Toggles
Rockers
Pushbuttons C
Illuminated PB
Programmable
Keylocks
Rotaries
Slides
Tactiles
Tilt
Touch
Indicators
Accessories
Supplement

Series BB
Process Sealed Subminiature Antistatic Pushbuttons

General Specifications

Electrical Capacity (Resistive Load)

Logic Level: 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 50 milliohms maximum
Insulation Resistance: 500 megohms minimum @ 500V DC
Dielectric Strength: 500V AC minimum for 1 minute minimum
Mechanical Life: 50,000 operations minimum (momentary)
25,000 operations minimum (alternate action)
Electrical Life: 50,000 operations minimum (momentary)
25,000 operations minimum (alternate action)
Nominal Operating Force: 2.55N (momentary); 2.94N (alternate action)
Contact Timing: Nonshorting
Travel: Momentary: Pretravel .028" (0.7mm); Overtravel .016" (0.4mm); Total Travel .043" (1.1mm)
Alternate: Pretravel .039" (1.0mm); Overtravel .039" (1.0mm); Total Travel .079" (2.0mm)

Materials & Finishes

Plunger: Polyacetal
Bushing: Carbon blended polyamide
Case Housing: Glass fiber reinforced polyamide
Support Bracket: Tin plated phosphor bronze
Movable Contact: Phosphor bronze with gold plating
Stationary Contacts: Copper alloy with gold plating
Terminals: Copper alloy with gold plating

Environmental Data

Operating Temp Range: −30°C through +85°C (−22°F through +185°F)
Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 49.03N (11.2 lbf) maximum downward force on actuator;
actuator must be in UP position to remove cap from alternate action models

PCB Processing

Soldering: Wave Soldering Recommended: See Profile A in Supplement section.
Manual Soldering: See Profile B in Supplement section.
Cleaning: Automated cleaning. See Cleaning specifications in Supplement section.

Standards & Certifications

Flammability Standards: UL94V-0 available
The BB Series pushbuttons have not been tested for UL recognition or CSA certification.
These switches are designed for use in a low-voltage, low-current, logic-level circuit.
When used as intended in a logic-level circuit, the results do not produce hazardous energy.

NKK
SWITCHES

Distinctive Characteristics

Subminiature size (1/3 size of Series M switches) saves space on PC boards.

Specifically developed for logic-level applications.

Available in momentary and maintained circuits.

