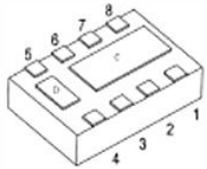
DFNWB3×2-8L-G Plastic-Encapsulate Transistors-MOSFETS

CJZM718 N-ch MOSFET and PNP Transistor

$V_{(BR)DSS}$/BV_{CEO}	$R_{DS(on)}$MAX	I_D/I_C
20V	0.7Ω@4.5V	0.5A
	0.85Ω@2.5V	
-25V	/	-3A

DFNWB3×2-8L-G



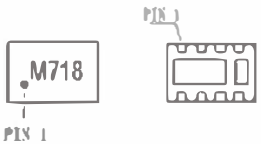
FEATURE

- High DC current gain
- Low Threshold
- Small package DFNWB3x2-8L-G
- Including a CJP718 transistor and a CJ1012 MOSFET independently in a package

APPLICATION

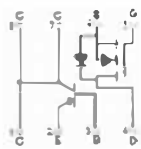
- Charging circuit
- Other power management in portable equipments

MARKING:



front back

Equivalent Circuit



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
PNP Transistor			
V_{CBO}	Collector-Base Voltage	-25	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-7.5	V
I_C	Collector Current	-3	A
N-MOSFET			
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	±6	V
I_D	Drain Current -Continuous	0.5	A
I_{DM}	Drain Current - Pulse	2	A
Power Dissipation, Temperature and Thermal Resistance			
P_D	Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient (note1)	175	℃/W
	Thermal Resistance from Junction to Ambient (note2)	110	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃
T_L	Lead Temperature	260	℃

MOSFET ELECTRICAL CHARACTERISTICS

PNP TRANSISTOR ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-0.1mA, I_E=0	-25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-10mA, I_B=0	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-0.1mA, I_C=0	-7.5			V
Collector cut-off current	I_{CBO}	V_{CB}=-20V, I_E=0			-25	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-6V, I_C=0			-25	nA
DC current gain	h_{FE}*	V_{CE}=-2V, I_C=-0.01A	300			
		V_{CE}=-2V, I_C=-0.1A	300			
		V_{CE}=-2V, I_C=-2A	150			
		V_{CE}=-2V, I_C=-6A	15			
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=-0.1A, I_B=-10mA			-30	mV
		I_C=-1A, I_B=-20mA			-220	mV
		I_C=-1.5A, I_B=-50mA			-250	mV
		I_C=-2.5A, I_B=-150mA			-350	mV
		I_C=-3.5A, I_B=-350mA			-380	mV
Base-emitter saturation voltage	$V_{BE(sat)}$*	I_C=-3.5A, I_B=-350mA			-1.075	V
Base-emitter voltage	$V_{BE(on)}$*	V_{CE}=-2V, I_C=-3.5A			-0.95	V
Transition frequency	f_T	V_{CE}=-10V, I_C=-50mA, f=100MHz	150			MHz

N-ch MOSFET ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

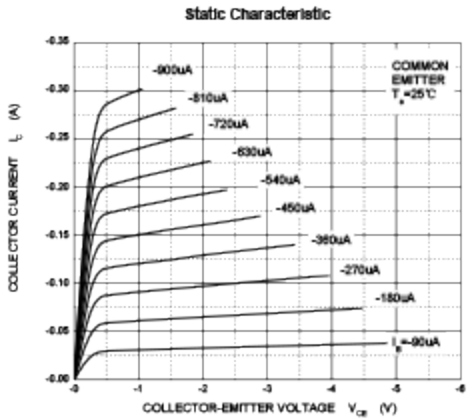
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} =0V, I_D=250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =16V, V_{GS} = 0V			0.1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±4.5V, V_{DS} = 0V			±1	μA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.45		1.2	V
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =4.5V, I_D =0.6A			0.7	Ω
		V_{GS} =2.5V, I_D =0.5A			0.85	Ω
Forward tranconductance	g_{fs}	V_{DS} =10V, I_D =0.4A	0.5			S
Diode forward voltage	V_{SD}*	I_S=0.15A, V_{GS} = 0V			1.2	V
DYNAMIC PARAMETERS (note 3)						
Input Capacitance	C_{iss}	V_{DS} =16V, V_{GS} =0V, f =1MHz		100		pF
Output Capacitance	C_{oss}			16		pF
Reverse Transfer Capacitance	C_{rss}			12		pF
SWITCHING PARAMETERS (note 3)						
Turn-on delay time	$t_{d(on)}$	V_{DD}=10V, V_{GEN}=4.5V, R_G=10Ω, R_L=47Ω, I_D=0.2A		5		ns
Turn-on rise time	t_r			5		ns
Turn-off delay time	$t_{d(off)}$			25		ns
Turn-off fall time	t_f			11		ns
Total Gate Charge	Q_g	V_{DS} =10V, V_{GS} =4.5V, I_D =0.25A		750		nC
Gate-Source Charge	Q_{gs}			75		nC
Gate-Drain Charge	Q_{gd}			225		nC

