

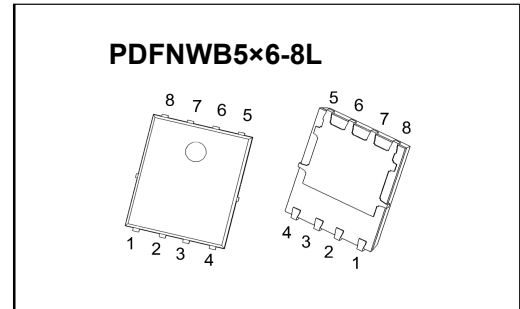
PDFNWB5×6-8L Plastic-Encapsulate Diode

SBDA30100T

SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

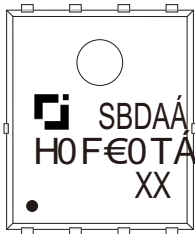
I_O	30A
V_{RRM}	100 V
T_j	150 °C
$V_{F(typ)}$	0.70V (@ $T_j=125^{\circ}C$)



FEATURES

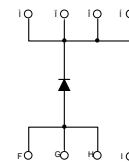
- Low Power Loss, High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

MARKING



SBDA30100T = Device code
 Solid dot = Pin1 indicator
 XX = Code

EQUIVALENT CIRCUIT



Pin 1~Pin 3: ANODE
 Pin 5~Pin 8: CATHODE

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

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	100	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	70	V
I_O	Average rectified output current	30	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	300	A
$R_{\theta JC}$	Thermal resistance from junction to case , $T_c=25^{\circ}C$	2.0	$^{\circ}C/W$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	$^{\circ}C/W$
T_j	Junction temperature	150	$^{\circ}C$
T_{stg}	Storage temperature	-55~+150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	100			V
Reverse current	I_R	$V_R=100V$	$T_j=25^{\circ}C$	2.0	100	μA
			$T_j=125^{\circ}C$	2.0		mA
Forward voltage	V_F	$I_F=15A$	$T_j=25^{\circ}C$	0.60		V
			$T_j=125^{\circ}C$	0.58		V
		$I_F=30A$	$T_j=25^{\circ}C$	0.76	0.82	V
			$T_j=125^{\circ}C$	0.70		V

1, Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$.

2, The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_a=25^{\circ}C$.

