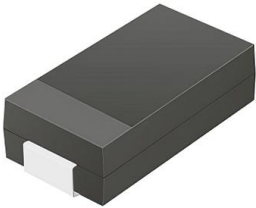


US3JB-HF Datasheet

www.digi-electronics.com




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

DiGi Electronics Part Number	US3JB-HF-DG
Manufacturer	Comchip Technology
Manufacturer Product Number	US3JB-HF
Description	DIODE GP 600V 3A SMB/DO-214AA
Detailed Description	Diode 600 V 3A Surface Mount SMB/DO-214AA

This model US3JB-HF is available at DiGi Electronics.

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RFQ Email: Info@DiGi-Electronics.com

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Purchase and inquiry

Manufacturer Product Number:

US3JB-HF

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

3A

Speed:

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

Current - Reverse Leakage @ Vr:

5 μ A @ 600 V

Mounting Type:

Surface Mount

Supplier Device Package:

SMB/DO-214AA

Base Product Number:

US3J

Manufacturer:

Comchip Technology

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

600 V

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

1.68 V @ 3 A

Reverse Recovery Time (trr):

75 ns

Capacitance @ Vr, F:

-

Package / Case:

DO-214AA, SMB

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



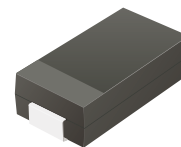
US3AB-HF Thru. US3MB-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3 Amp

RoHS Device

Halogen Free



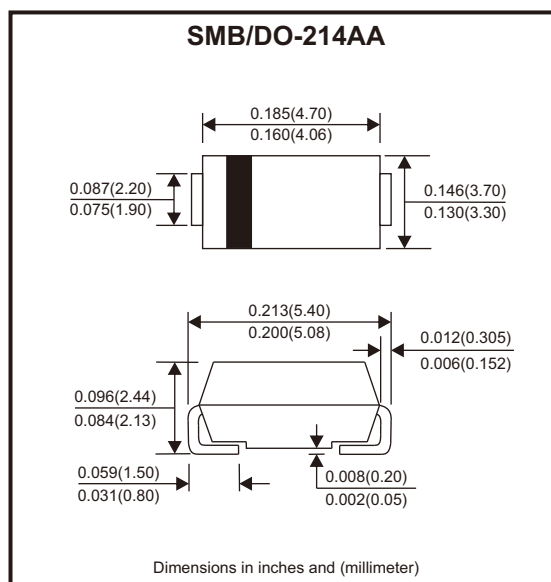
Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Easy to pick and place.
- High efficiency.

Mechanical data

- Case: SMB
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20%

Parameter	Symbols	US3AB -HF	US3BB -HF	US3DB -HF	US3GB -HF	US3JB -HF	US3KB -HF	US3MB -HF	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	3							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	90							A
Max. instantaneous forward voltage at 3A	V_F	1.0			1.3	1.68			V
Maximum DC reverse current at rated DC blocking voltage	I_R	5 100							μA
Maximum reverse recovery time (Note 1)	t_{rr}	50				75			ns
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	45 15							$^{\circ}C/W$
Operating and storage temperature range	T_j, T_{stg}	-55 ~ +150							$^{\circ}C$

Notes: 1. Measured with $I_F = 0.5A$, $I_R = 1A$, $I_{rr} = 0.25A$.

2. P.C.B. mounted with 2.0" x 2.0" (5 x 5 cm) copper pad areas.

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

REV:A

SMD Ultra Fast Recovery Rectifiers



Rating and Characteristic Curves (US3AB-HF Thru. US3MB-HF)

