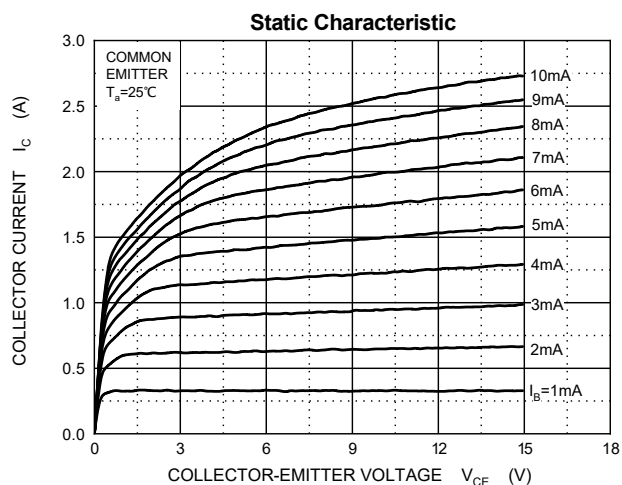
T_a=25°C unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR) _{CBO}	I _C = 100μA, I _E =0	60			V
Collector-emitter breakdown voltage	V(BR) _{CEO}	I _C = 10mA, I _B =0	60			V
Emitter-base breakdown voltage	V(BR) _{EBO}	I _E = 100μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} = 40 V, I _E =0			1	μA
Collector cut-off current	I _{CEO}	V _{CE} = 30 V, I _B =0			10	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 6 V, I _C =0			1	μA
DC current gain	h _{FE}	V _{CE} = 2 V, I _C = 1A	160		320	
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 2A, I _B = 0.2 A			0.5	V
Base-emitter saturation voltage	V _{BE (sat)}	I _C = 2A, I _B = 0.2 A			1.5	V
Transition frequency	f _T	V _{CE} = 5V, I _C =0.1A f =10MHz	50			MHz

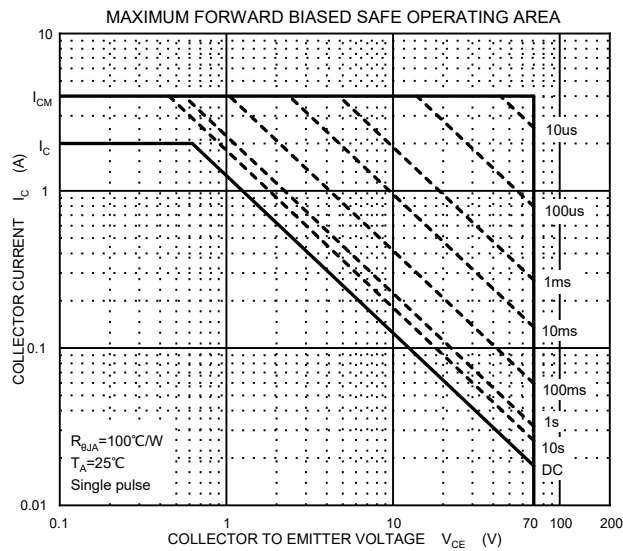
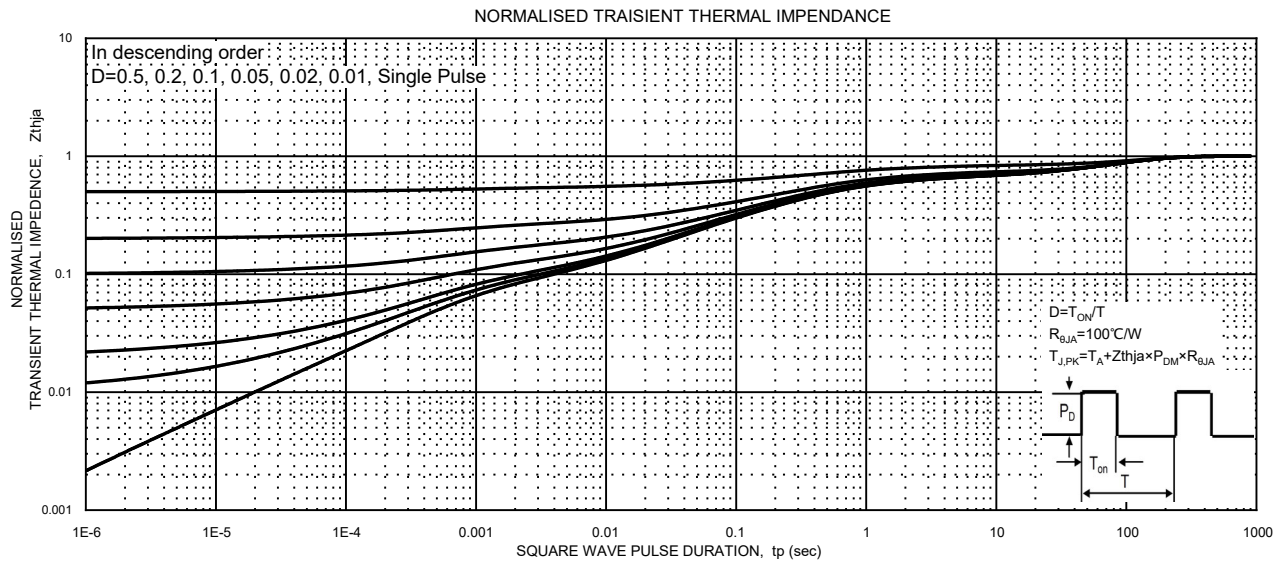
Notes:

1.The value of R_{θJA} is measured with the device mounted on 1 in² FR-4 board with copper on both side in a still air environment with T_a=25°C.

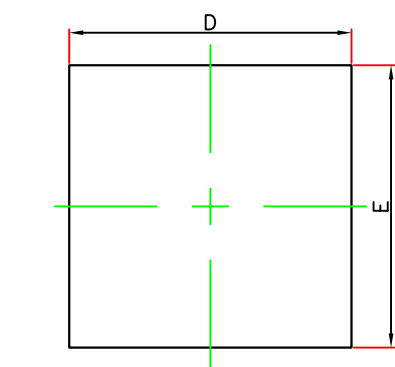
Typical Characteristics



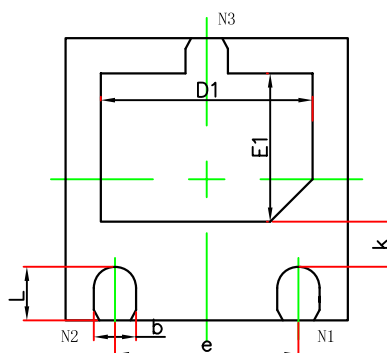
Typical Characteristics



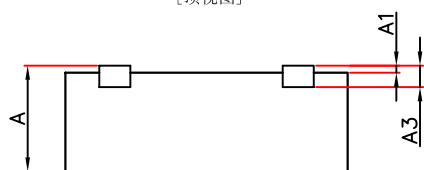
DFNWB2X2-3L Package Outline Dimensions



TOP VIEW
[顶视图]



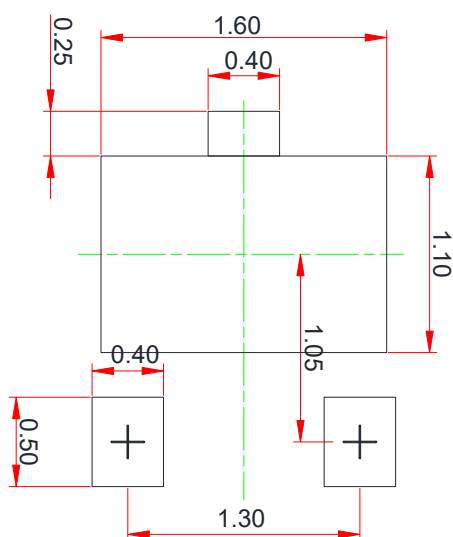
BOTTOM VIEW
[背视图]



SIDE VIEW
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.550	0.650	0.022	0.026
A1	0.000	0.050	0.000	0.002
A3	0.152 REF.		0.006 REF.	
D	1.924	2.076	0.076	0.082
E	1.924	2.076	0.076	0.082
D1	1.400	1.600	0.055	0.063
E1	0.950	1.150	0.037	0.045
k	0.220 MIN.		0.009 MIN.	
b	0.250	0.350	0.010	0.014
e	1.30(BSC)		0.050(BSC)	
L	0.330	0.430	0.013	0.017