Industry's smallest alternate action (maintained) pushbutton with latchdown feature providing visible, audible, and tactile feedback.
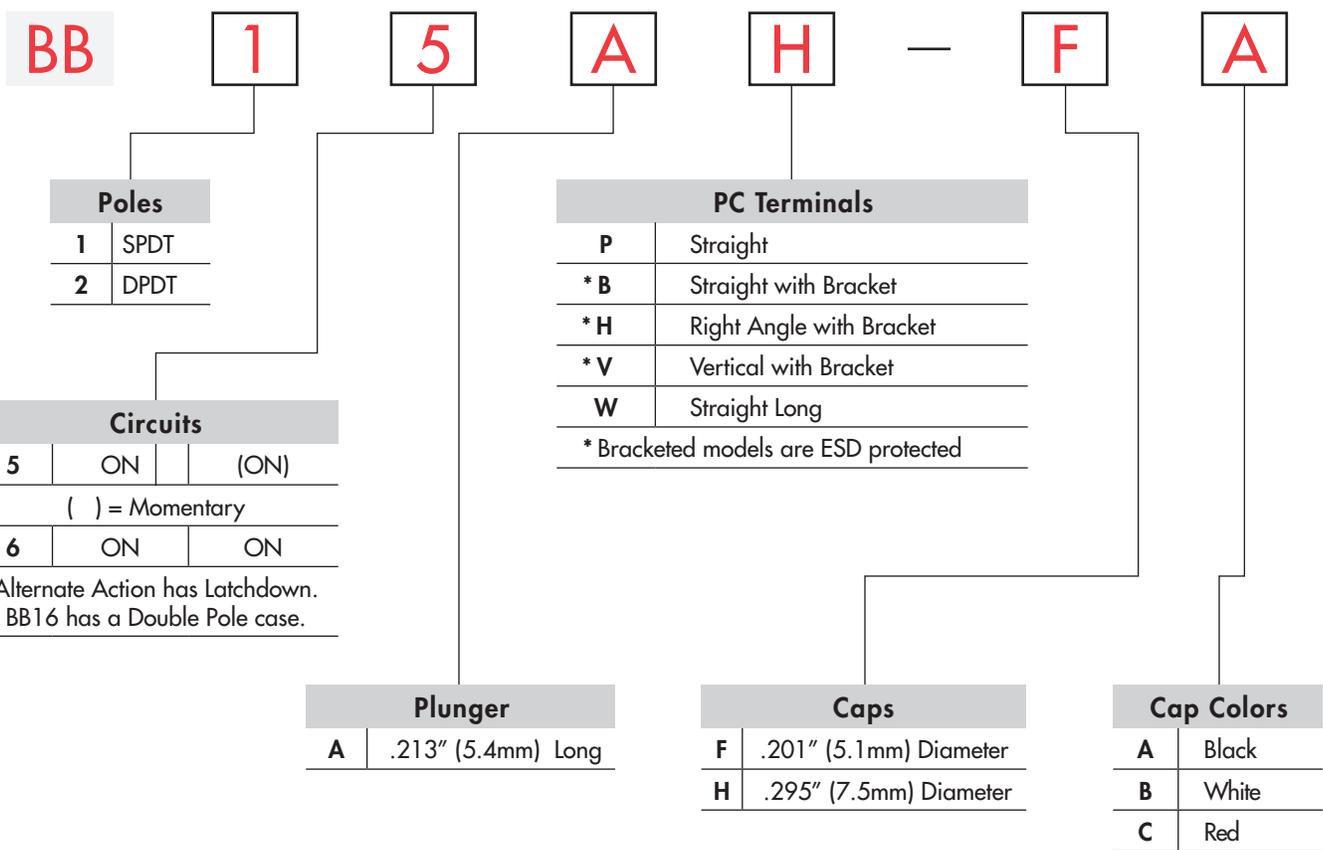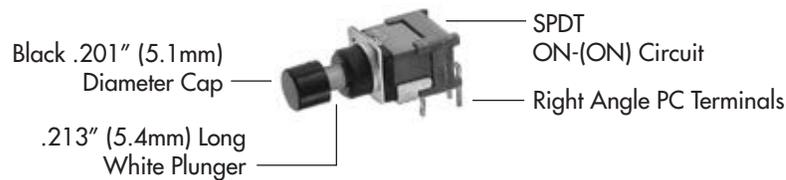
Antistatic superstructure, consisting of the carbon impregnated bushing and the support bracket, prevents static discharge to the contacts. Static electricity from an operator's touch travels from the actuator through the bushing and bracket to the PC board.

Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

Smooth, 6mm diameter bushing simplifies panel layout.

Totally sealed body construction prevents contact contamination and allows time- and money-saving soldering and cleaning.

.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grids.
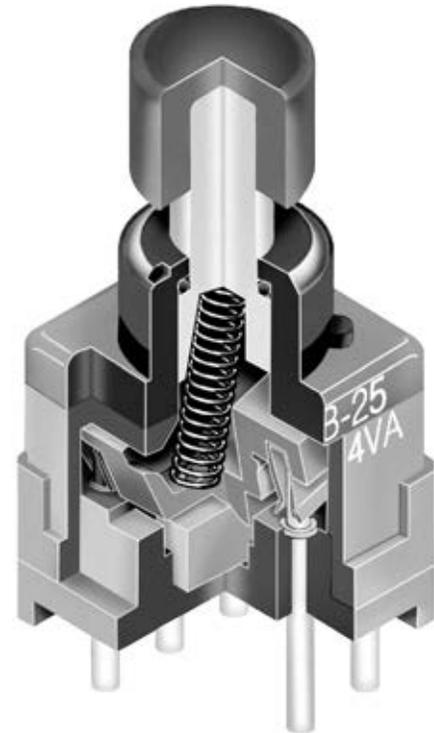
Actual Size

