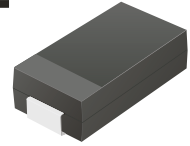


## CDBA120L-HF Thru. CDBA140L-HF

Reverse Voltage: 20 to 40 Volts

Forward Current: 1.0 Amp

RoHS Device  
Halogen Free

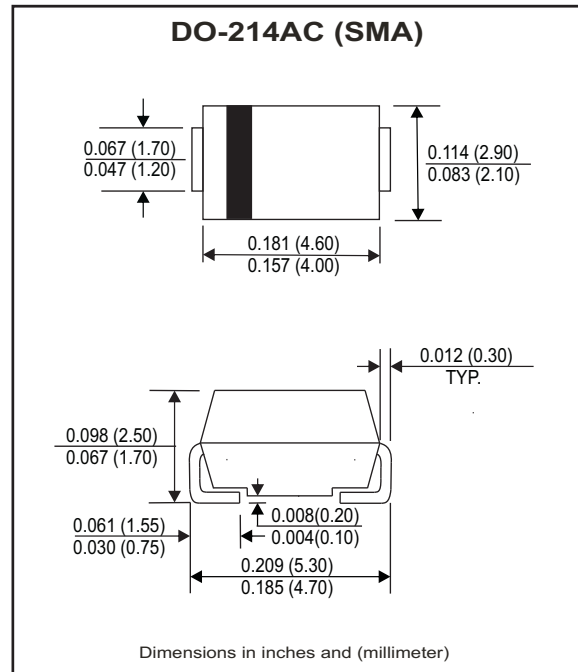


### Features

- 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.
- Guarding 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
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- weight: 0.055 grams



### 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	CDBA 120L-HF	CDBA 130L-HF	CDBA 140L-HF	Units
Max. Repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Max. DC blocking voltage	V <sub>DC</sub>	20	30	40	V
Max. RMS voltage	V <sub>RMS</sub>	14	21	28	V
Max. instantaneous forward voltage @ 1.0A, T <sub>A</sub> =25°C	V <sub>F</sub>	0.38		0.40	V
Operating Temperature	T <sub>J</sub>	-50 to +100			°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	see Fig.2	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> T <sub>A</sub> =25°C	I <sub>R</sub>			1.0	mA
	V <sub>R</sub> =V <sub>RRM</sub> T <sub>A</sub> =100°C	I <sub>R</sub>			20	mA
Thermal resistance	Junction to ambient	R <sub>θJA</sub>		80		°C/W
Diode junction apacitance	f=1MHz and applied 4V DC reverse Voltage	C <sub>J</sub>		130		pF
Storage temperature		T <sub>STG</sub>	-50		+150	°C