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

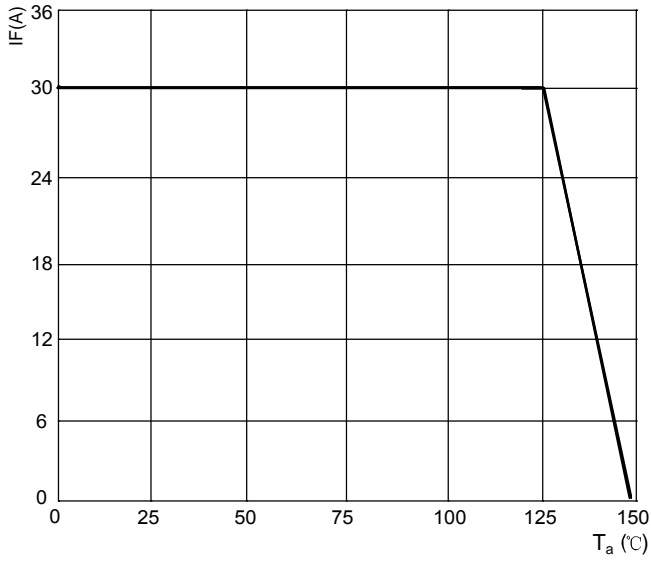


FIG.2: TYPICAL FORWARD CHARACTERISTICS

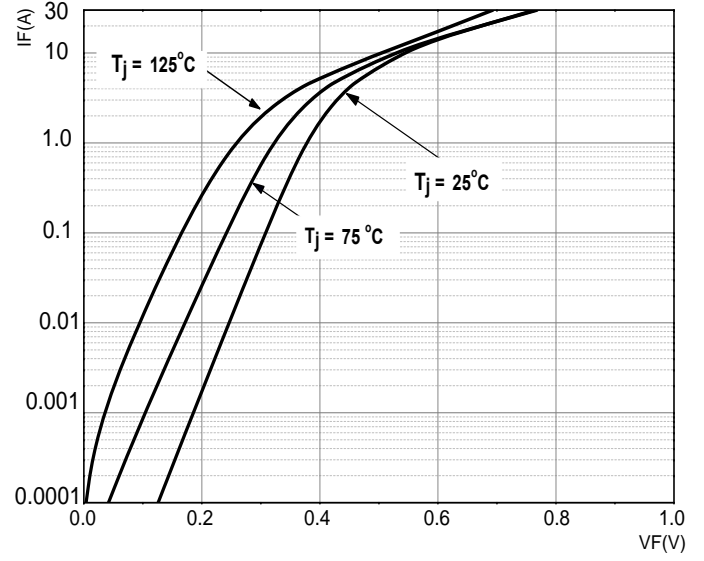


FIG.3: TOTAL CAPACITANCE DERATING CURVE

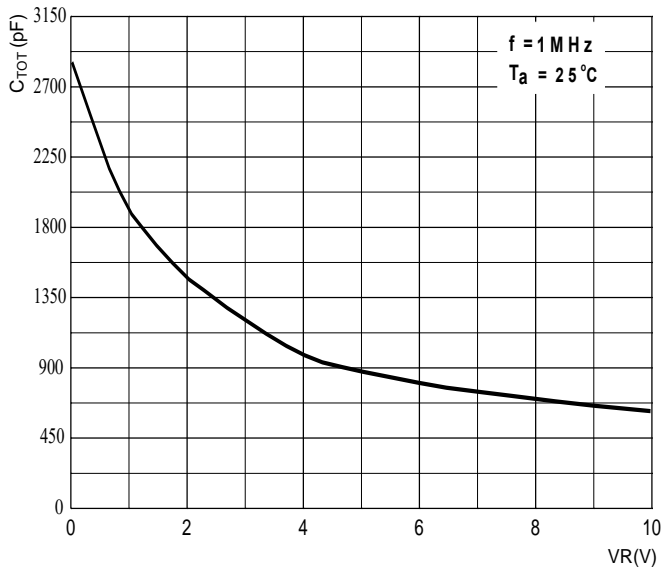
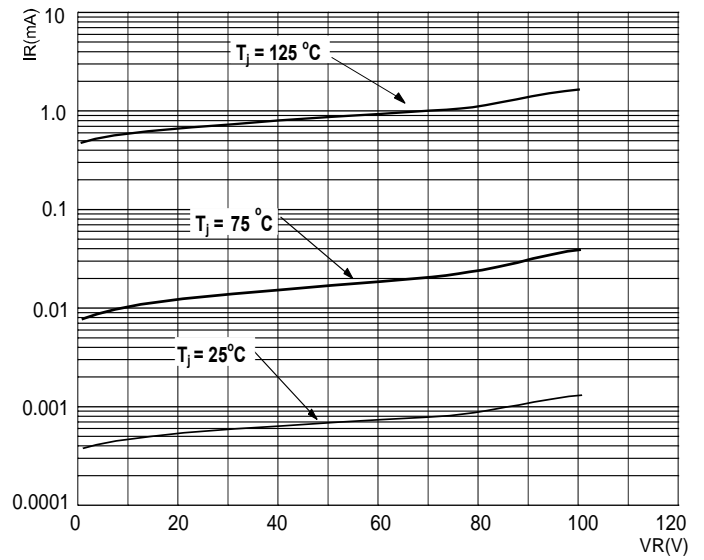
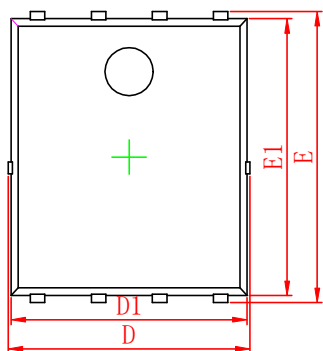


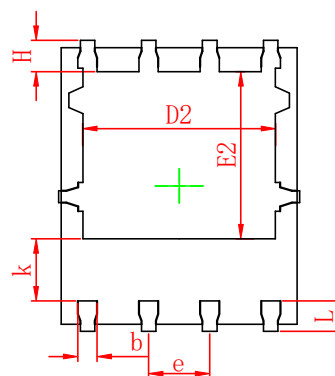
FIG.4: TYPICAL REVERSE CHARACTERISTICS



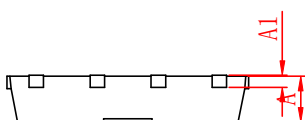
PDFNWB5×6-8L PACKAGE OUTLINE DIMENSIONS



Top View
[顶视图]



Bottom View
[背视图]



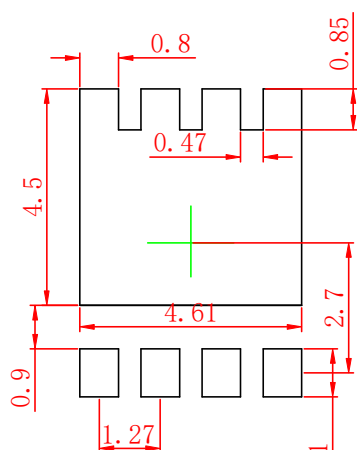
Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.10	0.035	0.043
A1	0.25 REF.		0.010 REF.	
D	4.90	5.10	0.193	0.201
D1	4.80	5.00	0.189	0.197
D2	3.90	4.10	0.154	0.161
E	5.90	6.10	0.232	0.240
E1	5.65	5.85	0.222	0.230
E2	3.35	3.65	0.132	0.144
k	1.20	1.50	0.047	0.059
b	0.20	0.45	0.008	0.018
e	1.27 BSC		0.050 BSC	
L	0.55	0.75	0.022	0.030
H	0.45	0.75	0.018	0.030

