

# CURA105-HF Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	CURA105-HF-DG
Manufacturer	<a href="#">Comchip Technology</a>
Manufacturer Product Number	CURA105-HF
Description	DIODE ULTRA FAST RECT 600V 1A DO
Detailed Description	Diode 600 V 1A Surface Mount DO-214AC (SMA)

This model CURA105-HF is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

 [Datasheet Search](#)



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

CURA105-HF

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

5  $\mu$ A @ 600 V

Mounting Type:

Surface Mount

Supplier Device Package:

DO-214AC (SMA)

Base Product Number:

CURA105

Manufacturer:

Comchip Technology

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

600 V

Voltage - Forward (Vf) (Max) @ If:

1.7 V @ 1 A

Reverse Recovery Time (trr):

100 ns

Capacitance @ Vr, F:

15pF @ 4V, 1MHz

Package / Case:

DO-214AC, SMA

Operating Temperature - Junction:

-55°C ~ 150°C

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8541.10.0080

## SMD Ultra Fast Recovery Rectifiers



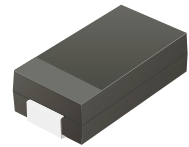
## CURA101-HF Thru. CURA107-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

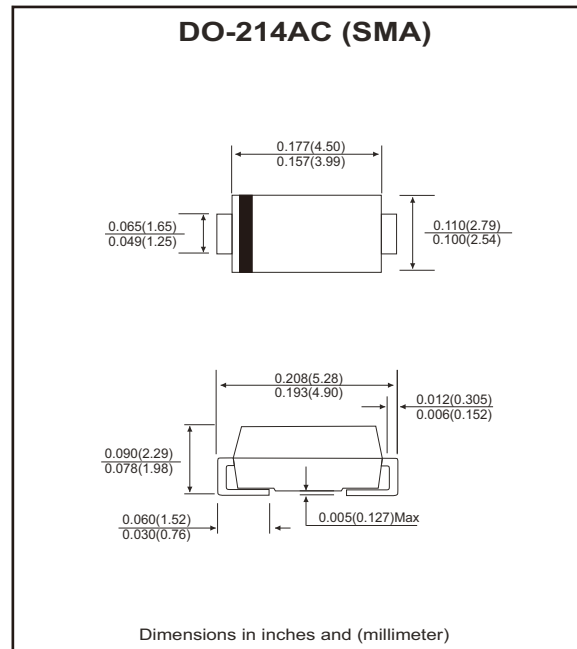


## Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Ultra fast recovery time: 50~100nS.
- Low leakage current.

## Mechanical data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.064 grams.



## Maximum Ratings and Electrical Characteristics

Parameter	Symbol	CURA 101-HF	CURA 102-HF	CURA 103-HF	CURA 104-HF	CURA 105-HF	CURA 106-HF	CURA 107-HF	Units
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
Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	30							A
Max. average forward rectified current At $T_A = 55^\circ\text{C}$	$I_{(AC)}$	1.0							A
Max. instantaneous forward voltage per at 1.0A	$V_F$	1.0		1.3		1.7		V	
Reverse recovery time	$T_{rr}$	50				100			nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reves voltage of 4.0V)	$C_J$	20				15			pF
Max. DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	5.0				100			$\mu\text{A}$
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	88							$^\circ\text{C/W}$
	$R_{\theta JL}$	28							$^\circ\text{C/W}$
Operating junction temperature	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Notes: 1. Thermal resistance from junction to lead.