Fig.1 - Max. Average Forward Current Rating

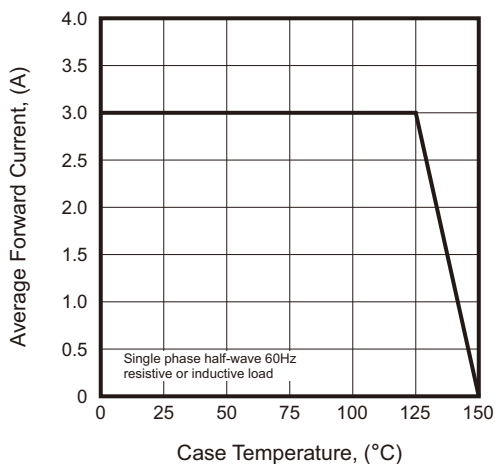


Fig.2 - Typical Reverse Characteristics

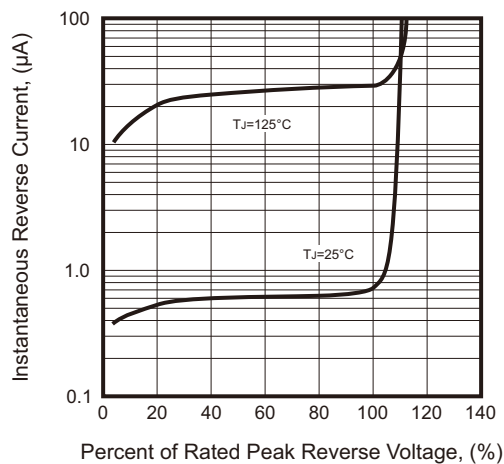


Fig.3 - Typical Forward Characteristic

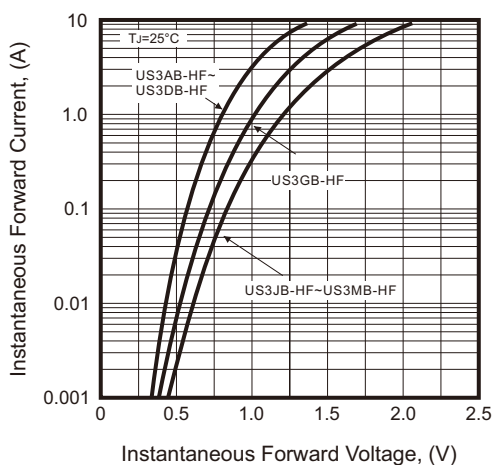
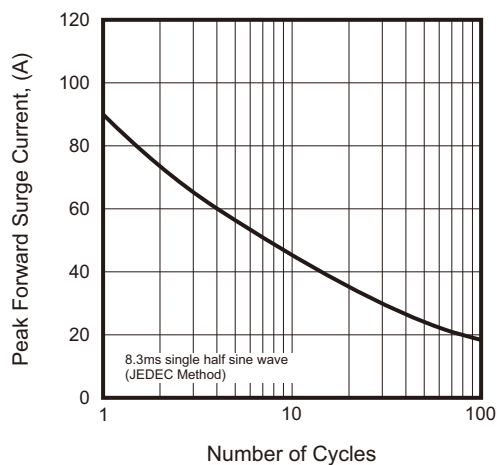


