SZCJ

JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

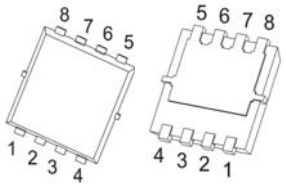
JSCJ

PDFNWB3.3x3.3-8L Plastic-Encapsulate MOSFET

CJAB55P03A P-Channel Power MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
-30V	6.5mΩ@-10V	-55A
	8.4mΩ@-4.5V	

PDFNWB3.3×3.3-8L



DESCRIPTION

The CJAB55P03A uses advanced trench technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. It can be used in a wide variety of applications

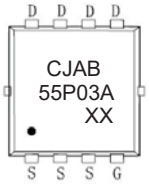
FEATURES

- High density cell design for ultra low $R_{DS(ON)}$
- Fully characterized avalanche voltage and current
- Excellent package for good heat dissipation
- Special process technology for high ESD capability

APPLICATIONS

- Battery and loading switching

MARKING

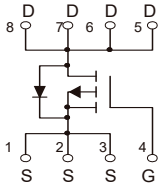


CJAB55P03A = Part No.

Solid dot=Pin1 indicator.

XX=Code.

EQUIVALENT CIRCUIT



ABSOLUTE MAXIMUM RATINGS (T_J=25℃ unless otherwise specified)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_C =25℃	I_D	-55	A
	T_C =100℃		-34.8	
Pulsed Drain Current		I_{DM}①②	-200	A
Continuous Drain Current	T_A =25℃	I_D	-11.4	A
	T_A =75℃		-8.8	
Single Pulsed Avalanche Energy		E_{AS}③	150	mJ
Power Dissipation		P_D①	50	W
Thermal Resistance from Junction to Ambient		$R_{\theta JA}$⑥	83.3	℃/W
Thermal Resistance from Junction to Case		$R_{\theta JC}$	2.5	℃/W
Operating Junction and Storage Temperature Range		T_J,T_{stg}	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
Off characteristics							
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-1mA		-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V, V_{GS} =0V	T_J =25℃			-1.0	μA
			T_J =125℃			-100	
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V				±100	nA
On characteristics							
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA		-1.0	-1.5	-2.5	V
Static drain-source on-sate resistance	$R_{DS(on)}$④	V_{GS} =-10V, I_D =-15A			6.5	8.2	mΩ
		V_{GS} =-4.5V, I_D =-10A			8.4	13.0	mΩ
Dynamic characteristics ⑤							
Input capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V, f =1MHz			3259		pF
Output capacitance	C_{oss}				404		
Reverse transfer capacitance	C_{rss}				282		
Switching characteristics ⑤							
Total gate charge	Q_g	V_{DS}=-10V,I_D=-10A, V_{GS}=-4.5V			30		nC
Gate-source charge	Q_{gs}				8.7		
Gate-drain charge	Q_{gd}				8.3		
Drain-Source Diode Characteristics							
Drain-source diode forward voltage	V_{SD} ④	V_{GS} =0V, I_S=-10A				-1.2	V
Continuous drain-source diode forward current	I_S ①					-55	A
Pulsed drain-source diode forward current	I_{SM} ②					-200	A

Notes:

①.T_C=25℃ Limited only by maximum temperature allowed.

②.P_W≤10μs, Duty cycle≤1%.

③.EAS condition: V_{DD}=-15V,V_{GS}=-10V, L=0.5mH, R_g=25Ω Starting T_J= 2 5 ℃.

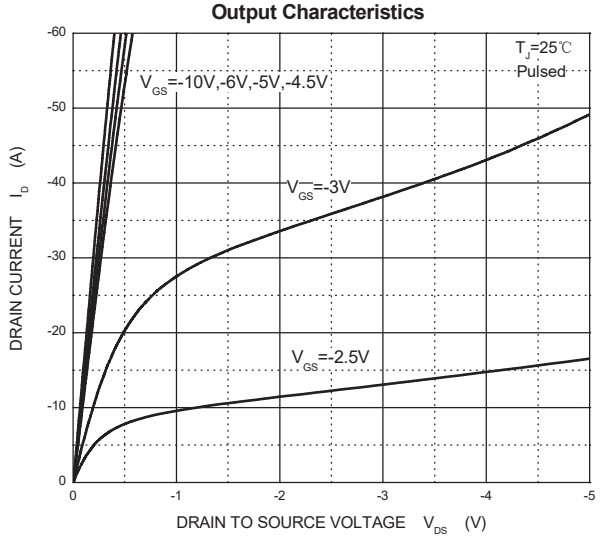
④.Pulse Test : Pulse Width≤380μs, duty cycle ≤2%.

