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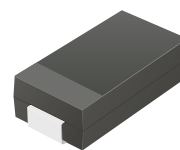
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# Super Low VF SMD Schottky Barrier Rectifiers



## CDBA120SL-G

**Reverse Voltage: 20 Volts**  
**Forward Current: 1.0 Amp**  
**RoHS Device**

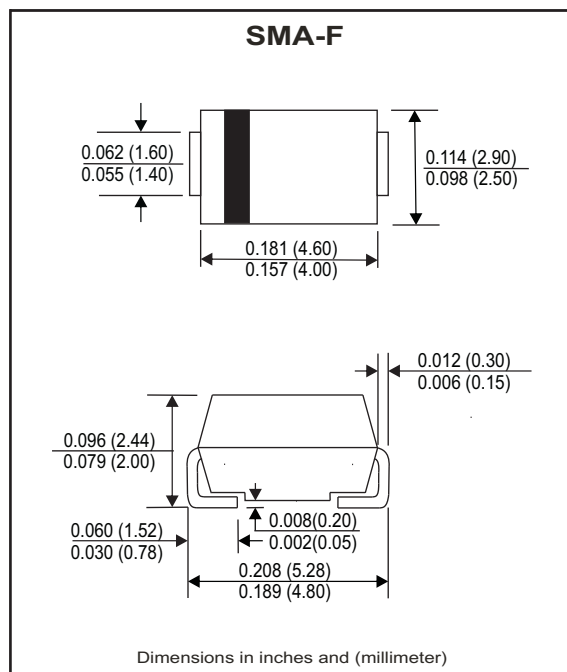


### Features

- Low Profile surface mount applications in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.

### Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic, DO-214AC / SMA-F
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.064 grams (Approx.)



### Circuit Diagram



### Maximum Ratings and Electrical Characteristics

Ratings at Ta=25°C unless otherwise noted.  
 Single phase, half wave, 60Hz, resistive or inductive loaded.  
 For capacitive load, derate current by 20% .

Parameter	Symbol	CDBA120SL-G	Units
Max. Repetitive peak reverse voltage	V <sub>RRM</sub>	20	V
Max. RMS voltage	V <sub>RMS</sub>	14	V
Max. Continuous reverse voltage	V <sub>R</sub>	20	V
Max. Forward voltage @I <sub>F</sub> =1.0A	V <sub>F</sub>	0.31	V
Operating Temperature	T <sub>J</sub>	-55 to +100	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	See Fig.1	I <sub>O</sub>			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I <sub>FSM</sub>			30	A
Reverse current	V <sub>R</sub> =V <sub>RRM</sub> TA=25°C	I <sub>R</sub>			1.0	mA
	V <sub>R</sub> =V <sub>RRM</sub> TA=100°C	I <sub>R</sub>			20	mA
Thermal resistance	Junction to ambient	R <sub>θJA</sub>		70		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse Voltage	C <sub>J</sub>		160		pF
Storage temperature		T <sub>STG</sub>	-55		+150	°C

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## RATING AND CHARACTERISTIC CURVES (CDBA120SL-G)