Toggles

Rockers

C Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

Series BB

Process Sealed Subminiature Antistatic Pushbuttons
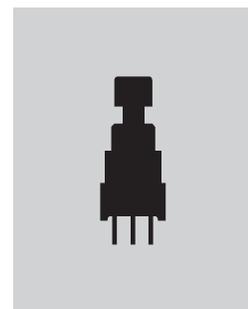
Toggles · Rockers · Pushbuttons · Illuminated PB · Programmable · Keylocks · Rotaries · Slides · Tactiles · Tilt · Touch · Indicators · Accessories · Supplement

TYPICAL SWITCH ORDERING EXAMPLE

BB 1 5 A H – F A

Poles
1	SPDT
2	DPDT

Circuits
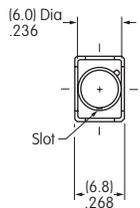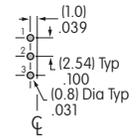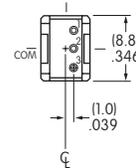| 5	ON	(ON)
	( ) = Momentary	
6	ON	ON

Alternate Action has Latchdown.
BB16 has a Double Pole case.

PC Terminals
P	Straight
*B	Straight with Bracket
*H	Right Angle with Bracket
*V	Vertical with Bracket
W	Straight Long

* Bracketed models are ESD protected

Plunger
A	.213″ (5.4mm) Long

Caps
F	.201″ (5.1mm) Diameter
H	.295″ (7.5mm) Diameter

Cap Colors
A	Black
B	White
C	Red

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

BB15AH-FA

Black .201″ (5.1mm) Diameter Cap
.213″ (5.4mm) Long White Plunger
SPDT
ON-(ON) Circuit
Right Angle PC Terminals

POLES & CIRCUITS

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Schematics
		Normal Slot	**Down**	**Normal** Slot	**Down**	Note: Terminal numbers are not actually on the switch.
SP	**BB15** **BB16**	ON ON	(ON) ON	2-3	2-1	SPDT
DP	**BB25** **BB26**	ON ON	(ON) ON	2-3 5-6	2-1 5-4	DPDT

PLUNGERS

A .213" (5.4mm) Long

Standard Plunger Color: White

Contact factory for other colors and lengths.

Normal Position — (2.8) Dia .110 (5.4) .213

Latchdown Position — (2.8) Dia .110 (4.2) .165
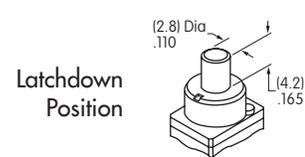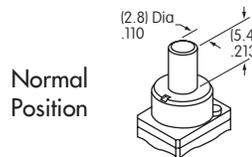
PC TERMINALS

Use of a support bracket is recommended to increase PCB mounting strength and stability.

Both single pole and double pole alternate action models have double pole bases.

See Typical Switch Dimensions for details.

P Straight

(2.54) Typ .100
(5.08) .200
(0.6) Dia Typ .024
(3.1) Typ .122

B Straight with Bracket

(10.16) .400
(5.08) .200
(5.08) .200
(0.6) Typ .024
(2.54) Typ .100
(0.6) Dia Typ .024
(0.4) Typ .016
(3.1) .122

H Right Angle with Bracket

(2.54) Typ .100
(0.6) Dia Typ .024
(2.54) Typ .100
(0.6) .024
(0.4) .016
(0.5) Typ .020

V Vertical with Bracket

(0.5) Typ .020
(0.6) Dia Typ .024
(2.54) Typ .100
(0.6) .024
(0.4) .016

W Straight Long

(2.54) Typ .100
(0.6) Dia Typ .024
(5.08) .200
(18.9) .744
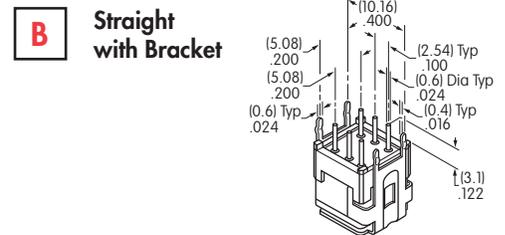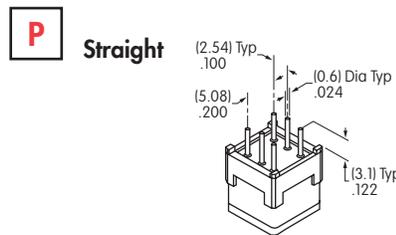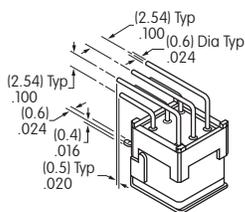
SLIP-ON CAPS