## RATING AND CHARACTERISTIC CURVES (CDBA120L-HF thru. CDBA140L-HF)

Fig.1 - Typical Forward Characteristics

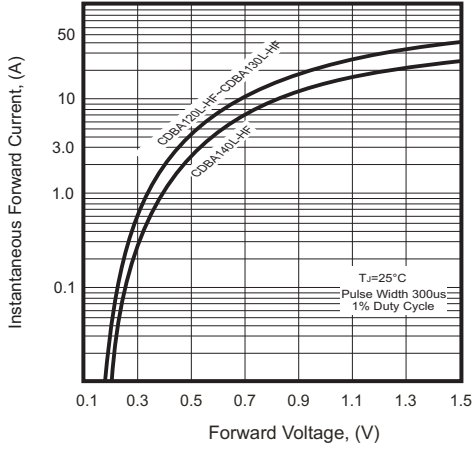


Fig.2 - Typical Forward Current Derating Curve

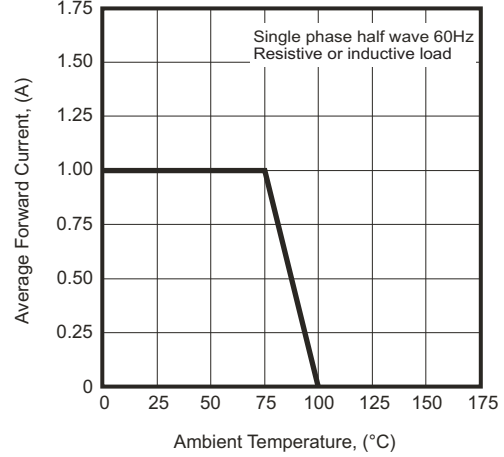


Fig.3 - Typical Reverse Characteristics

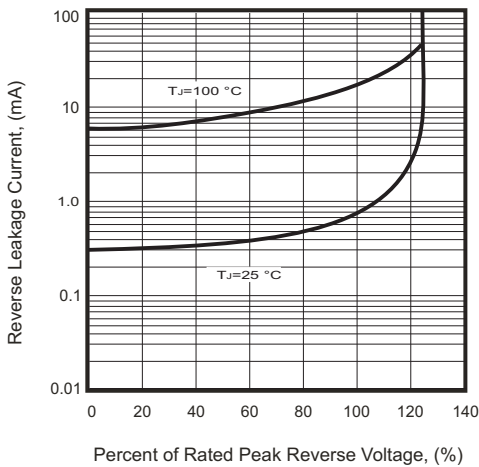


Fig.4 - Maximum Non-repetitive Forward Surge Current

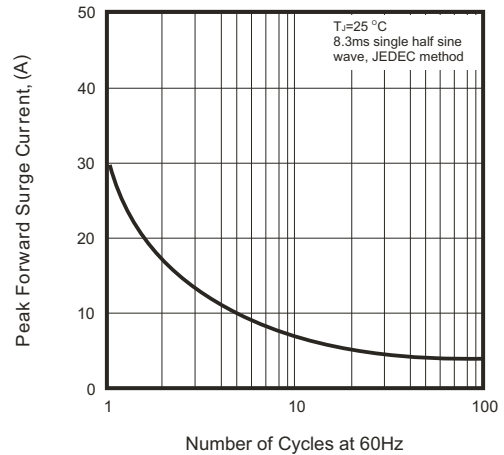
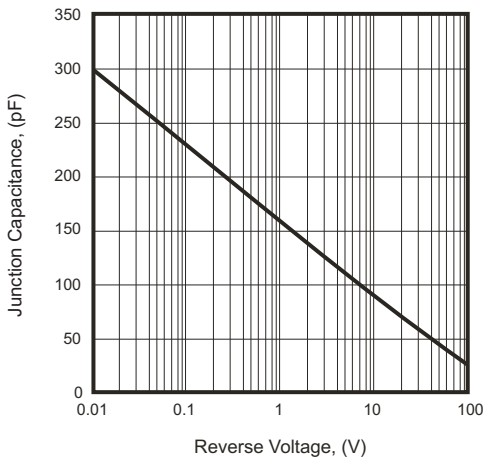
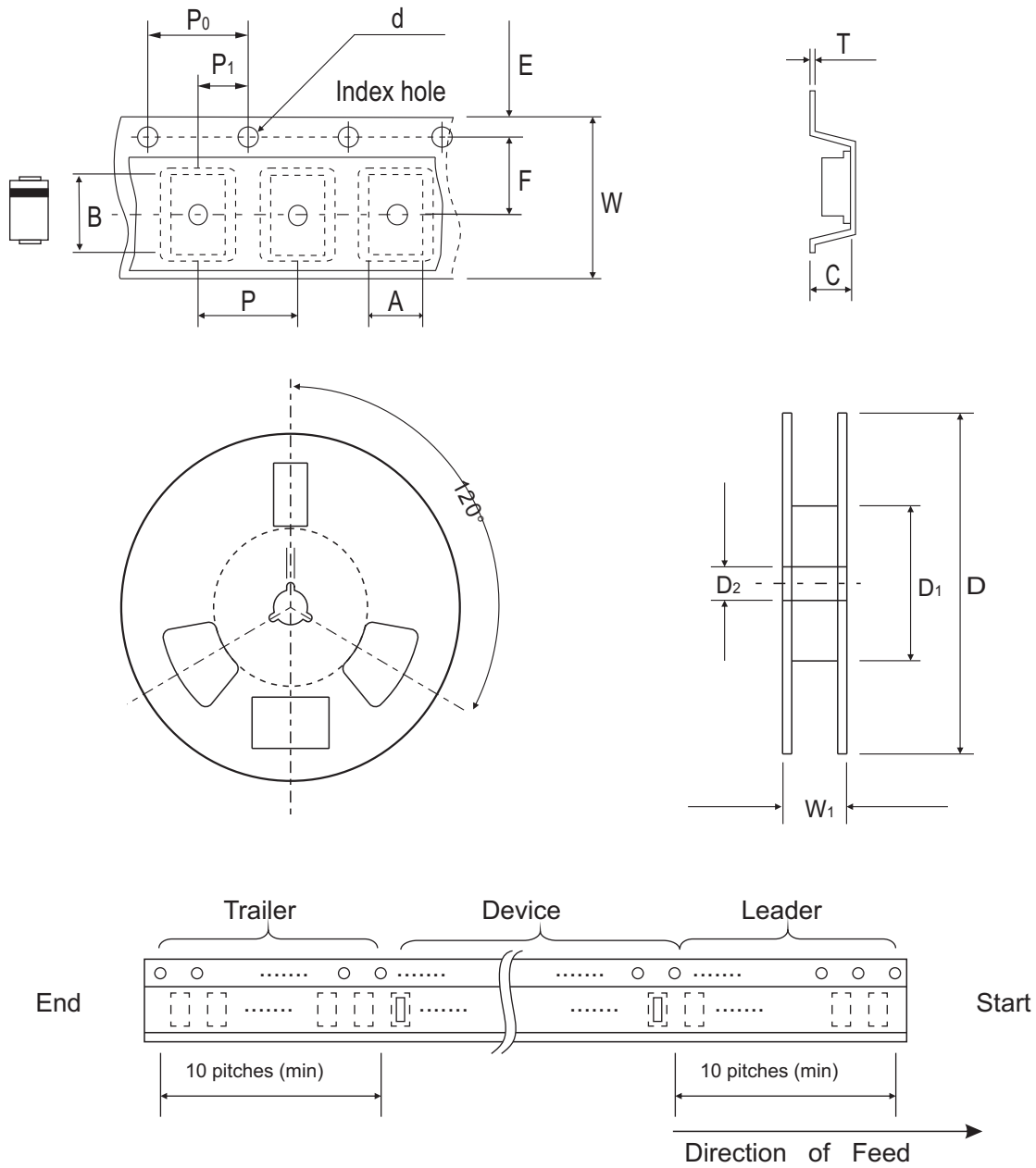