REV:A

# SMD Ultra Fast Recovery Rectifiers



## RATING AND CHARACTERISTIC CURVES (CURA101-HF thru. CURA107-HF)

Fig.1- Typical Forward Current Derating Curve

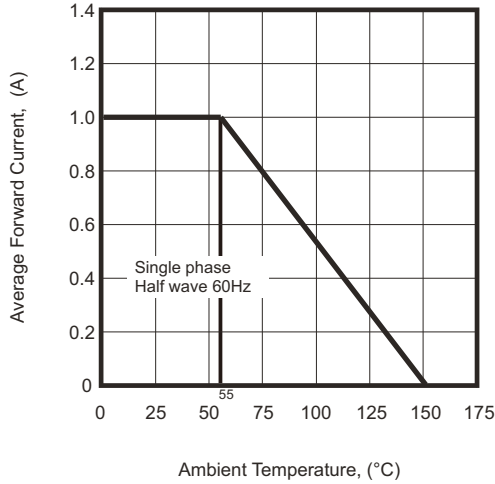


Fig.2 - Maximum NON-Repetitive Peak Forward Surge Current

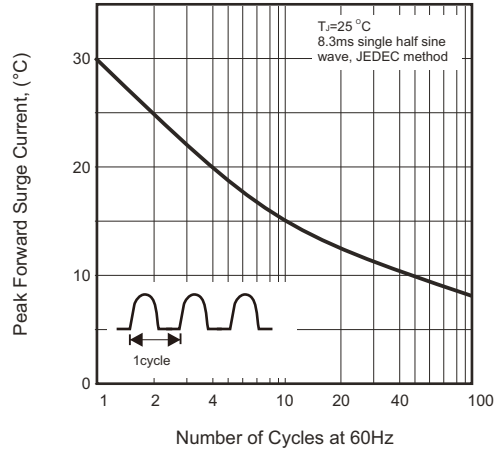


Fig.3 - Typical Instantaneous Forward Characteristics

