



Aluminum Capacitors Powerlytic™, Large Can



FEATURES

- Useful life: 1000 h at +85 °C
- High capacitance per case size
- High ripple current
- Low leakage current
- Long shelf life and operating life
- Type 36D ratings recommended for replacement applications only. For new designs, see type 36DY
- Screw terminal
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

| QUICK REFERENCE DATA | | | |
|---|------------|---|---|
| DESCRIPTION | | VALUE | |
| Nominal case size Ø D x L in inches (mm) | | 1.453 x 2.250 (36.9 x 57.2) to 3.078 x 8.750 (78.2 x 222.3) | |
| Operating temperature | | -40 °C to +85 °C (36DX) -40 °C to +95 °C (36DE) | |
| Rated capacitance range, C _R | | 190 µF to 50 000 µF | |
| Tolerance on C _R | | +75 %, -10 % (10 WV _{DC} to 100 WV _{DC}) +50 %, -10 % (200 WV _{DC} to 450 WV _{DC}) | |
| Rated voltage range, U _R | | 10 WV _{DC} to 450 WV _{DC} | |
| Life validation test at 85 °C | | 1000 h: ΔCAP ± 15 % from initial measurement. ΔESR 1.5 x initial specified limit | |
| DC leakage current | 36D | $I = k\sqrt{CV}$ I in µA, C in µF, V in Volts | k = 6.0 at +25 °C, k = 36 at +65 °C, k = 50 at +85 °C |
| | 36DE, 36DX | | k = 4.0 at +25 °C, k = 32 at +85 °C |

| DIMENSIONS in inches (millimeters) | | | | | | | |
|------------------------------------|--------------------|--------------------|------------------------|---------------|------------------------|-------------------------------------|-----------------------|
| LARGE CAN CAPACITORS | | | | | | | |
| CASE CODE | NOMINAL | | WITH INSULATION SLEEVE | | | TERMINAL SPACING M ± 0.016 (0.4) | TYPICAL WEIGHT (g) |
| | D ± 0.032 (0.8) | L ± 0.063 (1.6) | D (Max.) | L (Max.) | P TERMINAL H (Max.) | | |
| AN | 1.375 (35.0) | 1.625 (41.0) | 1.453 (36.9) | 1.750 (44.5) | 1.849 (47.0) | 0.500 (12.7) | 43.0 |
| AY | 1.375 (35.0) | 1.875 (48.0) | 1.453 (36.9) | 2.000 (50.8) | 1.099 (53.3) | 0.500 (12.7) | 54.0 |
| AA | 1.375 (35.0) | 2.125 (54.0) | 1.453 (36.9) | 2.250 (57.2) | 1.349 (59.7) | 0.500 (12.7) | 63.0 |
| AM | 1.375 (35.0) | 2.625 (67.0) | 1.453 (36.9) | 2.750 (69.9) | 1.849 (72.4) | 0.500 (12.7) | 82.0 |
| AB | 1.375 (35.0) | 3.125 (79.0) | 1.453 (36.9) | 3.250 (82.6) | 1.349 (85.1) | 0.500 (12.7) | 105.0 |
| AL | 1.375 (35.0) | 3.625 (92.0) | 1.453 (36.9) | 3.750 (95.3) | 1.849 (97.8) | 0.500 (12.7) | 122.0 |
| AC | 1.375 (35.0) | 4.125 (105.0) | 1.453 (36.9) | 4.250 (108.0) | 1.349 (110.5) | 0.500 (12.7) | 129.0 |
| AD | 1.375 (35.0) | 4.625 (117.0) | 1.453 (36.9) | 4.750 (120.7) | 1.849 (123.2) | 0.500 (12.7) | 162.0 |
| AE | 1.375 (35.0) | 5.125 (130.0) | 1.453 (36.9) | 5.250 (133.4) | 1.349 (125.9) | 0.500 (12.7) | 179.0 |
| AF | 1.375 (35.0) | 5.625 (143.0) | 1.453 (36.9) | 5.750 (146.1) | 1.849 (148.6) | 0.500 (12.7) | 201.0 |
| EN | 1.750 (44.0) | 1.625 (41.0) | 1.828 (46.4) | 1.750 (44.5) | 1.849 (47.0) | 0.750 (19.1) | 71.0 |
| EA | 1.750 (44.0) | 2.125 (54.0) | 1.828 (46.4) | 2.250 (57.2) | 2.349 (59.7) | 0.750 (19.1) | 102.0 |
| EM | 1.750 (44.0) | 2.625 (67.0) | 1.828 (46.4) | 2.750 (69.9) | 2.849 (72.4) | 0.750 (19.1) | 133.0 |
| EB | 1.750 (44.0) | 3.125 (79.0) | 1.828 (46.4) | 3.250 (82.6) | 3.349 (85.1) | 0.750 (19.1) | 167.0 |
| EL | 1.750 (44.0) | 3.625 (92.0) | 1.828 (46.4) | 3.750 (95.3) | 3.849 (97.8) | 0.750 (19.1) | 198.0 |
| EC | 1.750 (44.0) | 4.125 (105.0) | 1.828 (46.4) | 4.250 (108.0) | 4.349 (110.5) | 0.750 (19.1) | 230.0 |
| ED | 1.750 (44.0) | 4.625 (117.0) | 1.828 (46.4) | 4.750 (120.7) | 4.849 (123.2) | 0.750 (19.1) | 252.0 |

