

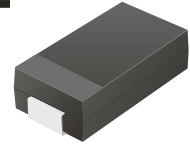
CDBA120L-HF Thru. CDBA140L-HF

Reverse Voltage: 20 to 40 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

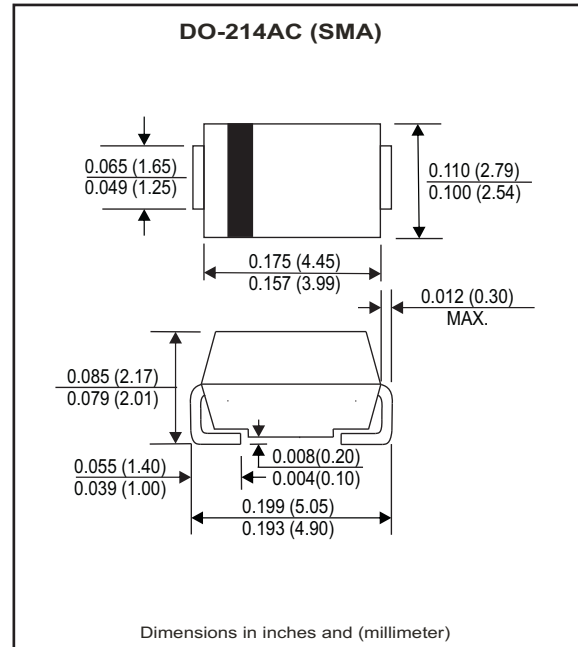


Features

- 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 $T_a=25^\circ\text{C}$ 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_{RRM}	20	30	40	V
Max. DC blocking voltage	V_{DC}	20	30	40	V
Max. RMS voltage	V_{RMS}	14	21	28	V
Max. instantaneous forward voltage @ 1.0A, $T_A=25^\circ\text{C}$	V_F	0.38		0.40	V
Operating Temperature	T_J	-50 to +100			$^\circ\text{C}$

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	see Fig.2	I_o			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_A=25^\circ\text{C}$	I_R			1.0	mA
	$V_R = V_{RRM}$ $T_A=100^\circ\text{C}$	I_R			20	mA
Thermal resistance	Junction to ambient	$R_{\theta JA}$		80		$^\circ\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse Voltage	C_J		130		pF
Storage temperature		T_{STG}	-50		+150	$^\circ\text{C}$