Fig.1 - Typical Forward Current Derating Curve

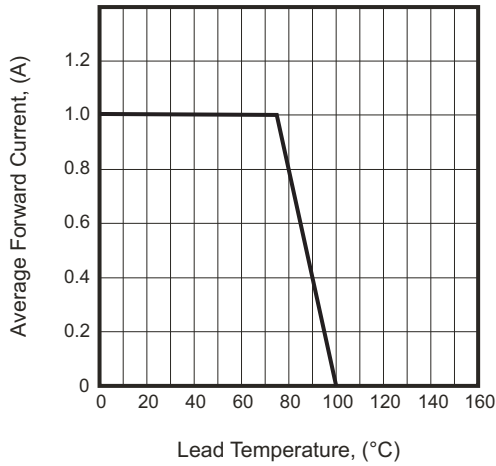


Fig.2 - Typical Forward Characteristics

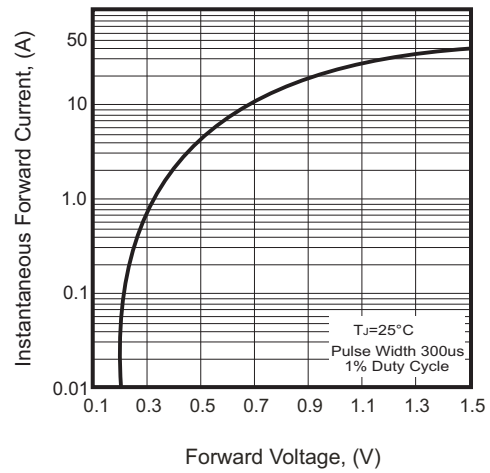


Fig.3 - Maximum Non-repetitive Forward Surge Current

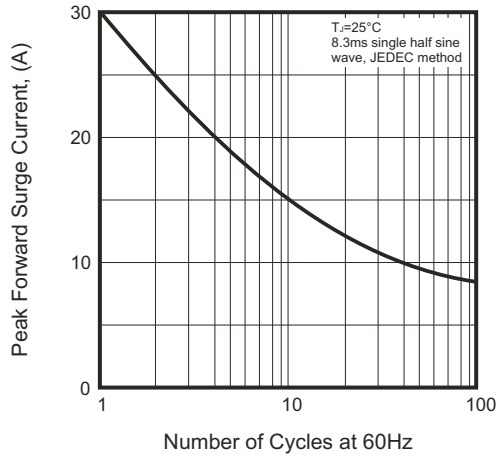


Fig.4 - Typical Junction Capacitance

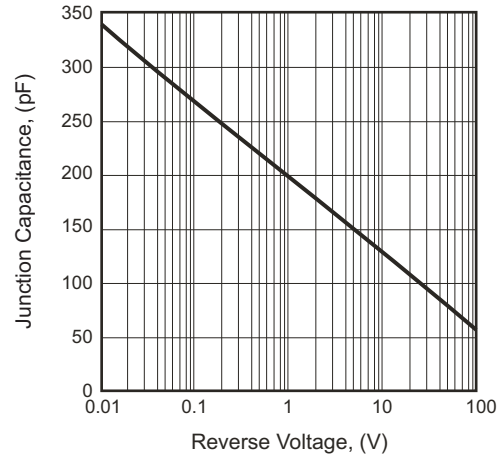
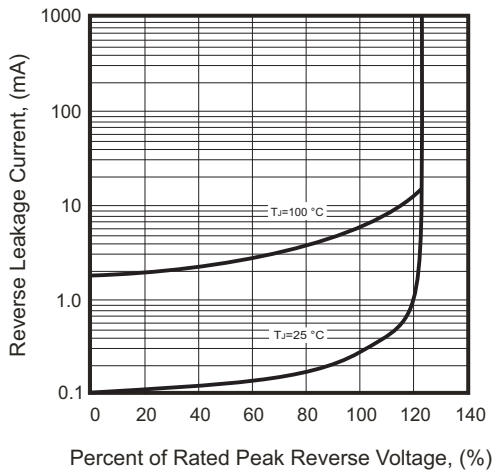