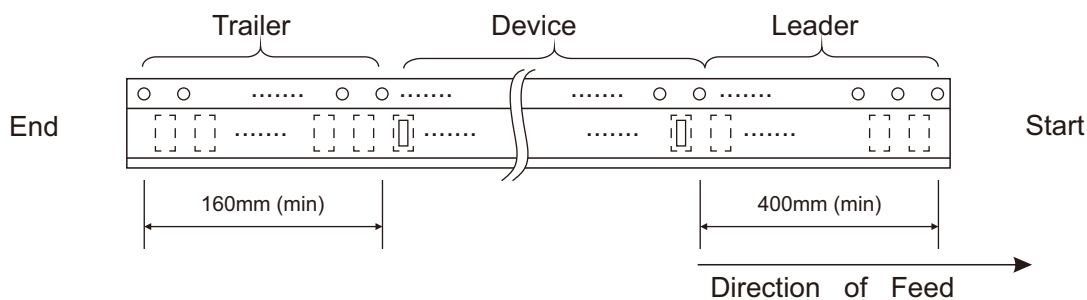
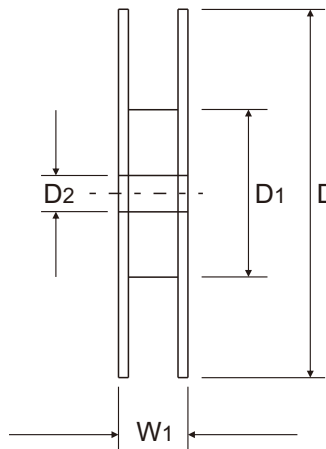
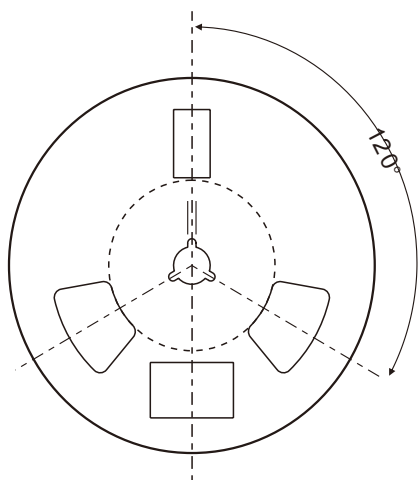
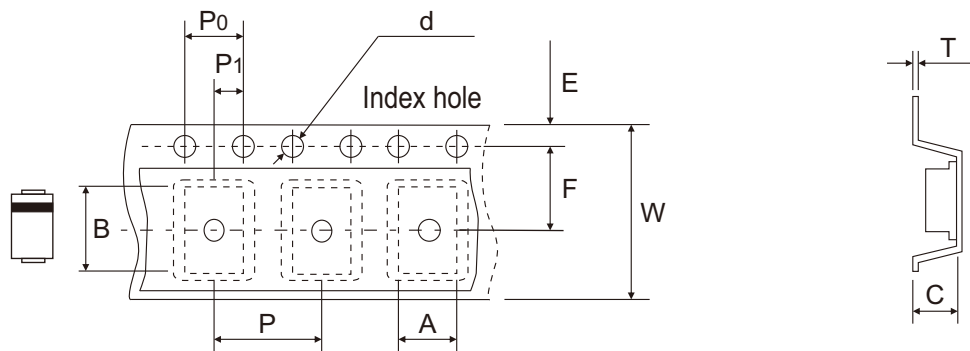
Fig.4 - Maximum Non-Repetitive Peak Forward Surge Current



SMD Ultra Fast Recovery Rectifiers



Reel Taping Specification



DO-214AA (SMB)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.80 ± 0.10	5.50 + 0.05 - 0.10	2.45 ± 0.05	1.55 ± 0.05	330 ± 2.00	100 ± 1.00	13.00 ± 0.20
	(inch)	0.150 ± 0.004	0.217 + 0.002 - 0.004	0.096 ± 0.002	0.061 ± 0.002	12.992 ± 0.079	3.937 ± 0.039	0.512 ± 0.008

DO-214AA (SMB)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.05	12.00 ± 0.15	18.00 + 2.00 - 1.00
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.002	0.472 ± 0.006	0.709 + 0.079 - 0.039

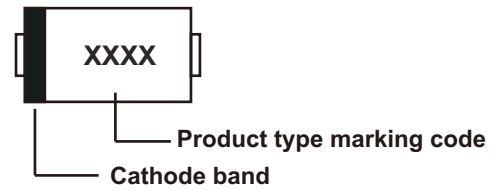
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REV:A

SMD Ultra Fast Recovery Rectifiers

Marking Code

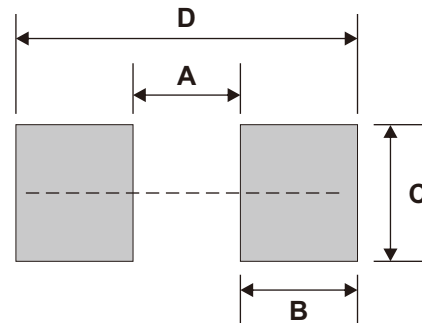
Part Number	Marking Code
US3AB-HF	RS3A
US3BB-HF	US3B
US3DB-HF	US3D
US3GB-HF	US3G
US3JB-HF	US3J
US3KB-HF	US3K
US3MB-HF	US3M



xxxx = Product type marking code

Suggested PAD Layout

SIZE	DO-214AA (SMB)	
	(mm)	(inch)
A	2.20	0.087
B	2.40	0.094
C	2.80	0.110
D	7.00	0.276



Note: 1. The pad layout is for reference purpose only.

Standard Packaging

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

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