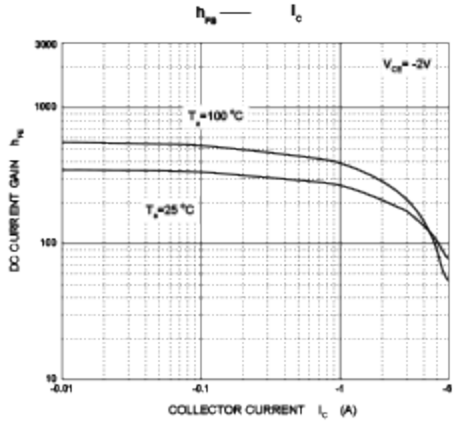
Note: 1. When mounted on a minimum pad.
2. When mounted on 1 in^2 of 2oz copper board.
3. These parameters have no way to verify.

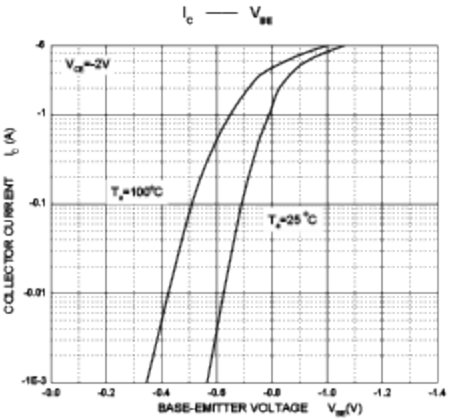
* Pulse test: pulse width≤300μs, duty cycle≤ 2%

