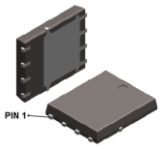
Schottky Barrier Rectifiers

CDBH8-30100L-HF

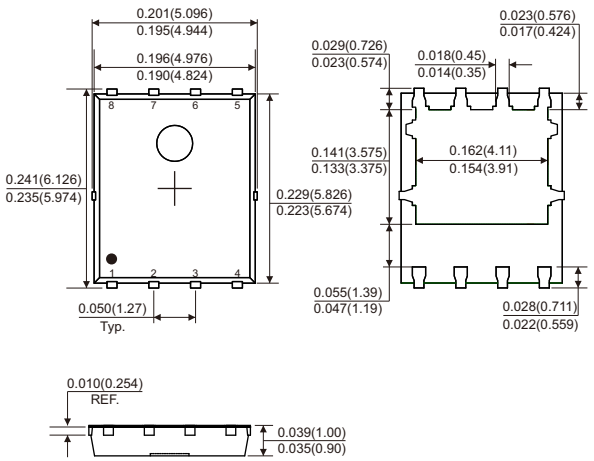
RoHS Device
Halogen Free



Features

- low power loss, high efficiency.
- Guard ring die construction for transient protection.
- High current capability and low forward voltage drop.

PDFN5x6-8L

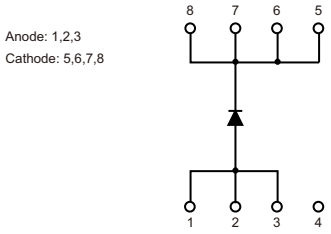


Dimensions in inches and (millimeter)

Mechanical data

- Case: PDFN5x6-8L, molded plastic.
- Terminals: Tin-plated, solderable per MIL-STD-750, method 2026.

Circuit Diagram



Maximum Ratings (at T_A=25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}	100	V
DC blocking voltage	V_R	100	V
RMS reverse voltage	V_{RMS}	70	V
Average rectified output current	I_O	30	A
Non-repetitive peak forward surge current, 8.3ms half sine wave	I_{FSM}	300	A
Thermal resistance from junction to case @T_C=25°C	$R_{\theta JC}$	2	°C/W
Thermal resistance from junction to ambient	$R_{\theta JA}$	62.5	°C/W
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (at T_A=25°C, unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse voltage	I_R = 100μA	V_{BR}	100			V
Reverse current	V_R = 100V, T_J = 25°C	I_R		2	100	μA
	V_R = 100V, T_J = 125°C			2		mA
Forward voltage	I_F = 15A, T_J = 25°C	V_F		0.60		V
	I_F = 15A, T_J = 125°C			0.58		V
	I_F = 30A, T_J = 25°C	V_F		0.76	0.82	V
	I_F = 30A, T_J = 125°C			0.70		V

Notes: 1. Pulse width ≤ 300μs, duty cycle ≤ 2% .

2. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² FR-4 board with 2OZ. copper, in still air environment with Ta=25°C.

Typical Rating and Characteristics Curves (CDBH8-30100L-HF)

