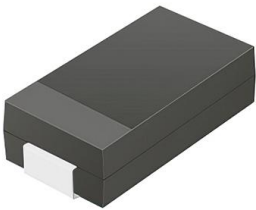


ES3JB-HF Datasheet

www.digi-electronics.com



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

DiGi Electronics Part Number	ES3JB-HF-DG
Manufacturer	Comchip Technology
Manufacturer Product Number	ES3JB-HF
Description	DIODE GP 600V 3A SMB/DO-214AA
Detailed Description	Diode 600 V 3A Surface Mount SMB/DO-214AA

This model ES3JB-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

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

ES3JB-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:

ES3J

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):

35 ns

Capacitance @ Vr, F:

45pF @ 4V, 1MHz

Package / Case:

DO-214AA, SMB

Operating Temperature - Junction:

-55°C ~ 150°C

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

SMD Super Fast Recovery Rectifiers



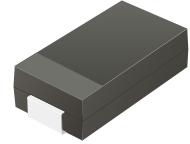
ES3AB-HF Thru. ES3JB-HF

Reverse Voltage: 50 to 600 Volts

Forward Current: 3 Amp

RoHS Device

Halogen Free



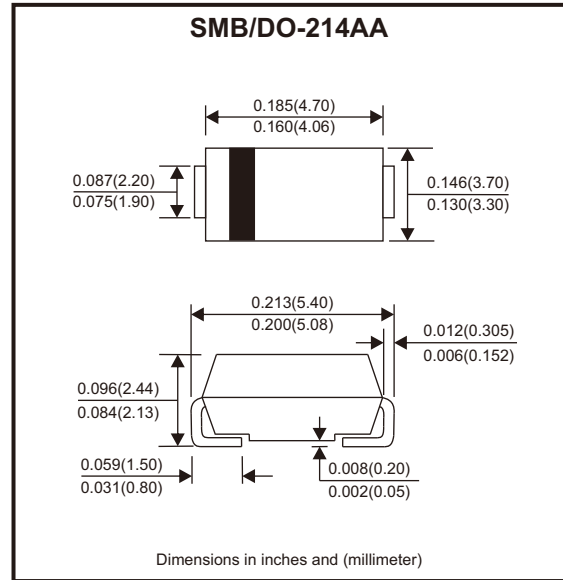
Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Super fast reverse recovery time.

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	ES3AB -HF	ES3BB -HF	ES3CB -HF	ES3DB -HF	ES3EB -HF	ES3GB -HF	ES3JB -HF	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	3							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	90							A
Max. forward voltage at 3A	V_F	1.0			1.25		1.68		V
Maximum DC reverse current at rated DC blocking voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5 100							μA
Typical junction capacitance at $V_R = 4\text{V}$, $f = 1\text{MHz}$	C_j	45							pF
Maximum reverse recovery time (Note 1)	t_{rr}	35							ns
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	50 16							$^\circ\text{C/W}$
Operating and storage temperature range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

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

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 Super Fast Recovery Rectifiers



Rating and Characteristic Curves (ES3AB-HF Thru. ES3JB-HF)