F AT475 .201" (5.1mm) Diameter Cap

Material: Polyamide

(5.1) Dia .201
(2.8) Dia .110
(6.3) .248
(5.4) .213
(4.0) .157
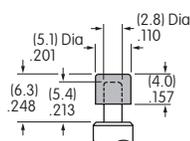
H AT496 .295" (7.5mm) Diameter Cap

Material: Polyamide

(7.5) Dia .295
(2.8) Dia .110
(6.3) .248
(5.4) .213
(4.0) .157
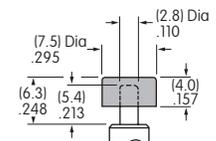
Colors Available: **A** Black **B** White **C** Red

Toggles
Rockers
C Pushbuttons
Illuminated PB
Programmable
Keylocks
Rotaries
Slides
Tactiles
Tilt
Touch
Indicators
Accessories
Supplement

Toggles
Rockers
Pushbuttons C
Illuminated PB
Programmable
Keylocks
Rotaries
Slides
Tactiles
Tilt
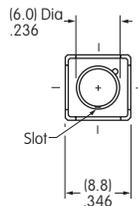Touch
Indicators
Accessories
Supplement

Series BB

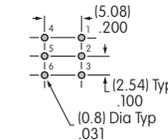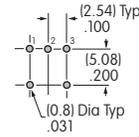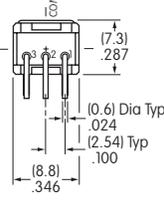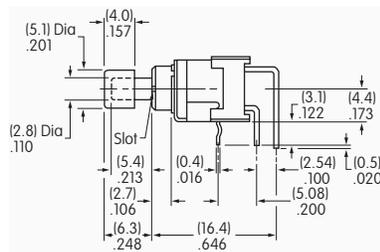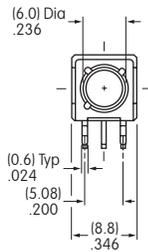## Process Sealed Subminiature Antistatic Pushbuttons

TYPICAL SWITCH DIMENSIONS

Straight PC

Single Pole

(6.0) Dia .236
Slot
(6.8) .268

(5.1) Dia .201
(4.0) .157
(3.5) .138
(0.6) Dia Typ .024
(2.8) Dia .110
(5.4) .213
(0.8) .031
(2.54) Typ .100
(6.3) .248
(13.1) .516
(3.1) .122

COM
(8.8) .346
(1.0) .039
C̵

(1.0) .039
(2.54) Typ .100
(0.8) Dia Typ .031
C̵
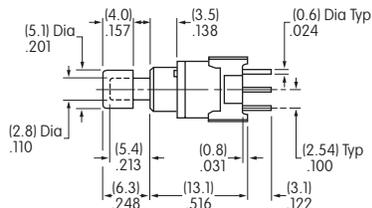
BB15AP-FA

Momentary

Straight PC

Double Pole | **BB16AP**

(6.0) Dia .236
Slot
(8.8) .346

(5.1) Dia .201
(4.0) .157
(3.5) .138
(0.6) Dia Typ .024
(2.8) Dia .110
(5.4) .213
(0.8) .031
(2.54) Typ .100
(6.3) .248
(13.1) .516
(3.1) .122

COM 1 4
2 +5
3 6
(8.8) .346
(5.08) .200

COM 1
+ 2
3
(8.8) .346
(2.54) .100

4 1
5 2
6 3
(5.08) .200
(2.54) Typ .100
(0.8) Dia Typ .031

1
2
3
(2.54) .100
(2.54) Typ .100
C̵
(0.8) Dia Typ .031
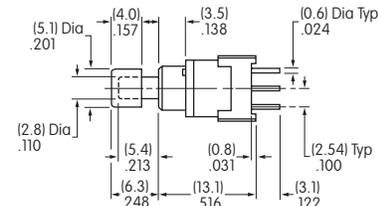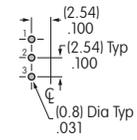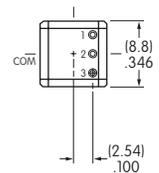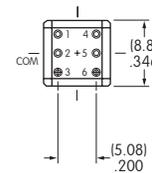
BB25AP-FA