⑤.Guaranteed by design, not subject to production.

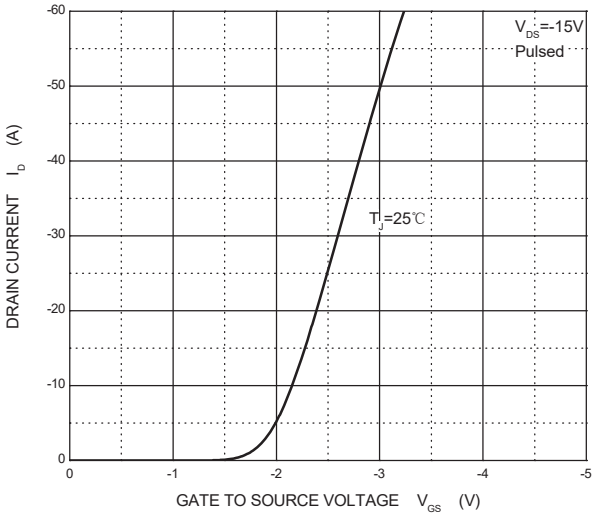
⑥.Device mounted on 1 in^2 FR-4 board with 2oz. double-sided Copper, in a still air environment with T_A=25℃.

Typical Characteristics

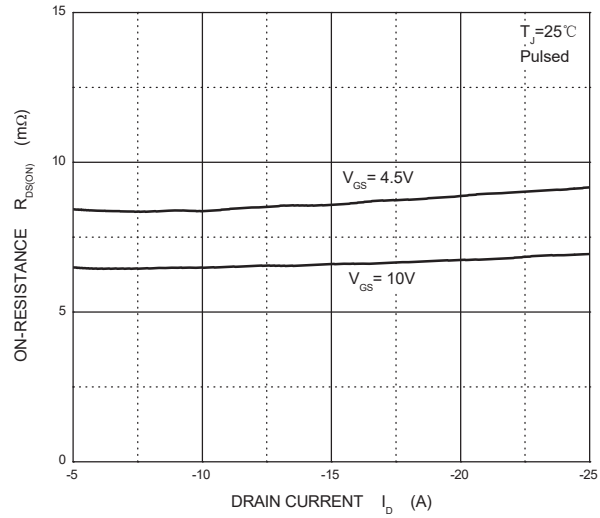
Output Characteristics



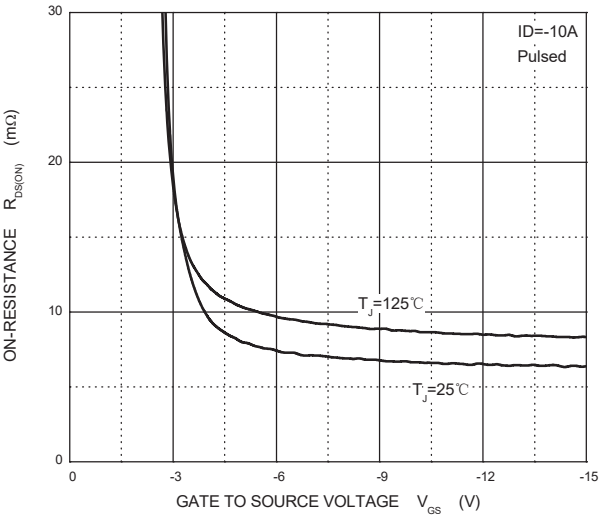
Transfer Characteristics



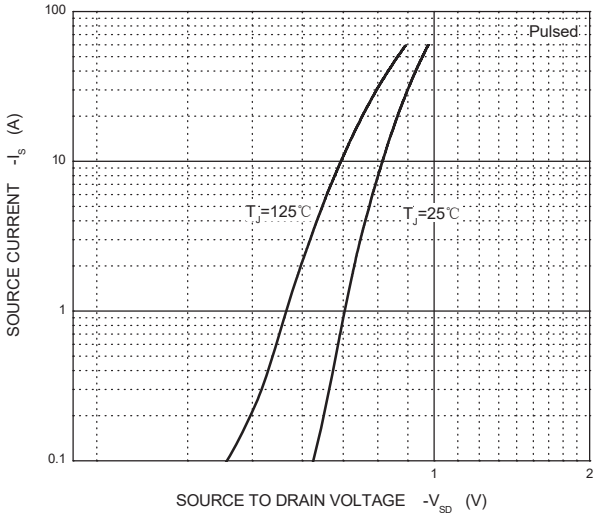
$R_{DS(ON)}$ —— I_D



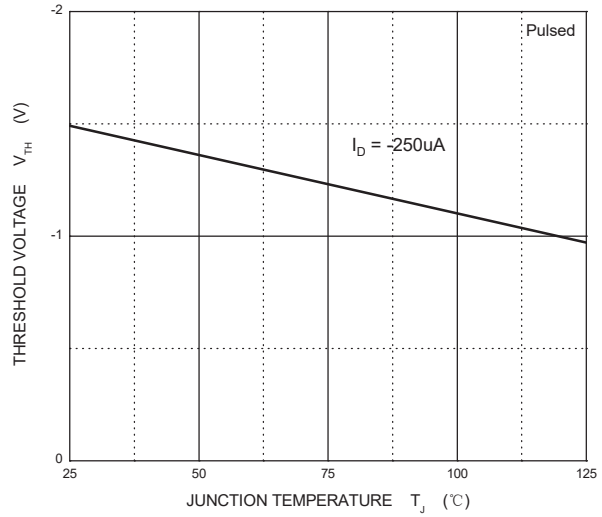
$R_{DS(ON)}$—— V_{GS}



I_S —— V_{SD}