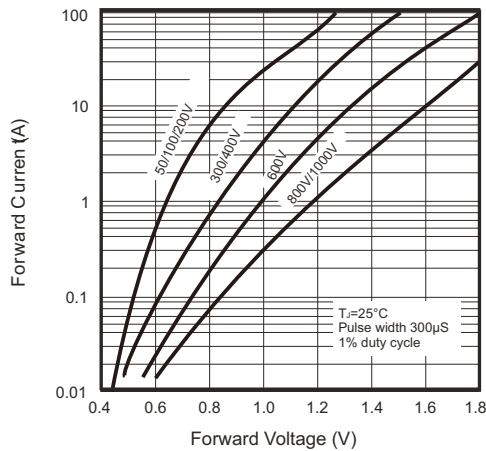


Fig.4 - Typical Reverse Characteristics

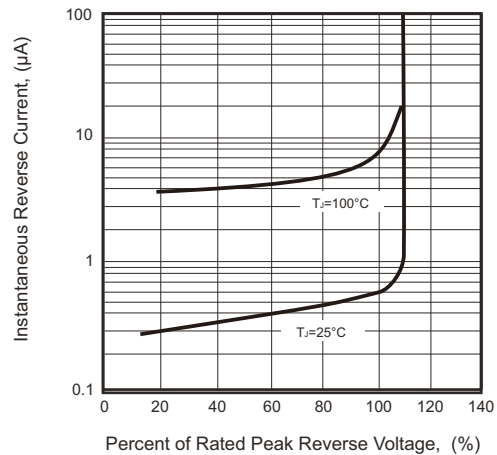


Fig.5 - Junction Capacitance

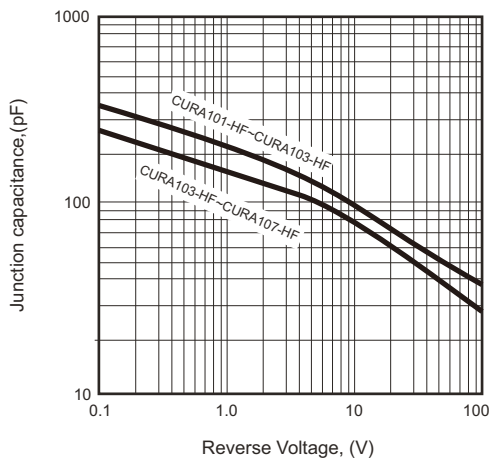
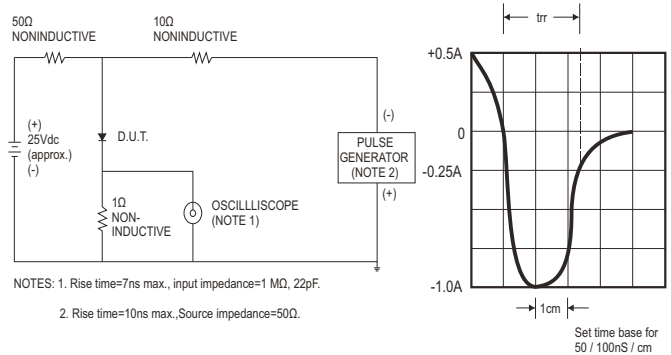


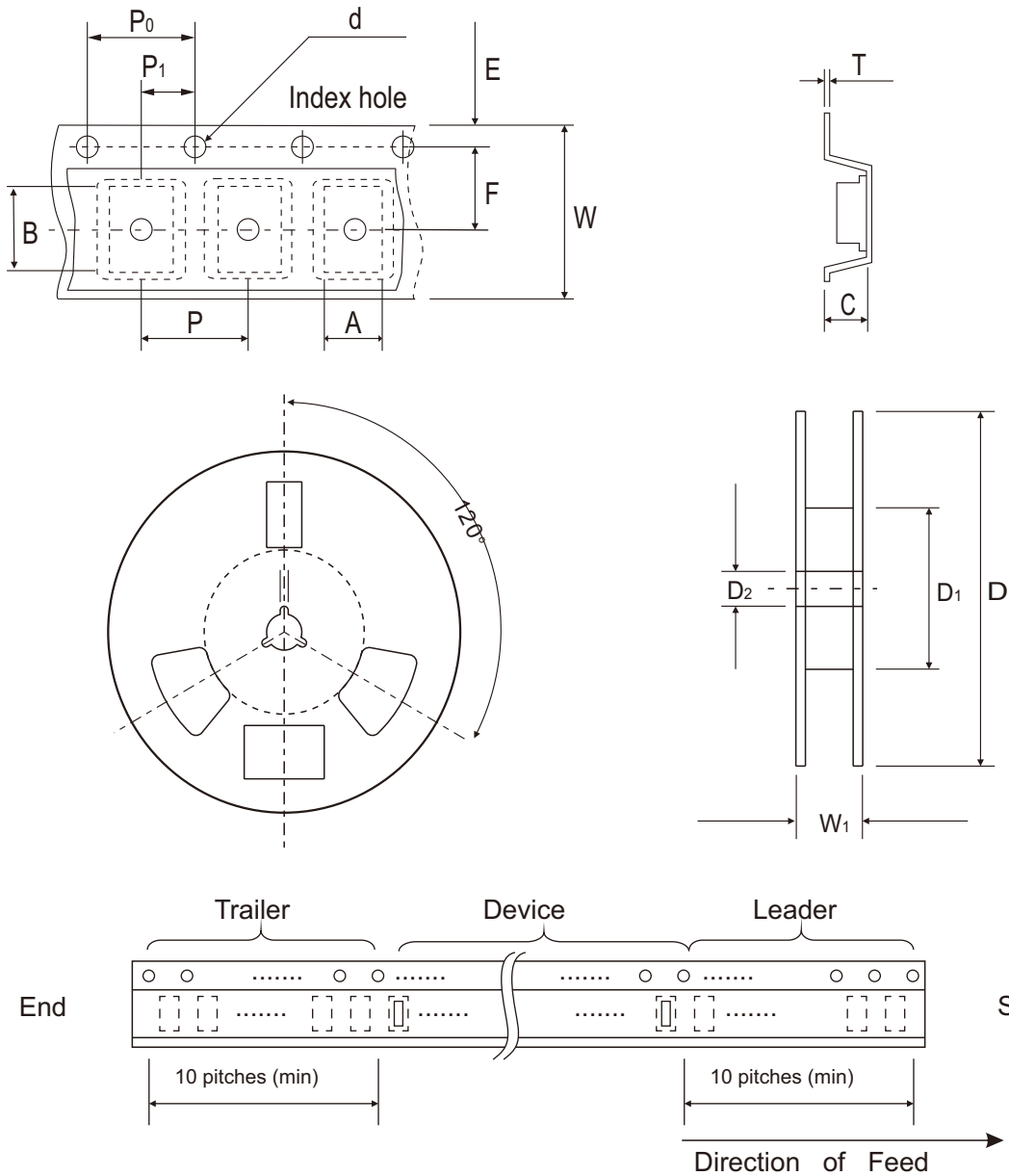
Fig.6 - Test Circuit Diagram and Reverse Recovery Time Characteristic