Momentary & Alternate | Alternate

Straight PC • Bracket

Single Pole

(6.0) Dia .236
Slot
(6.0) .236
(8.0) .315

(5.1) Dia .201
(4.0) .157
(2.7) .106
(0.4) Typ .016
(0.6) Dia Typ .024
(10.16) .400
(2.8) Dia .110
(5.4) .213
(0.8) .031
(2.54) Typ .100
(6.3) .248
(13.1) .516
(3.1) .122

COM
(0.6) Typ .024
(8.8) .346
(1.0) .039
C̵
(2.54) .100

(1.0) .039
(2.54) Typ .100
(0.8) Dia Typ .031
(2.54) .100
C̵
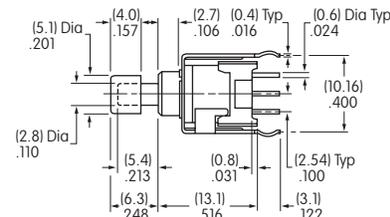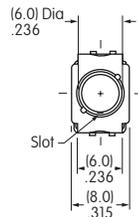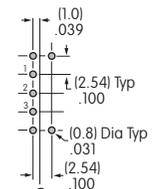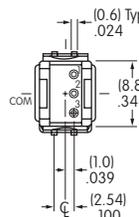
BB15AB-FA

Momentary

Straight PC • Bracket

Double Pole | **BB16AB**

(6.0) Dia .236
Slot
(6.0) .236
(8.8) .346

(5.1) Dia .201
(4.0) .157
(2.7) .106
(0.4) Typ .016
(0.6) Dia Typ .024
(10.16) .400
(2.8) Dia .110
(5.4) .213
(0.8) .031
(2.54) .100
(6.3) .248
(13.1) .516
(3.1) .122

COM 1 4
2 +5
3 6
(8.8) .346
(0.6) Typ .024
(5.08) .200

COM 1
+ 2
3
(8.8) .346
(0.6) Typ .024
(2.54) .100

4 1
5 2
6 3
(5.08) .200
(2.54) Typ .100
(0.8) Dia Typ .031

1
2
3
(2.54) Typ .100
(2.54) Typ .100
C̵
(0.8) Dia Typ .031
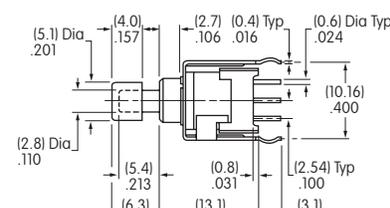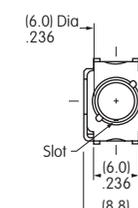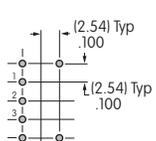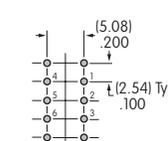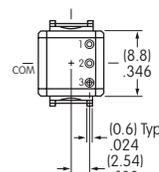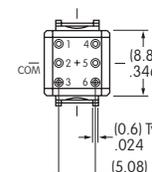
BB25AB-FA

Momentary & Alternate | Alternate

NKK SWITCHES

TYPICAL SWITCH DIMENSIONS
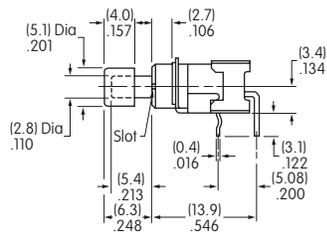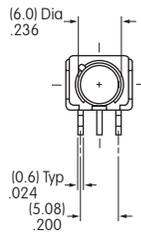
Single Pole — **Right Angle PC**

Momentary

BB15AH-FA

Double Pole — **BB16AH** — **Right Angle PC**
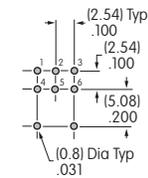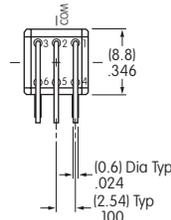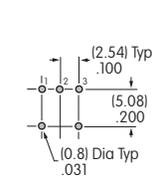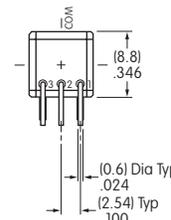
Momentary & Alternate — Alternate