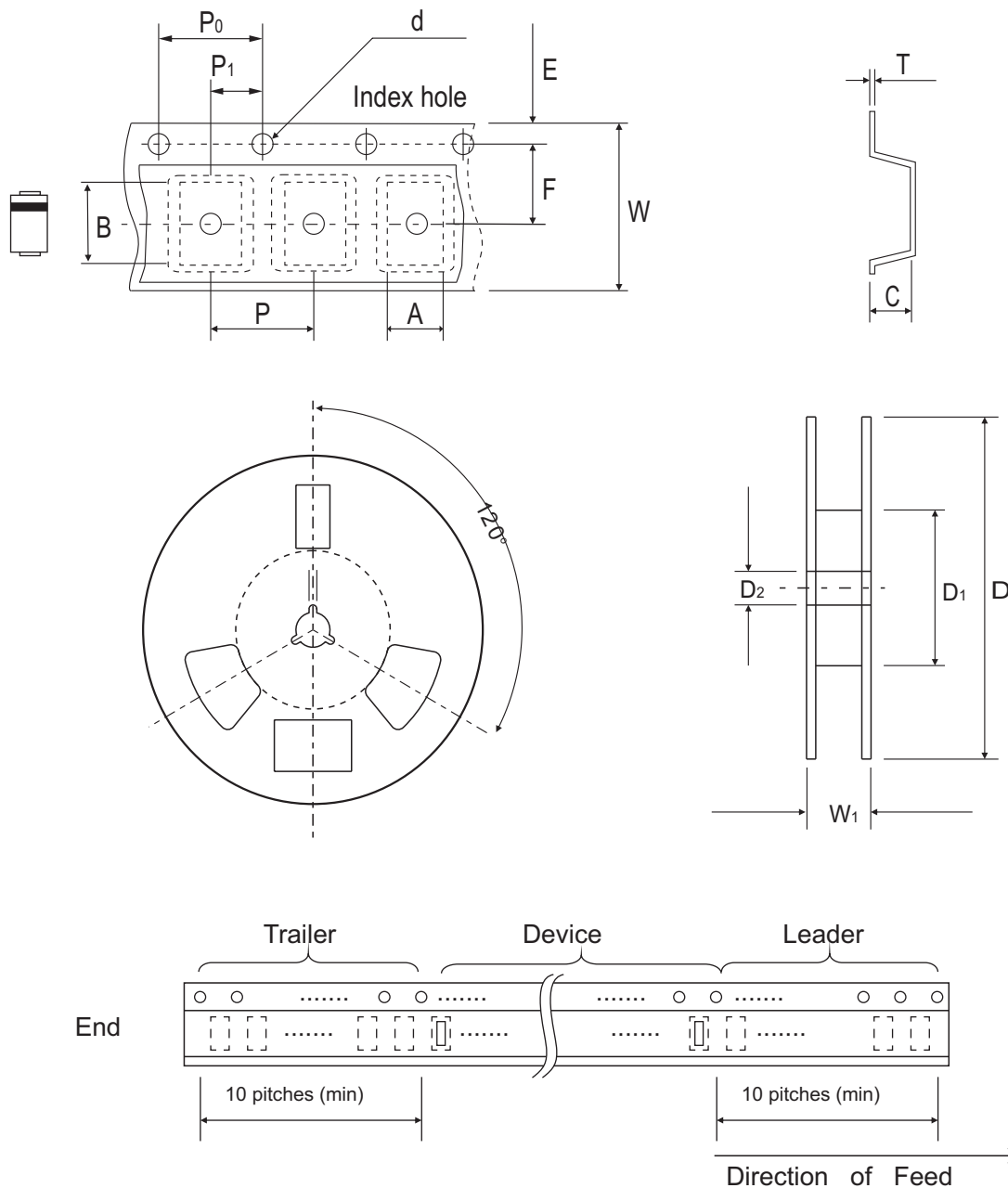
Fig.5 - Typical Reverse Characteristics



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## Reel Taping Specification



SMA-F	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	2.72 ± 0.10	5.25 ± 0.10	2.36 ± 0.10	1.50 ± 0.10	330 ± 2.00	50.0 MIN.	13.00 ± 0.50
	(inch)	0.107 ± 0.004	0.207 ± 0.004	0.093 ± 0.004	0.059 ± 0.004	12.992 ± 0.079	1.969 MIN.	0.519 ± 0.020

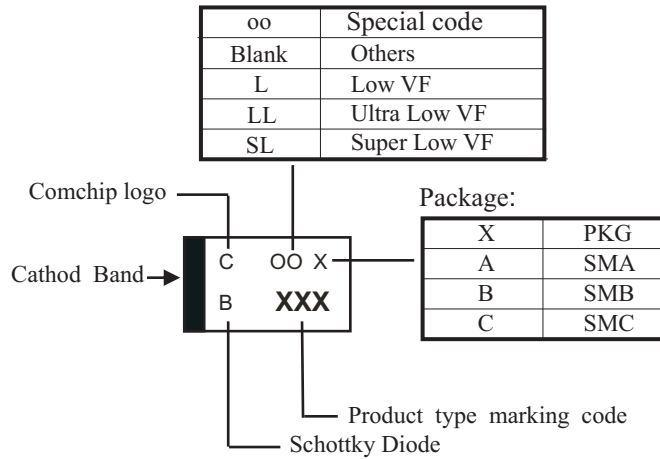
SMA-F	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	12.00 ± 0.30	18.00 ± 1.00
	(inch)	0.069 ± 0.004	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.472 ± 0.012	0.709 ± 0.039

# Super Low VF SMD Schottky Barrier Rectifiers



## Marking Code

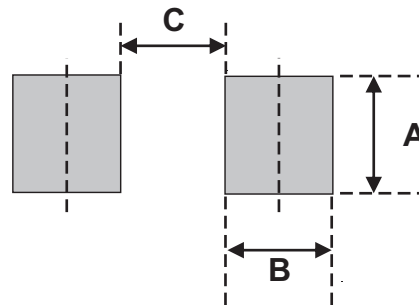
Part Number	Marking Code
CDBA120SL-G	120



**xxx = Product type marking code**

## Suggested PAD Layout

SIZE	DO-214AC(SMA-F)	
	(mm)	(inch)
A	1.70	0.067
B	2.60	0.102
C	1.50	0.060



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DO-214AC (SMA-F)	5,000	13