DFNWB2X2-3L Suggested Pad Layout



Note:

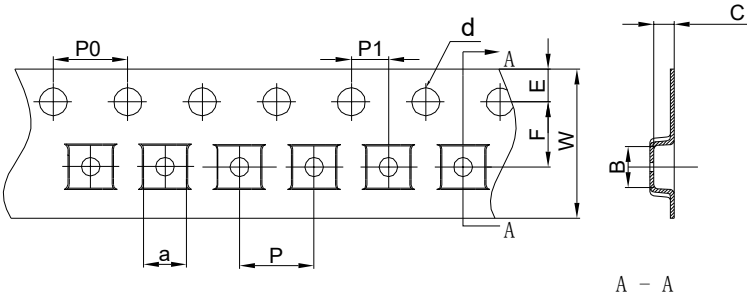
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

DFNWB2X2-3L Tape and Reel

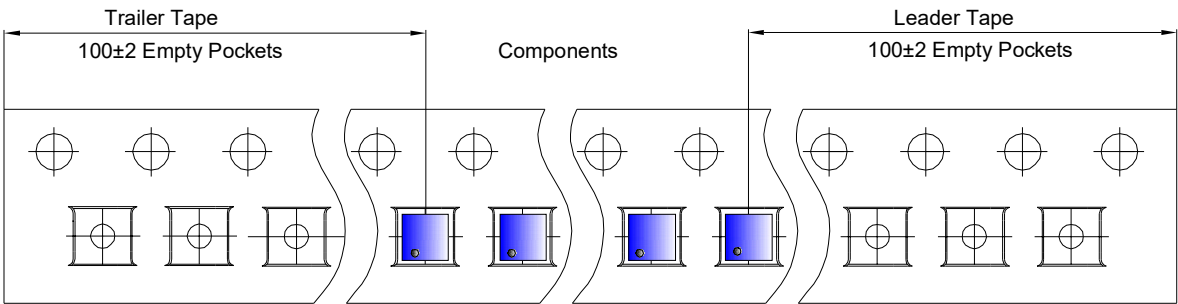
DFNWB2.0×2.0-3L Embossed Carrier Tape



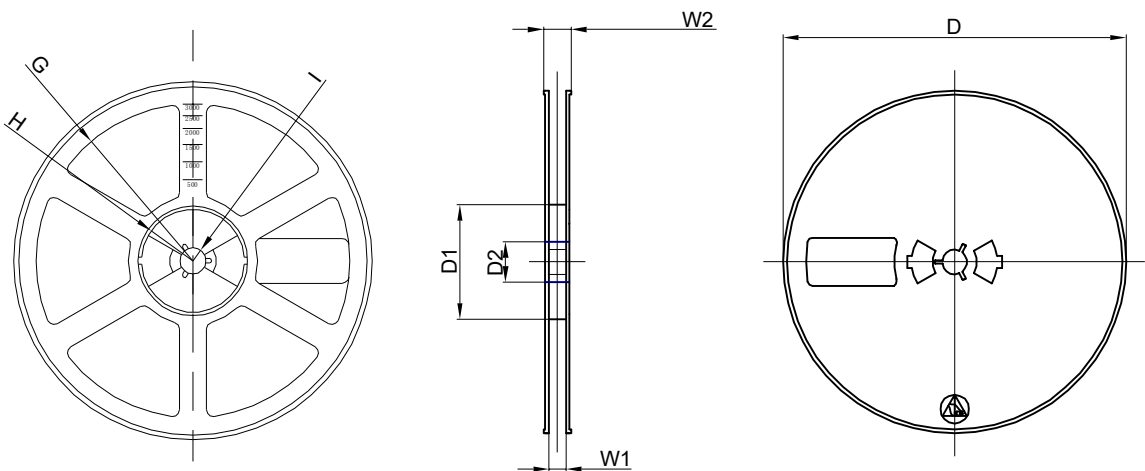
Packaging Description:
DFNWB2.0×2.0-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 18.0cm 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
DFNWB2.0×2.0-3L	2.20	1.36	0.75	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

DFNWB2.0×2.0-3L Tape Leader and Trailer



DFNWB2.0×2.0-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	