Notes:

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

PDFNWB5×6-8L Suggested Pad Layout



Notes:

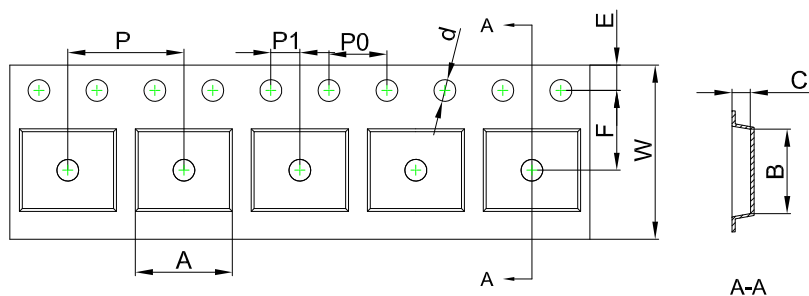
- 1 Controlling dimension: in millimeters.
- 2 General tolerance: ±0.05mm.
- 3 The pad layout is for reference purpose only.

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.

PDFNWB5×6-8L Tape and Reel

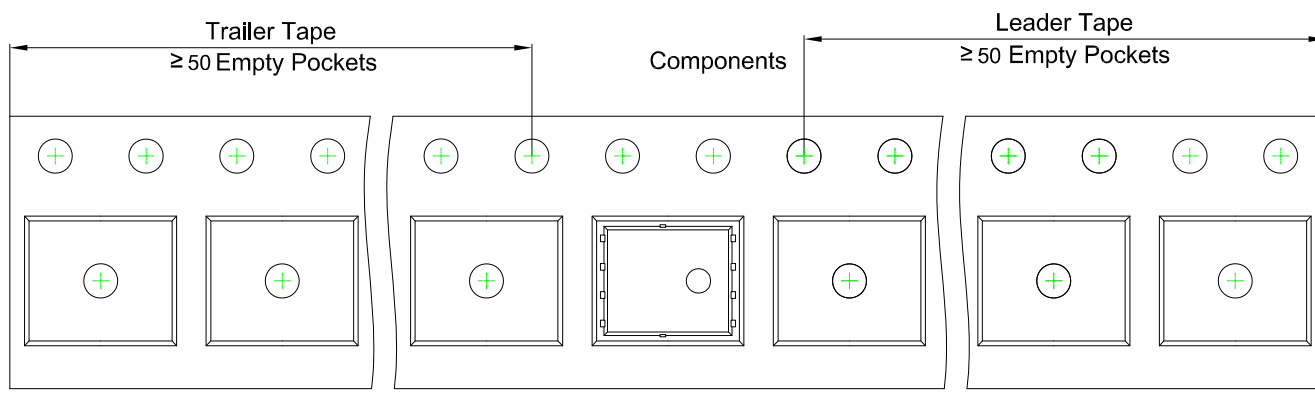
PDFNWB5×6-8L Embossed Carrier Tape



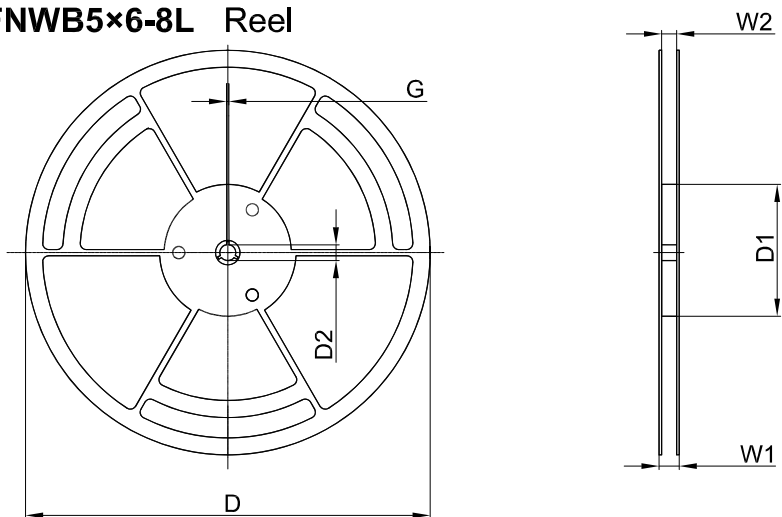
Packaging Description:
PDFNWB5×6-8L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed 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
PDFNWB5×6-8L	6.30	5.30	1.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

PDFNWB5×6-8L Tape Leader and Trailer



PDFNWB5×6-8L 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