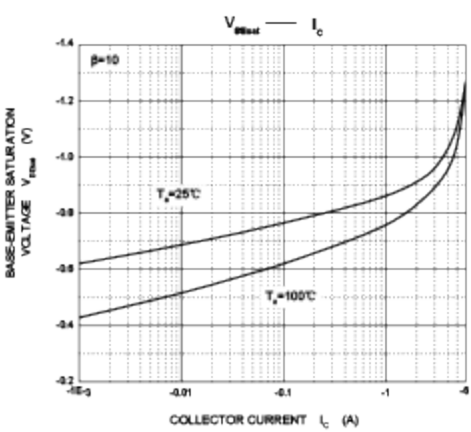
Typical Characteristics

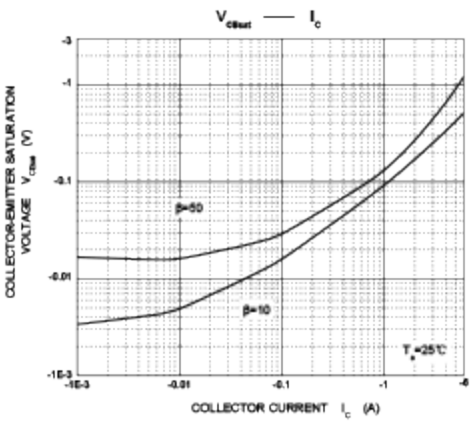
PNP Transistor

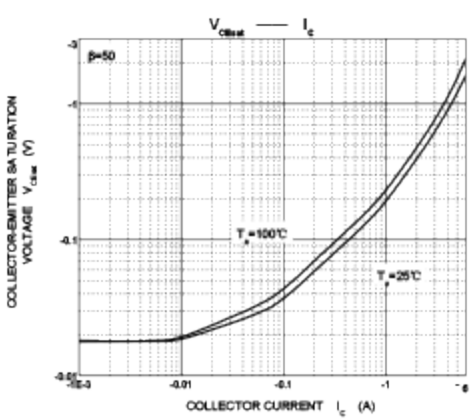






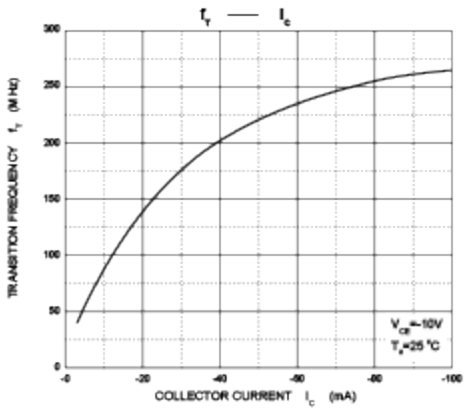


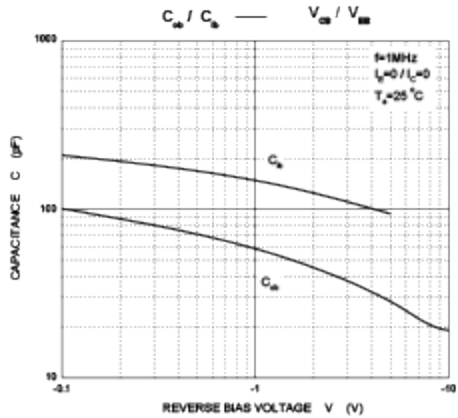


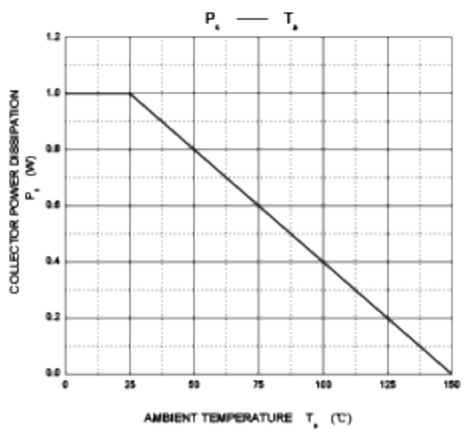


Typical Characteristics

PNP Transistor

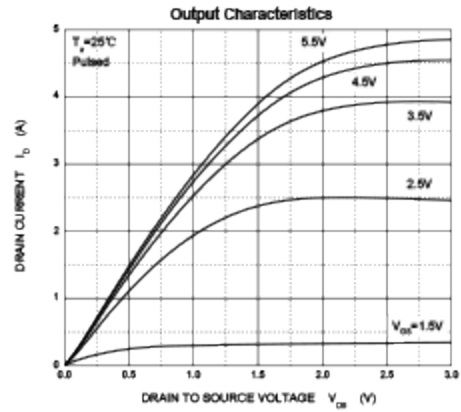


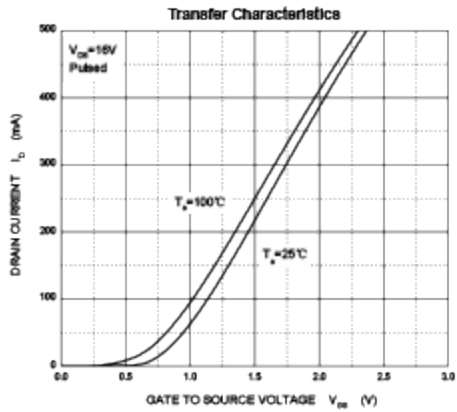


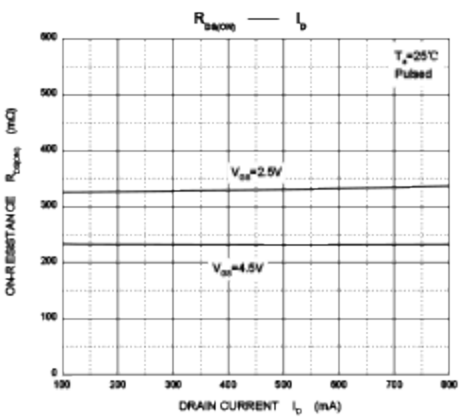


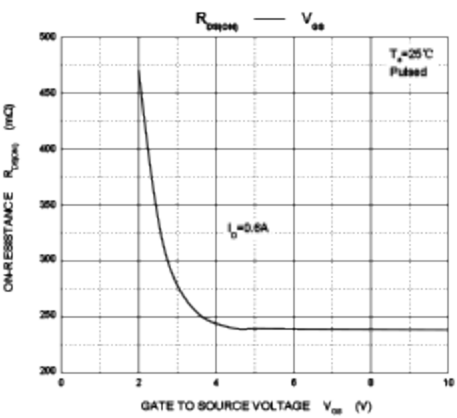
Typical Characteristics

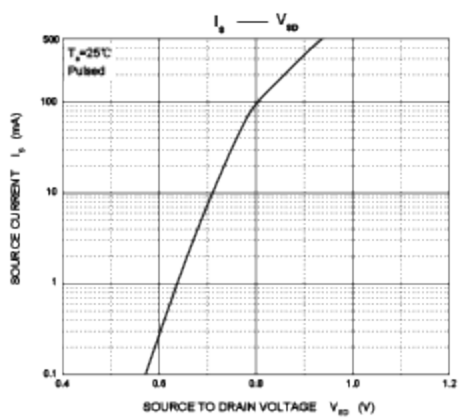
N-channel Characteristics

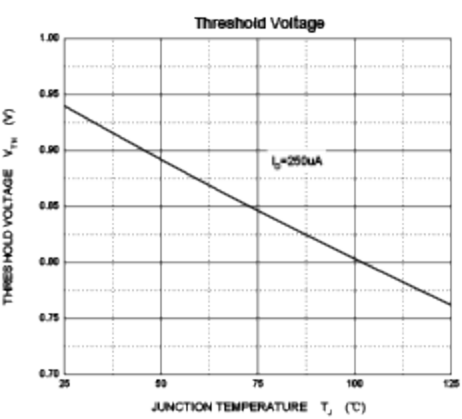




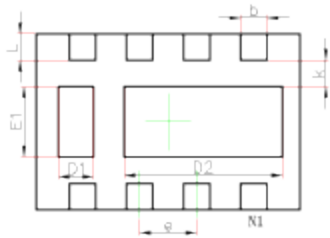


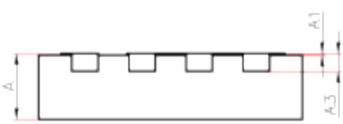






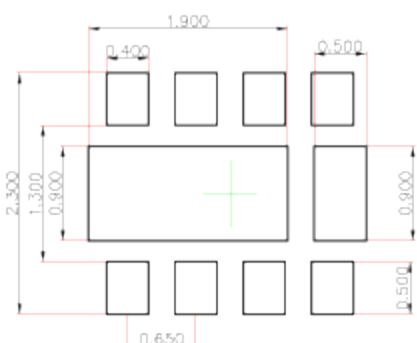
DFNWB3X2-8L-G Package Outline Dimensions





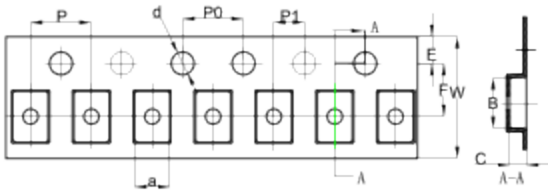