# SMD Ultra Fast Recovery Rectifiers



## Reel Taping Specification



DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.7 Max	5.3 Max	2.66 Max	1.50 ± 0.10 DIA	330 ± 2.00	50.0 Min.	13.5 ± 1.00
	(inch)	0.106 Max	0.209 Max	0.105 Max	0.059 ± 0.004 DIA	13.00 ± 0.079	1.969 Min.	0.531 ± 0.039

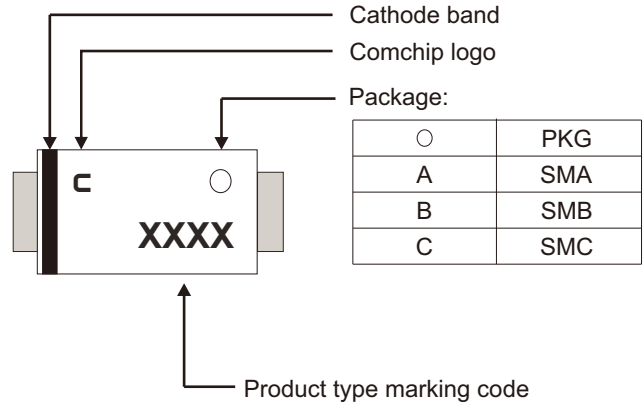
DO-214AC (SMA)	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.0 ± 0.30	18.4 Max.
	(inch)	0.689 ± 0.004	0.216 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.012	0.724 Max

# SMD Ultra Fast Recovery Rectifiers



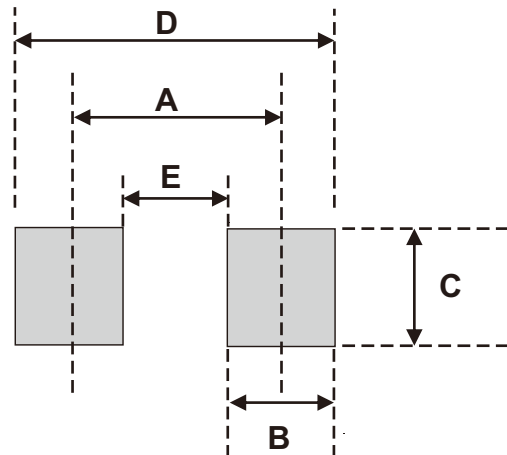
## Marking Code

Part Number	Marking Code
CURA101-HF	U101
CURA102-HF	U102
CURA103-HF	U103
CURA104-HF	U104
CURA105-HF	U105
CURA106-HF	U106
CURA107-HF	U107



## Suggested PAD Layout

SIZE	DO-214AC (SMA)	
	(mm)	(inch)
A	4.50	0.177
B	1.50	0.059
C	3.60	0.142
D	6.00	0.236
E	3.00	0.118



## Standard Packaging

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
DO-214AC (SMA)	5000	13

## OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.