BB25AH-FA
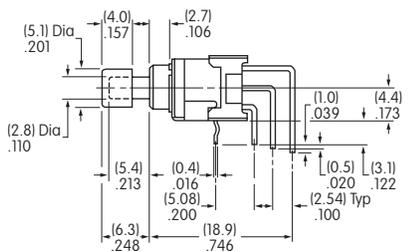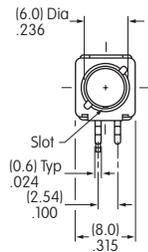
Single Pole — **Vertical PC**
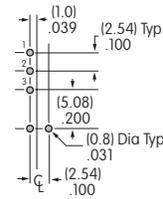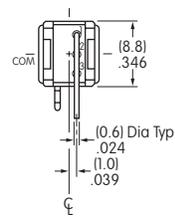
Momentary
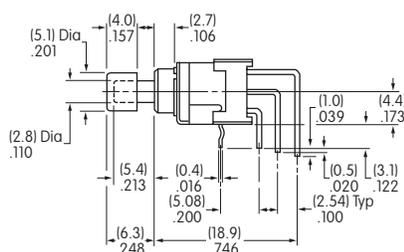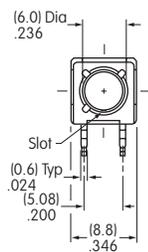
BB15AV-FA

Double Pole — **BB16AV** — **Vertical PC**
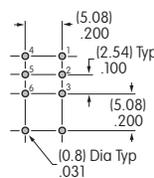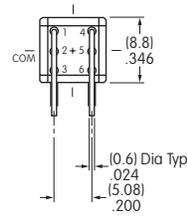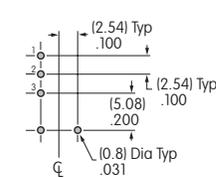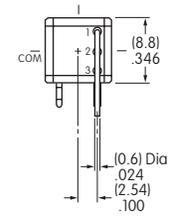

Momentary & Alternate — Alternate

BB25AV-FA

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

NKK Switches:

BB15AW-FC BB25AP-HB BB15AH-FC BB15AH-HC BB15AP BB16AP BB15AP-FA BB15AP-FB BB25AW
BB26AW BB25AP-FA BB16AP-FA BB26AP-FA BB25AH-FA BB25AW-FA BB16AW-FA BB15AP-HA BB16AP-HA
BB26AP-HA BB25AH-HA BB26AH-HA BB15AV-HA BB25AV-HA BB26AV-HA BB26AW-HA BB16AP-FB
BB26AP-FB BB16AB-FB BB16AH-FB BB15AP-HB BB16AP-HB BB26AB-HB BB15AP-FC BB25AP-FC BB16AP-FC BB26AP-FC BB26AB-FC BB25AP-HC BB16AP-HC BB26AP-HC BB15AB-HC BB25AB-HC BB26AB-HC
BB15AV-HC BB25AW-HC BB15AV1-FA BB15AW BB16AH BB16AW BB25AP BB26AP BB25AP-HA BB15AW-HC BB25AV-FB BB26AV-FA BB15AB1 BB16AB1 BB16AV-HA BB16AV-HC BB15AB-HB BB15AB-FB
BB15AH/328 BB16AB-FA BB15AP-HC BB26AV BB25AP-FB BB16AV-HB BB16AB-FC BB26AV-FC BB16AV1-HA
BB15AB BB16AV BB16AB BB25AH-FB BB16AB-HC BB16AB-HA BB16AB-HB BB25AB BB26AH-HC
BB16AP/328 BB26AV-HB BB26AH-FA BB15AH-HB BB26AB-FA BB16AV-FA BB25AV-FC BB16AH-FC BB15AH-FB BB15AB-FC BB15AV BB16AH-HB BB15AB/328 BB25AB-HA BB16AH-HA BB15AH-FA BB25AH-FC BB26AB-HA BB26AH-FC BB16AH-HC BB15AV-FC