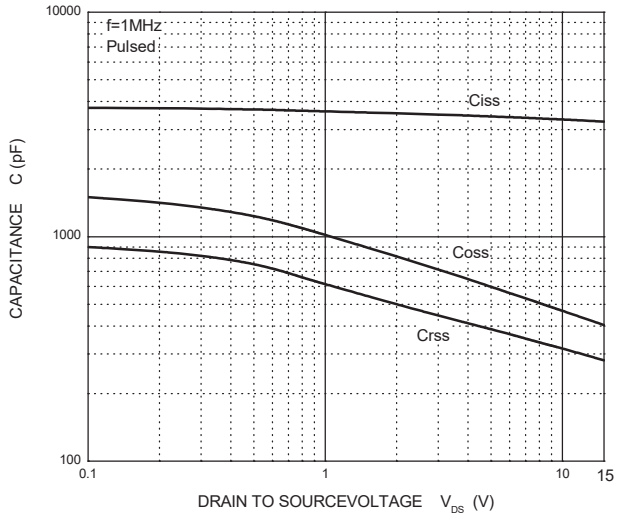


Threshold Voltage

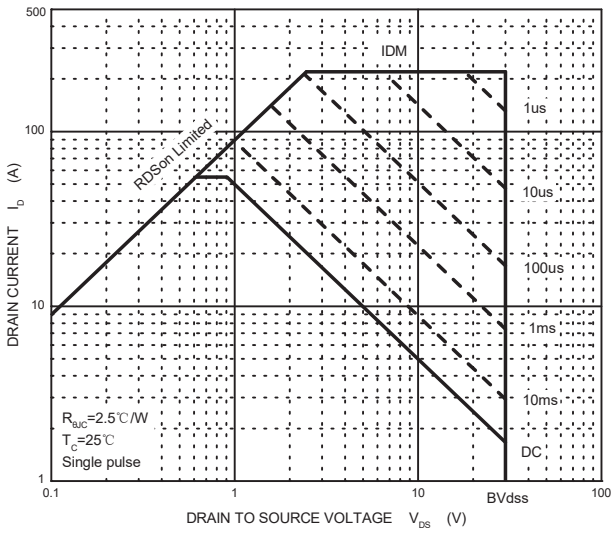


Typical Characteristics

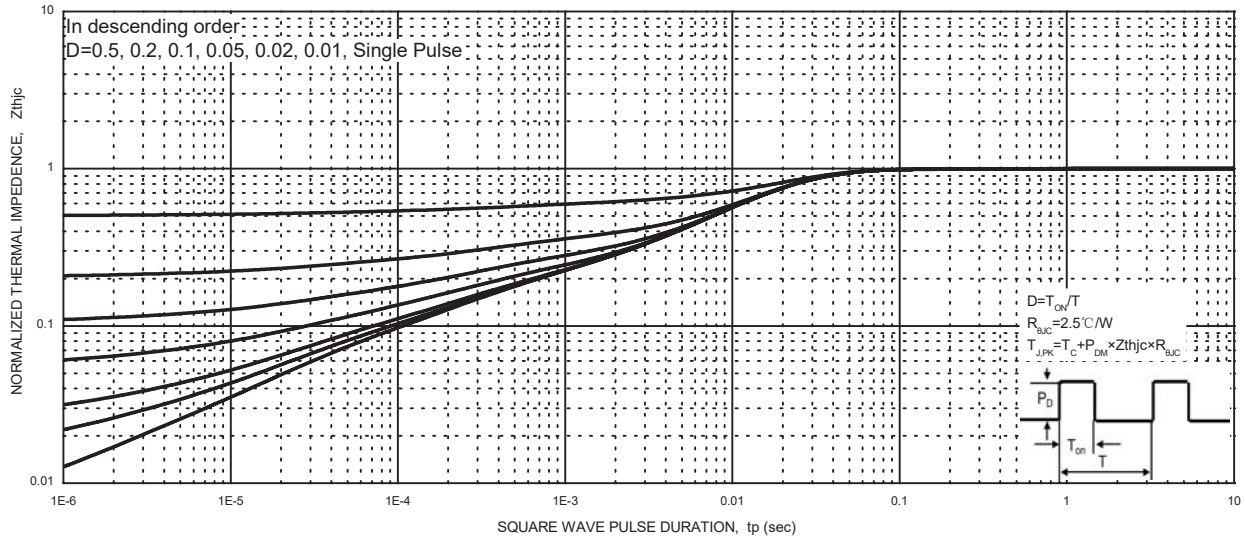
Capacitances



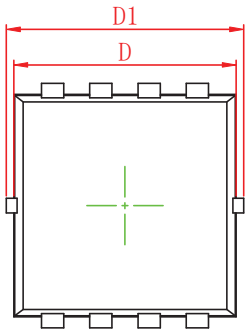
Maximum Forward Biased Safe Operating Area



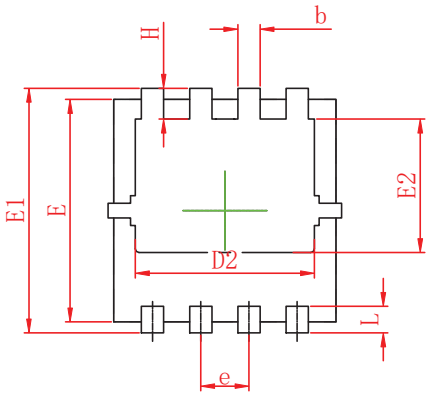
Normalized Trailent Thermal Impendance



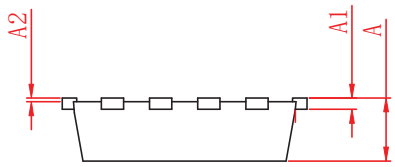
PDFNWB3.3×3.3-8L PACKAGE OUTLINE DIMENSIONS



Top View
[顶视图]



Bottom View
[背视图]

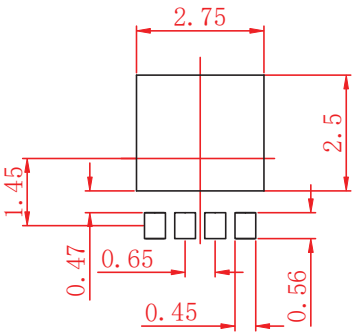


Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.65	0.90	0.026	0.035
A1	0.15 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.90	3.20	0.114	0.126
D1	3.00	3.40	0.118	0.134
D2	2.30	2.70	0.091	0.106
E	2.90	3.20	0.114	0.126
E1	3.00	3.40	0.118	0.134
E2	1.60	1.90	0.063	0.075
b	0.20	0.42	0.008	0.017
e	0.65 BSC.		0.026 BSC.	
L	0.20	0.50	0.008	0.020
H	0.32	0.52	0.012	0.020

Notes：
1 Dimensions exclusive of mold gate burrs.
2 Dimensions exclusive of mold flash and cutting burrs.