Fig.1 - Forward Current Derating Curve

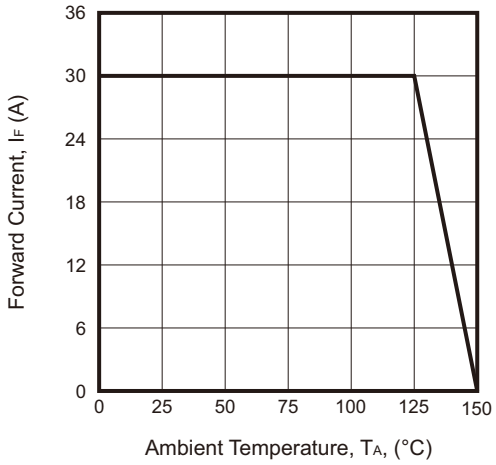


Fig.2 - Typical Forward Characteristic

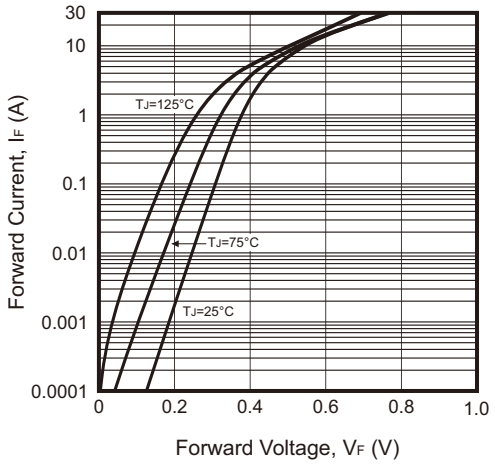


Fig.3 - Total Capacitance Derating Curve

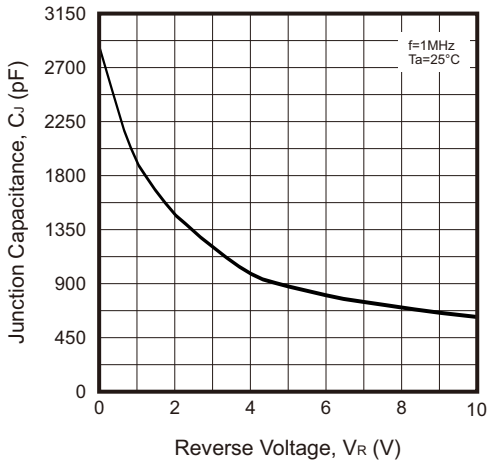
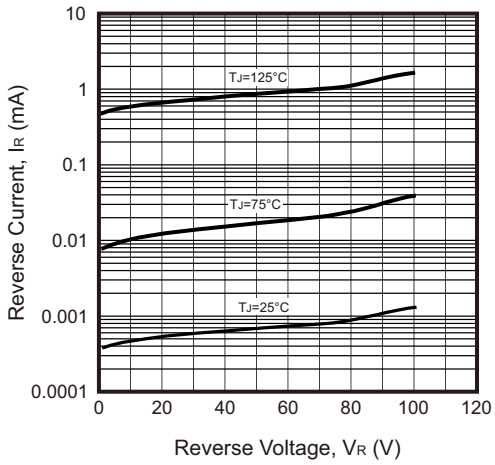
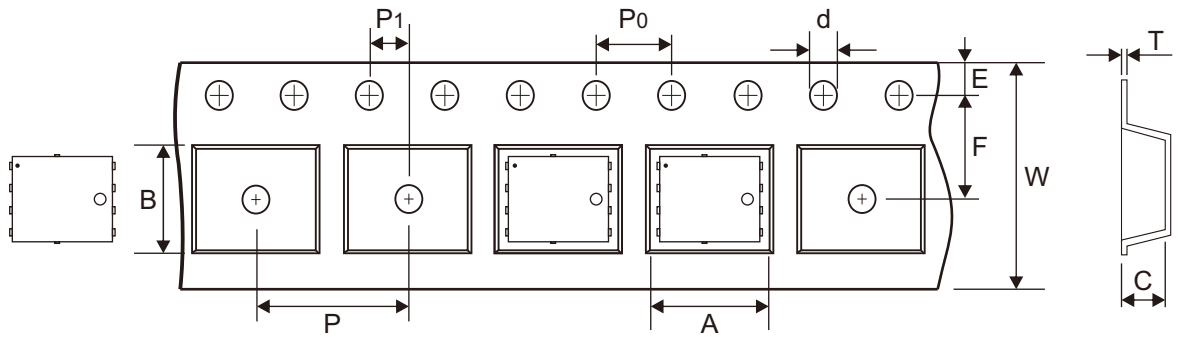
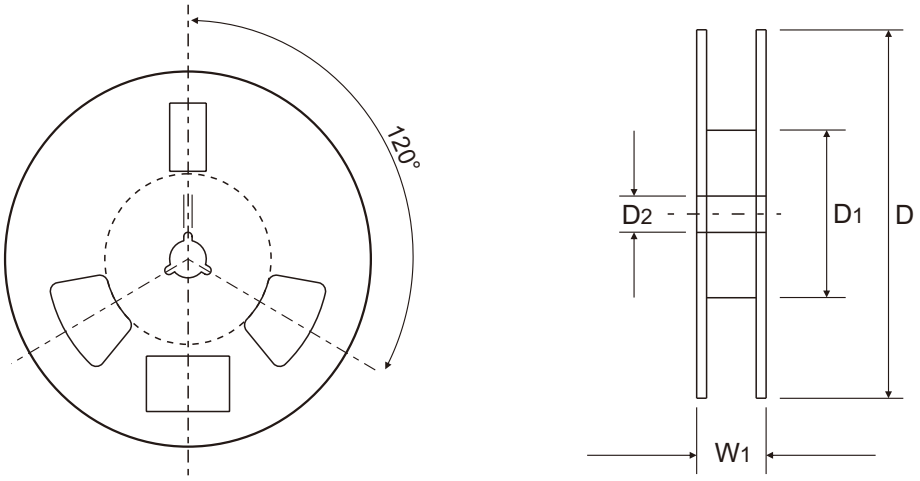