Fig.1 - Max. Average Forward Current Rating

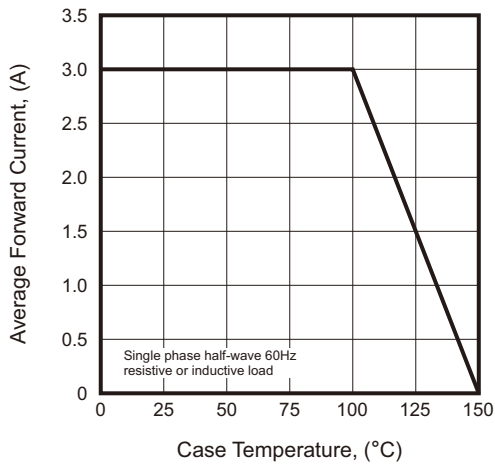


Fig.2 - Typical Reverse Characteristics

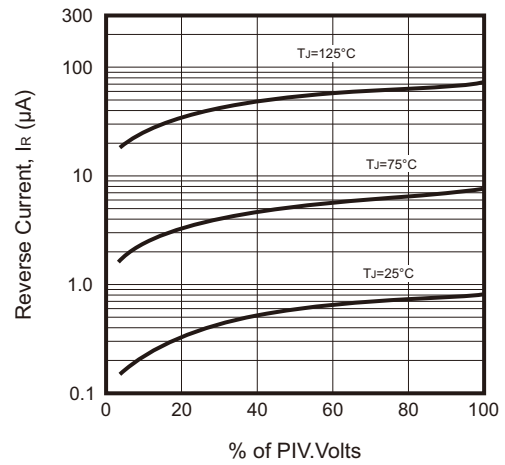


Fig.3 - Typical Forward Characteristic

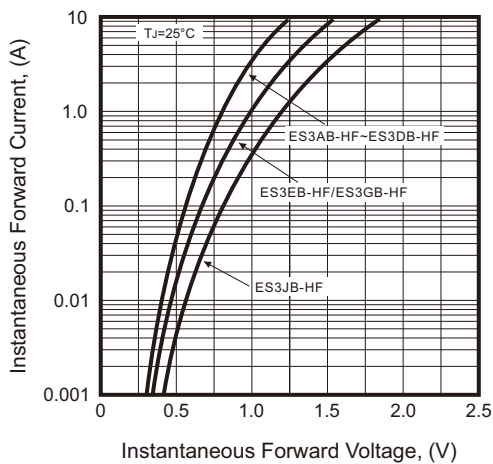


Fig.4 - Typical Junction Capacitance

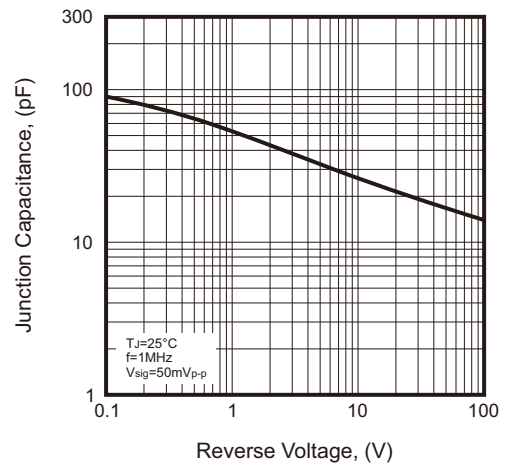
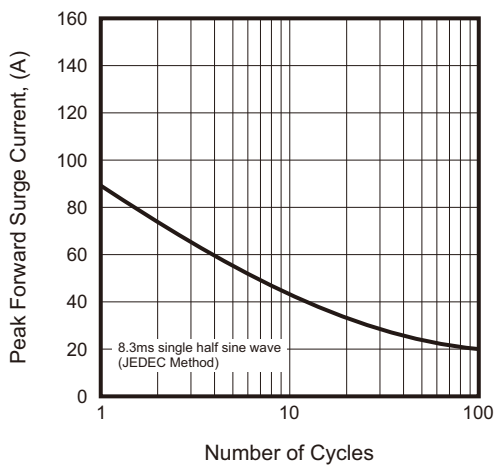


