

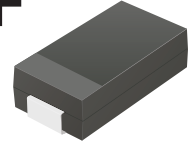
ACURB301-HF Thru. ACURB307-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3 Amp

RoHS Device

Halogen Free

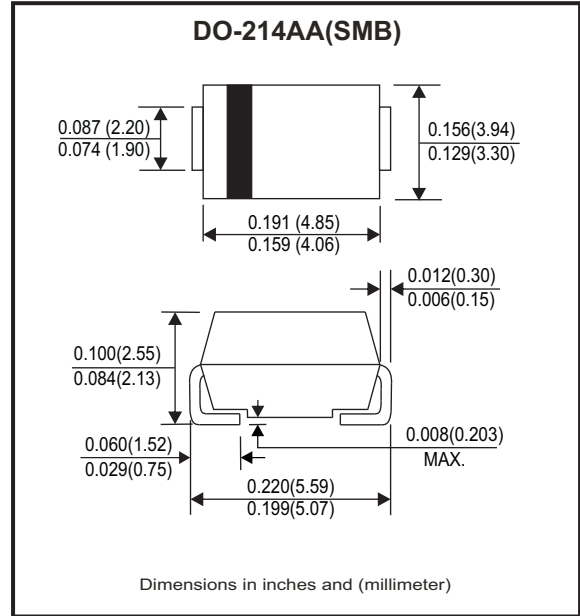


Features

- Low profile package
- Ideal for automated placement
- Low reverse current
- Fast reverse recovery time
- Comply with AEC-Q101

Mechanical data

- Epoxy: UL flammability classification rating 94V-0
- Case: Molded plastic, DO-214AA/SMB
- Terminals: Lead free plating(Tin Finish), Solderable Per MIL-STD-202, method 208.
- Polarity: Cathode band.
- Weight: 0.095 grams(approx.)



Circuit Diagram



Maximum Ratings and Electrical Characteristics

Parameter	Symbol	ACURB 301-HF	ACURB 302-HF	ACURB 303-HF	ACURB 304-HF	ACURB 305-HF	ACURB 306-HF	ACURB 307-HF	Unit
Max. repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Max. DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Max. RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Max. average forward current	I_F	3							A
Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load	I_{FSM}	80							A
Max. instantaneous forward voltage at 3A@25°C	V_F	1.0		1.3		1.7			V
Reverse recovery time (Note 2)	T_{rr}	50				75			nS
Max. DC reverse current at $T_c=25^\circ\text{C}$ rated DC blocking voltage $T_c=100^\circ\text{C}$	I_R	5 100							uA
Typical junction capacitance (Note 1)	C_J	20							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	70							°C/W
Junction temperature range	T_J	-55 to +175							°C
Storage temperature range	T_{STG}	-55 to +175							°C

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
 2. Measured with $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$
 3. Device mounted on FR-4 substrate, 1"x1" , 2oz, single-sided, PC boards with 0.1"x0.15" copper pad.

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

RATING AND CHARACTERISTIC CURVES (ACURB301-HF Thru. ACURB307-HF)