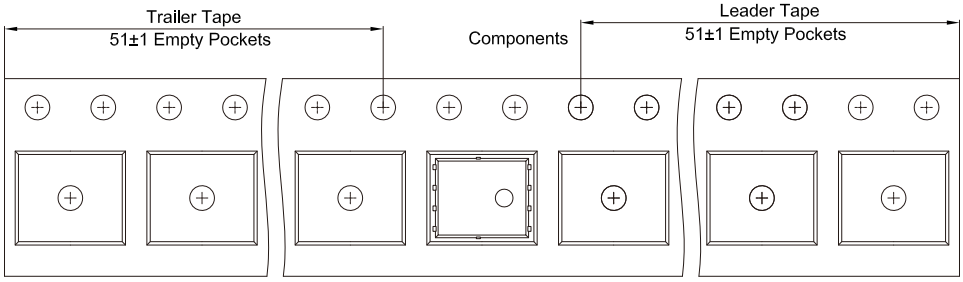
Fig.4 - Typical Reverse Characteristic



Reel Taping Specification





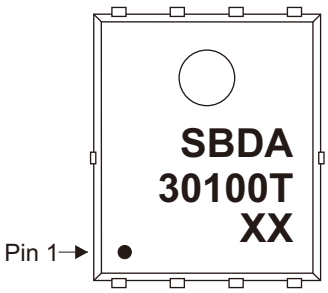


	SYMBOL	A	B	C	d	D	D1	D2
PDFN5x6 -8L	(mm)	6.30 ± 0.20	5.30 ± 0.20	1.20 ± 0.20	1.50 ± 0.15	330.00 ± 2.00	100.00 ± 1.00	13.00 ± 0.30
	(inch)	0.248 ± 0.008	0.209 ± 0.008	0.047 ± 0.008	0.059 ± 0.006	12.992 ± 0.079	3.937 ± 0.039	0.512 ± 0.012

	SYMBOL	E	F	P	P0	P1	W	W1
PDFN5x6 -8L	(mm)	1.75 ± 0.20	5.50 ± 0.10	8.00 ± 0.20	4.00 ± 0.20	2.00 ± 0.10	12.00 ± 0.50	12.40 ± 0.15
	(inch)	0.069 ± 0.008	0.217 ± 0.004	0.315 ± 0.008	0.157 ± 0.008	0.079 ± 0.004	0.472 ± 0.020	0.488 ± 0.006

Marking Code

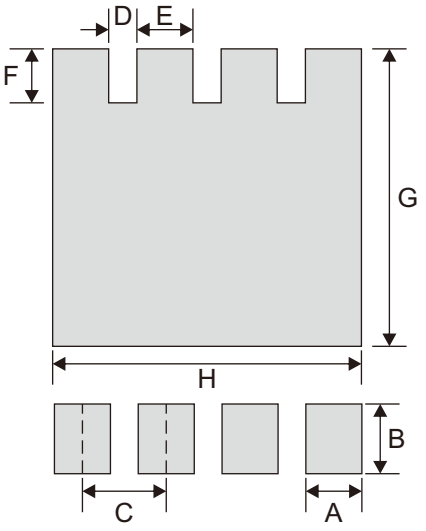
Part Number	Marking Code
CDBH8-30100L-HF	SBDA30100T



XX = Control code

Suggested P.C.B. PAD Layout

SIZE	PDFN5x6-8L	
	(mm)	(inch)
A	0.80	0.031
B	1.00	0.039
C	1.27	0.050
D	0.47	0.019
E	0.80	0.031
F	0.85	0.033
G	4.50	0.177
H	4.60	0.181



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
PDFN5x6-8L	5,000	13