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current



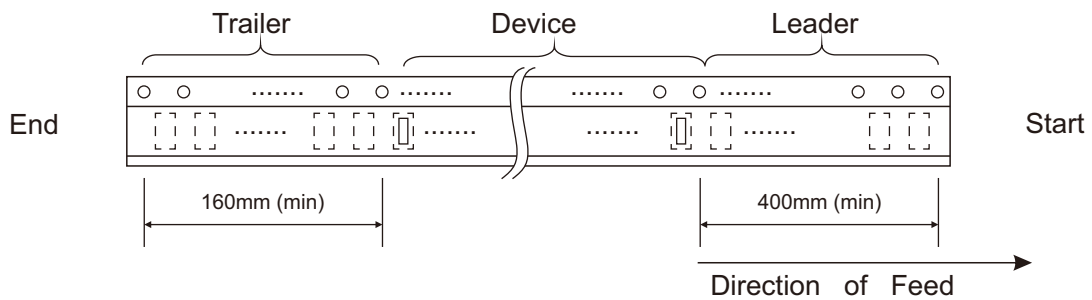
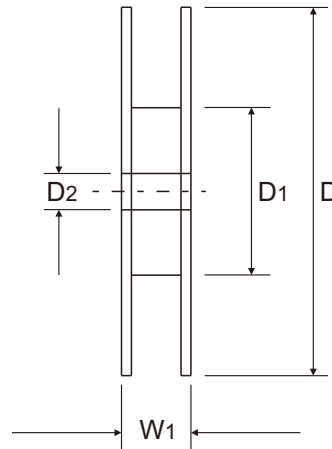
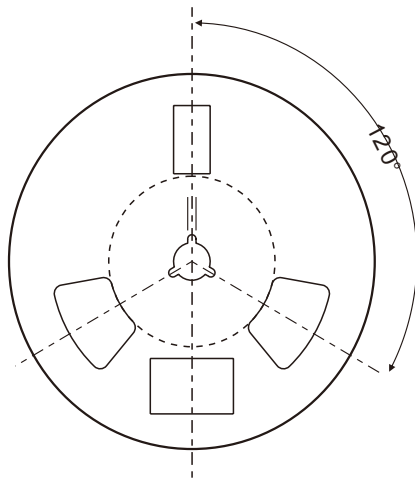
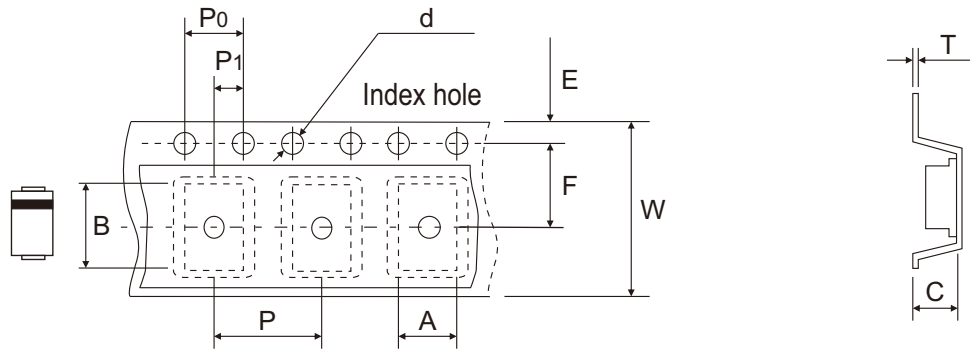
Company reserves the right to improve product design, functions and reliability without notice.

REV:A

SMD Super 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

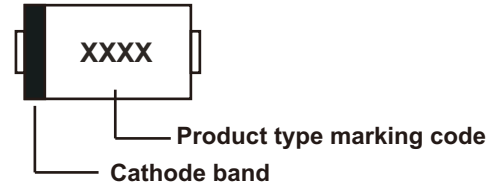
Company reserves the right to improve product design , functions and reliability without notice.

REV:A

SMD Super Fast Recovery Rectifiers

Marking Code

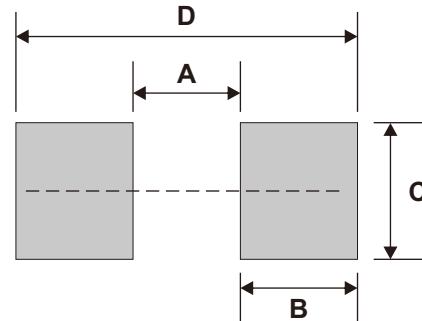
Part Number	Marking Code
ES3AB-HF	ES3A
ES3BB-HF	ES3B
ES3CB-HF	ES3C
ES3DB-HF	ES3D
ES3EB-HF	ES3E
ES3GB-HF	ES3G
ES3JB-HF	ES3J



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

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



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.