Fig.1 - Typical Forward Current Derating Curve

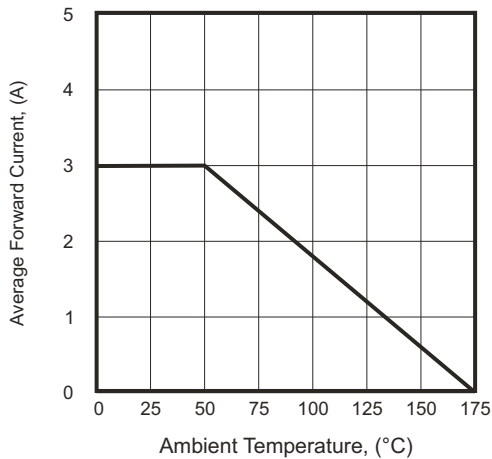


Fig.2 - Typical Forward Characteristics

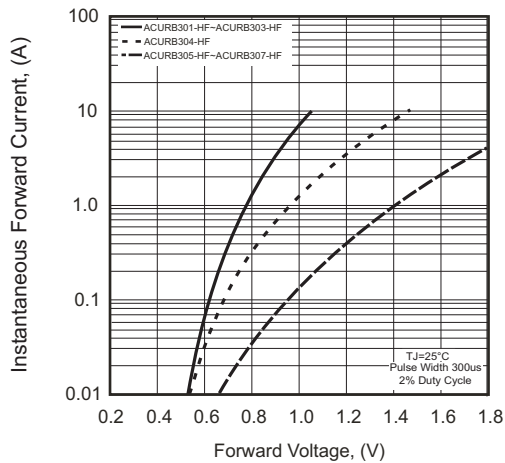


Fig.3 - Maximum Non-repetitive Forward Surge Current

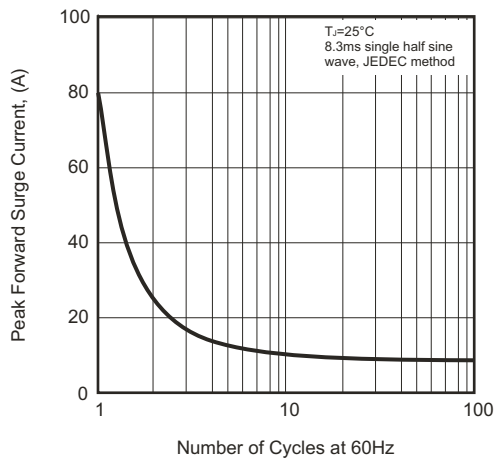


Fig.4 - Typical Reverse Characteristics

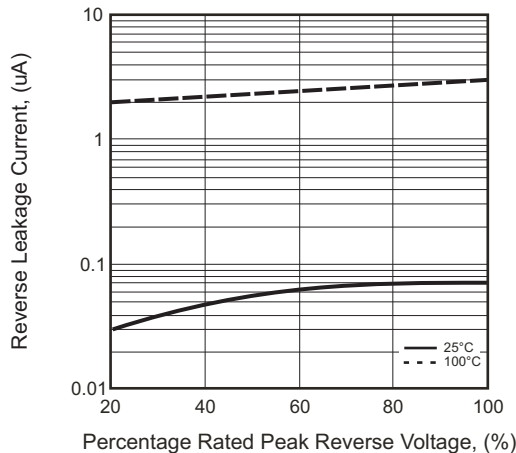


Fig.5 - Typical Junction Capacitance

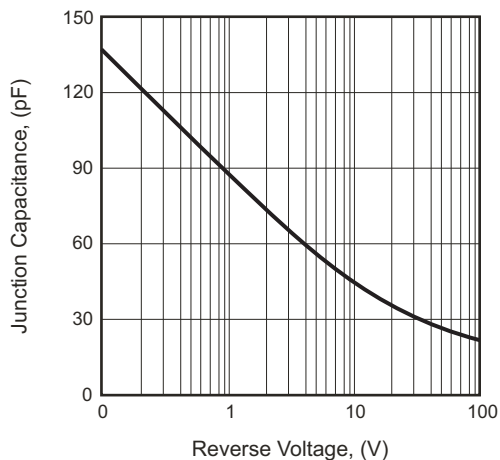
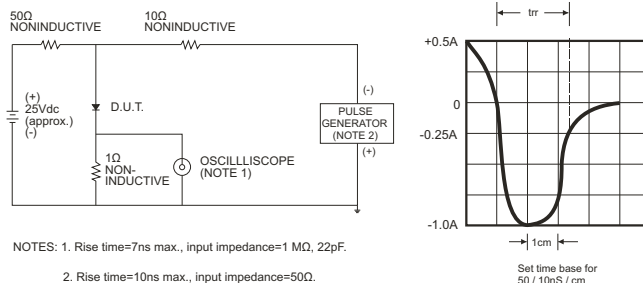
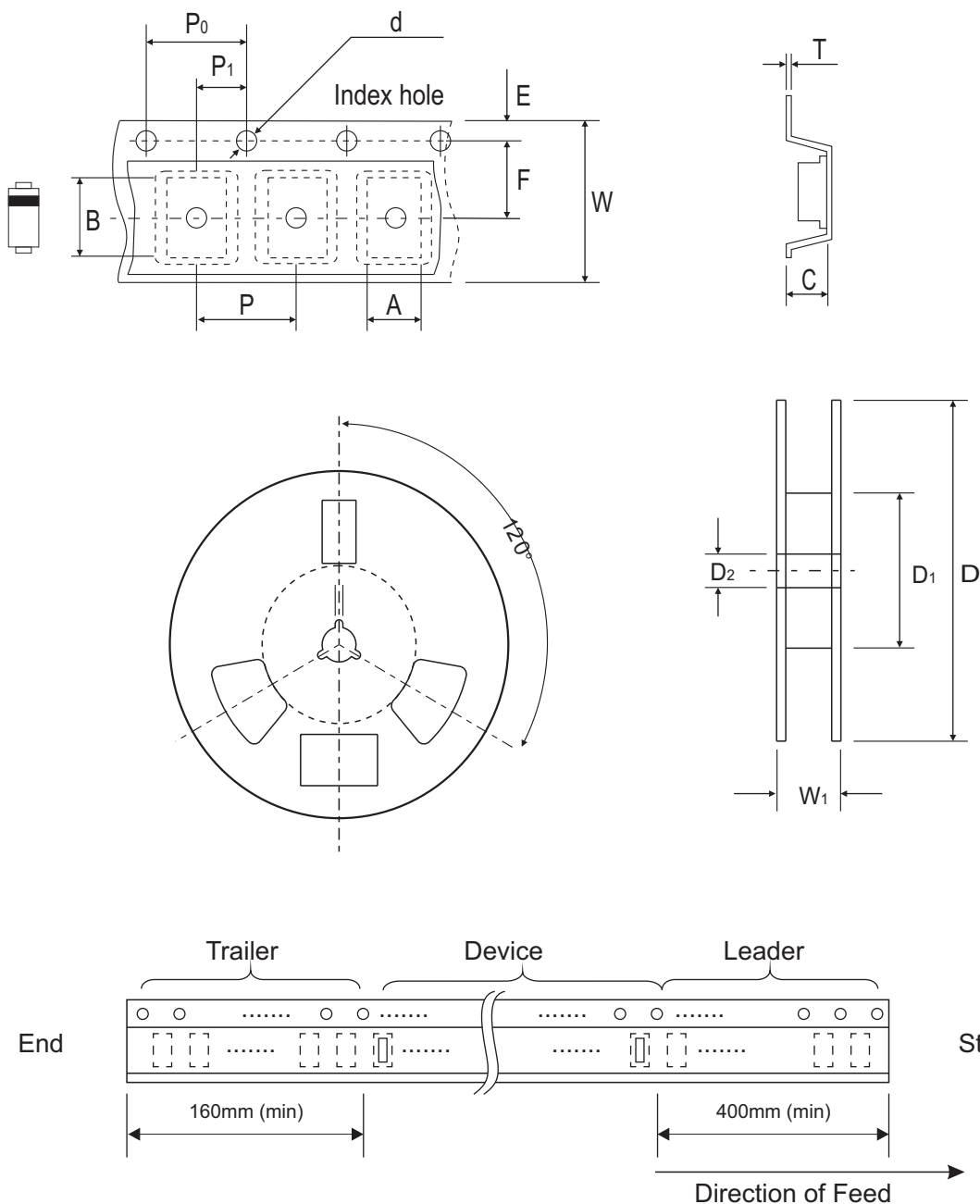