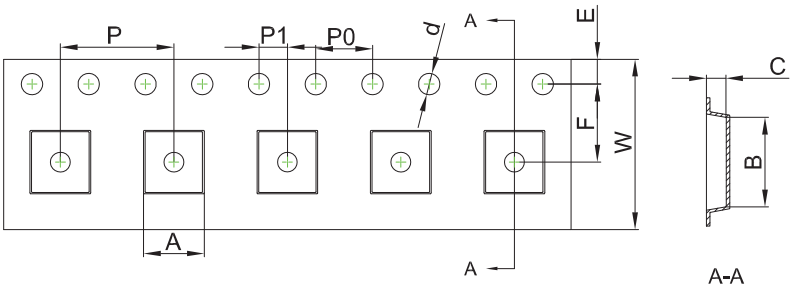
PDFNWB3.3×3.3-8L Suggested Pad Layout



Notes：
1 Controlling dimension：in millimeters.
2 General tolerance:±0.05mm.
2 The pad layout is for referance purpose only.

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

PDFNWB3.3×3.3-8L Embossed Carrier Tape

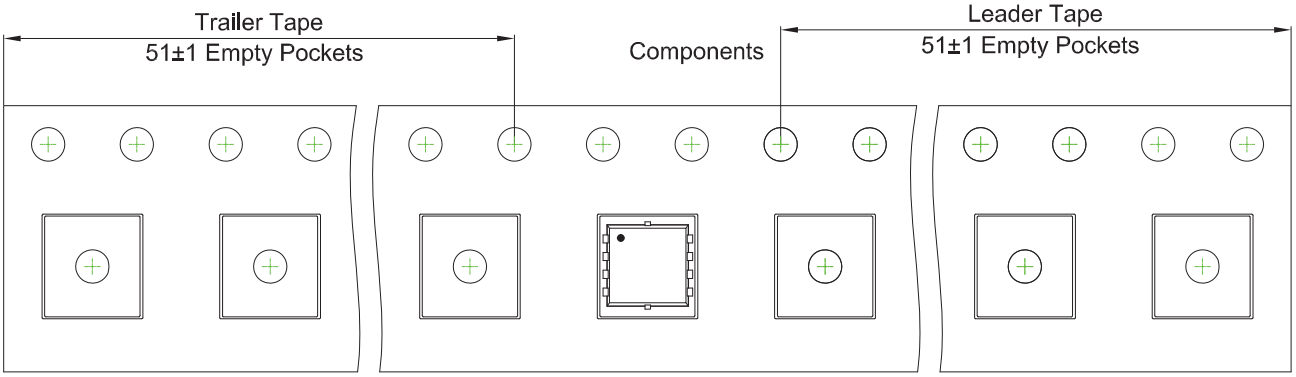


Packaging Description:

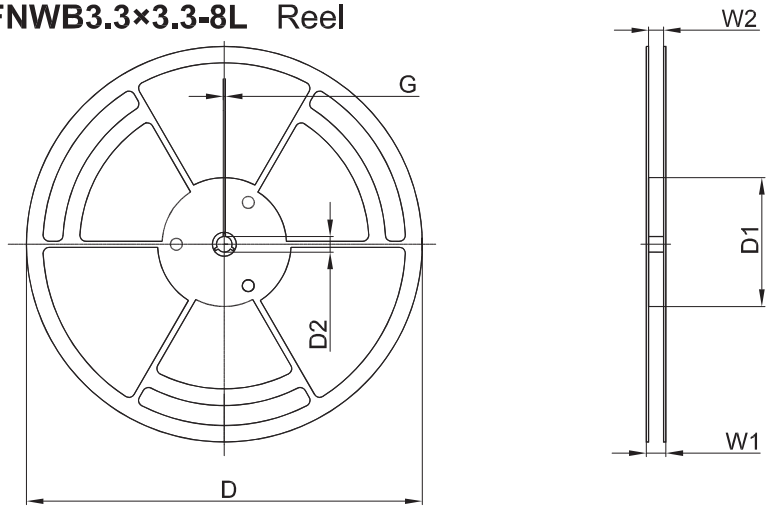
PDFNWB3.3x3.3-8L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 5,000 units per 13" or 33.0 cm 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
PDFNWB3.3×3.3-8L	3.55	3.55	1.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

PDFNWB3.3×3.3-8L Tape Leader and Trailer



PDFNWB3.3×3.3-8L Reel



Dimensions are in millimeter						
Reel Option	**D**	**D1**	**D2**	**G**	**W1**	**W2**
13" Dia	φ330.00	100.00	13.00	1.90	17.60	12.40

Reel	Reel Size	Box	Box Size (mm)	Carton	Carton Size (mm)
5,000 pcs	13 inch	10,000 pcs	360×360×65	50,000 pcs	378×358×382