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	2.900	3.100	0.114	0.122
E	1.900	2.100	0.075	0.083
D1	0.300	0.500	0.012	0.020
E1	0.700	0.900	0.028	0.035
D2	1.700	1.900	0.067	0.075
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
k	0.200MIN.		0.008MIN.	
L	0.224	0.376	0.009	0.015

DFNWB3X2-8L-G Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.050mm.
3.The pad layout is for reference purposes only.

DFNWB3*2-8L Embossed Carrier Tape



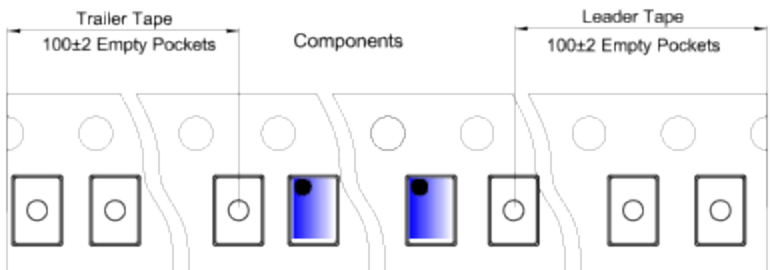
Packaging Description:

DFNWB3*2-8L 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).

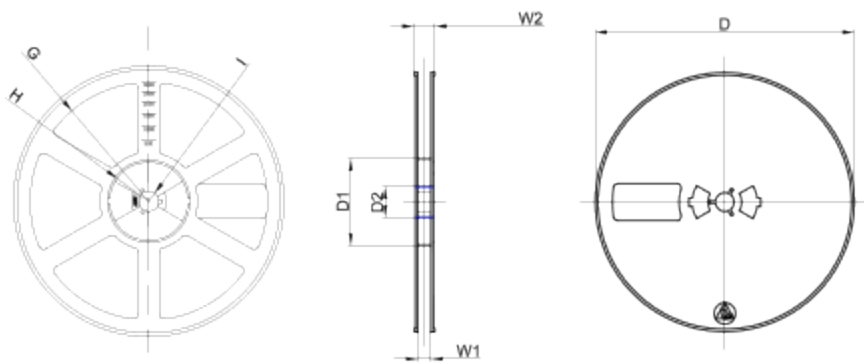
ALL DIM IN mm

Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
DFNWB3×2-8L	2.30	3.30	1.10	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

DFNWB3*2-8L Tape Leader and Trailer



DFNWB3*2-8L 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)
3,000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	