Fig.6 - Reverse Recovery Time Characteristics and Test Circuit



Reel Taping Specification

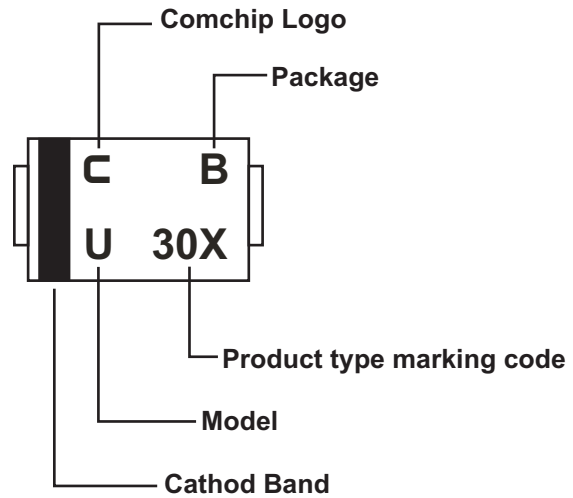


DO-214AA (SMB)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	4.00 MAX.	5.90 MAX.	3.00 MAX.	1.50 ± 0.10	330.00 ± 2.00	50 MIN.	13.50 ± 1.00
	(inch)	0.157 MAX.	0.232 MAX.	0.118 MAX.	0.059 ± 0.004	13.00 ± 0.079	1.969 MIN.	0.531 ± 0.039

DO-214AA (SMB)	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.00 ± 0.30	18.40 MAX.
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.012	0.724 MAX.

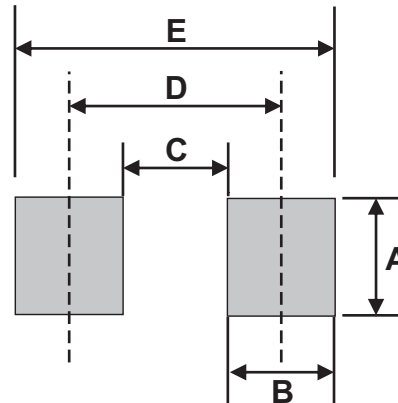
Marking Code

Part Number	Marking Code
ACURB301-HF	301
ACURB302-HF	302
ACURB303-HF	303
ACURB304-HF	304
ACURB305-HF	305
ACURB306-HF	306
ACURB307-HF	307



Suggested PAD Layout

SIZE	DO-214AA (SMB)	
	(mm)	(inch)
A	2.30	0.091
B	2.50	0.098
C	1.80	0.071
D	4.30	0.169
E	6.80	0.268



Note:

1. The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AA (SMB)	3,000	13