Fig.5 - Typical Junction Capacitance



## Reel Taping Specification

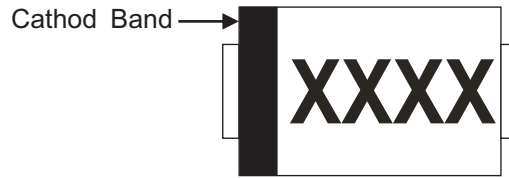


DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.70 MAX.	5.30 MAX.	2.66 MAX.	1.50 ± 0.10	330 ± 2.00	50.0 MIN.	13.50 ± 1.00
	(inch)	0.106 MAX.	0.209 MAX.	0.105 MAX.	0.059 ± 0.004	12.99 ± 0.079	1.969 MIN.	0.531 ± 0.039

DO-214AC (SMA)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.60 MAX.	12.0 ± 0.30	18.4 MAX.
	(inch)	0.069 ± 0.004	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.024 MAX.	0.472 ± 0.012	0.724 MAX.

## Marking Code

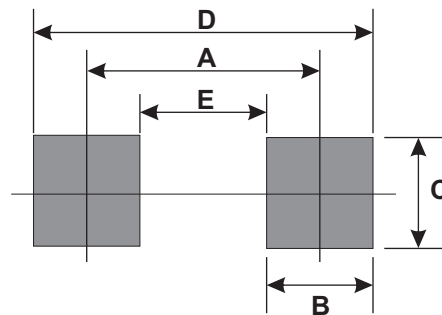
Part Number	Marking Code
CDBA120L-HF	SL12
CDBA130L-HF	SL13
CDBA140L-HF	SL14



XXXX = Product type marking code

## Suggested PAD Layout

SIZE	DO-214AC (SMA)	
	(mm)	(inch)
A	4.00	0.157
B	2.50	0.098
C	1.70	0.067
D	6.50	0.256
E	1.50	0.059



## Standard Packaging

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