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

Fig.1 Typical Forward Characteristics

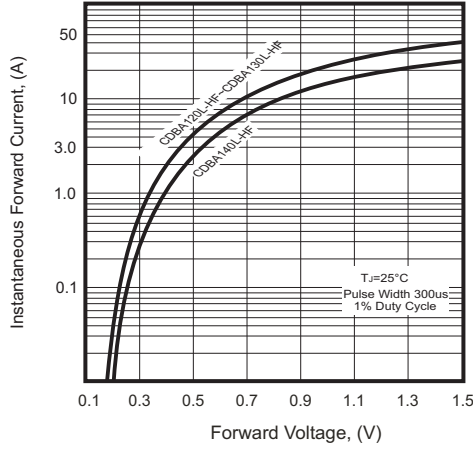


Fig.2 Typical Forward Current Derating Curve

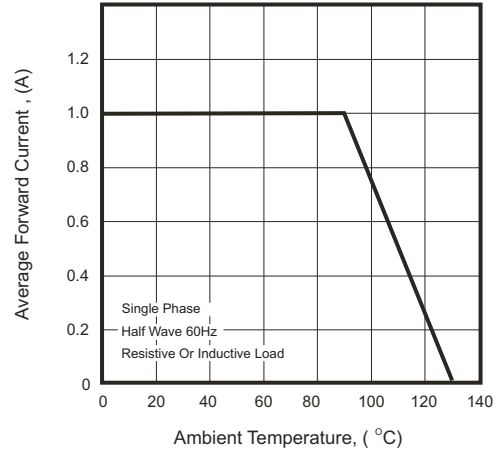


Fig.3- Typical Reverse Characteristics

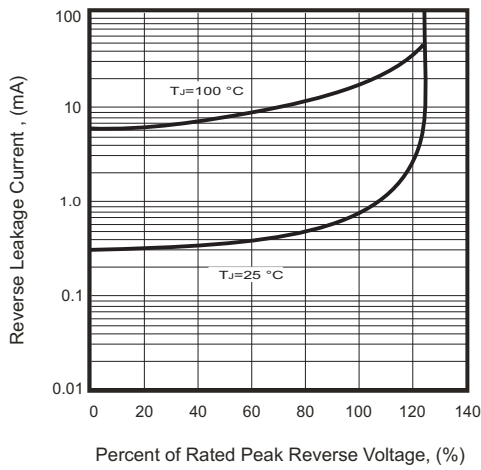


Fig.4 Maximum Non-repetitive Forward Surge Current

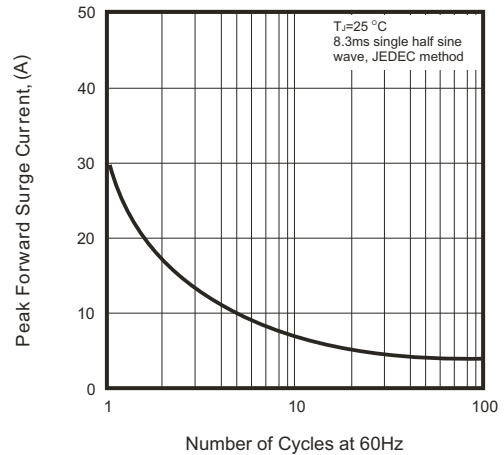
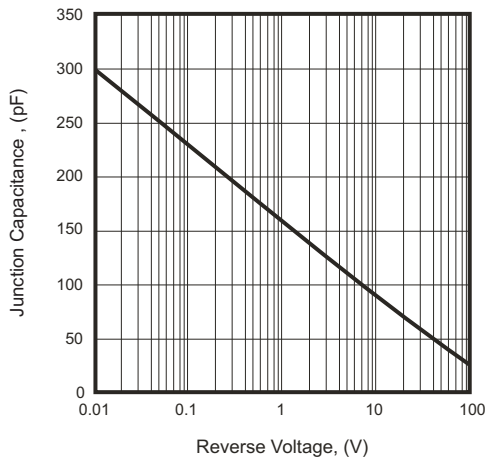
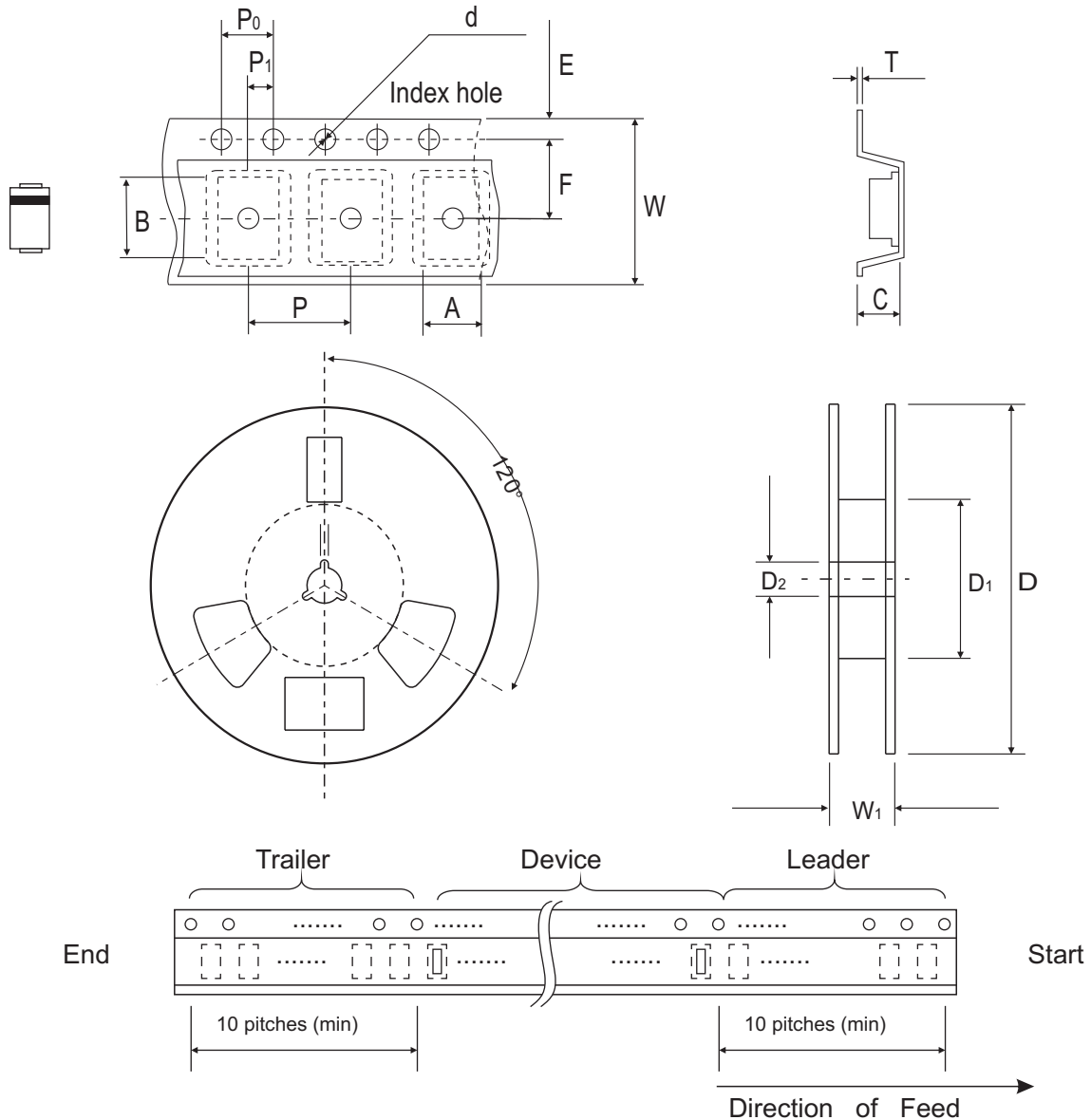


Fig.5- Typical Junction Capacitance



Reel Taping Specification

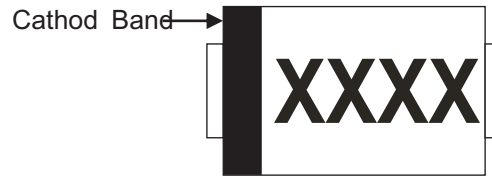


DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	2.70 MAX.	5.30 MAX.	2.66 MAX.	1.50 ± 0.10	330 ± 2.00	50.0 MIN.	13.50 ± 1.00
	(inch)	0.106 MAX.	0.209 MAX.	0.105 MAX.	0.059 ± 0.004	12.99 ± 0.079	1.969 MIN.	0.531 ± 0.039

DO-214AC (SMA)	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(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

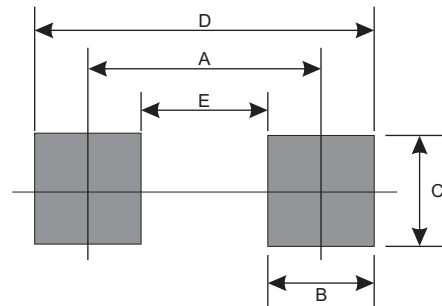
Part Number	Marking Code
CDBA120L-HF	SL12
CDBA130L-HF	SL13
CDBA140L-HF	SL14



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 Package

Case Type	REEL PACK			
	REEL (pcs)	Reel / Carton	CARTON (pcs)	Reel Size (inch)
DO-214AC (SMA)	5,000	10	50,000	13