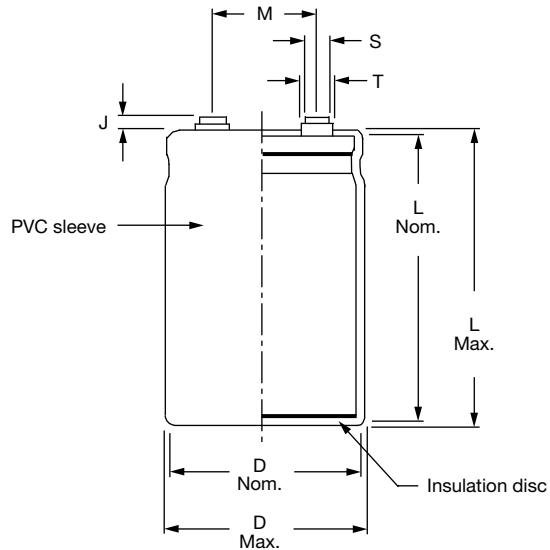
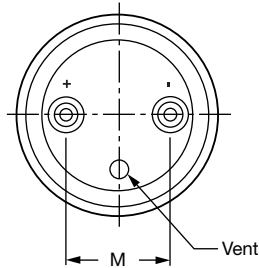


| DIMENSIONS in inches (millimeters) | | | | | | | |
|------------------------------------|--------------------|--------------------|------------------------|---------------|------------------------|-------------------------------------|-----------------------|
| LARGE CAN CAPACITORS | | | | | | | |
| CASE CODE | NOMINAL | | WITH INSULATION SLEEVE | | | TERMINAL SPACING M ± 0.016 (0.4) | TYPICAL WEIGHT (g) |
| | D ± 0.032 (0.8) | L ± 0.063 (1.6) | D (Max.) | L (Max.) | P TERMINAL H (Max.) | | |
| EE | 1.750 (44.0) | 5.125 (130.0) | 1.828 (46.4) | 5.250 (133.4) | 5.349 (135.9) | 0.750 (19.1) | 269.0 |
| EF | 1.750 (44.0) | 5.625 (143.0) | 1.828 (46.4) | 5.750 (146.1) | 5.849 (148.6) | 0.750 (19.1) | 318.0 |
| BY | 2.000 (51.0) | 1.875 (48.0) | 2.078 (52.8) | 2.000 (50.8) | 2.099 (53.3) | 0.875 (22.2) | 113.0 |
| BA | 2.000 (51.0) | 2.125 (54.0) | 2.078 (52.8) | 2.250 (57.2) | 2.349 (59.7) | 0.875 (22.2) | 133.0 |
| BM | 2.000 (51.0) | 2.625 (67.0) | 2.078 (52.8) | 2.750 (69.9) | 2.849 (72.4) | 0.875 (22.2) | 176.0 |
| BB | 2.000 (51.0) | 3.125 (79.0) | 2.078 (52.8) | 3.250 (82.6) | 3.349 (85.1) | 0.875 (22.2) | 213.0 |
| BL | 2.000 (51.0) | 3.625 (92.0) | 2.078 (52.8) | 3.750 (95.3) | 3.849 (97.8) | 0.875 (22.2) | 261.0 |
| BC | 2.000 (51.0) | 4.125 (105.0) | 2.078 (52.8) | 4.250 (108.0) | 4.349 (110.5) | 0.875 (22.2) | 381.0 |
| BD | 2.000 (51.0) | 4.625 (117.0) | 2.078 (52.8) | 4.750 (120.7) | 4.849 (123.2) | 0.875 (22.2) | 326.0 |
| BE | 2.000 (51.0) | 5.125 (130.0) | 2.078 (52.8) | 5.250 (133.4) | 5.349 (135.9) | 0.875 (22.2) | 337.0 |
| BF | 2.000 (51.0) | 5.625 (143.0) | 2.078 (52.8) | 5.750 (146.1) | 5.849 (148.6) | 0.875 (22.2) | 408.0 |
| CB | 2.500 (64.0) | 3.125 (79.0) | 2.578 (65.5) | 3.250 (82.6) | n/a | 1.125 (28.6) | 329.0 |
| CL | 2.500 (64.0) | 3.625 (92.0) | 2.578 (65.5) | 3.750 (95.3) | n/a | 1.125 (28.6) | 400.0 |
| CC | 2.500 (64.0) | 4.125 (105.0) | 2.578 (65.5) | 4.250 (108.0) | n/a | 1.125 (28.6) | 473.0 |
| CD | 2.500 (64.0) | 4.625 (117.0) | 2.578 (65.5) | 4.750 (120.7) | n/a | 1.125 (28.6) | 562.0 |
| CE | 2.500 (64.0) | 5.125 (130.0) | 2.578 (65.5) | 5.250 (133.4) | n/a | 1.125 (28.6) | 607.0 |
| CF | 2.500 (64.0) | 5.625 (143.0) | 2.578 (65.5) | 5.750 (146.1) | n/a | 1.125 (28.6) | 675.0 |
| DB | 3.000 (76.0) | 3.125 (79.0) | 3.078 (78.2) | 3.250 (82.6) | n/a | 1.250 (31.8) | 496.0 |
| DL | 3.000 (76.0) | 3.625 (92.0) | 3.078 (78.2) | 3.750 (95.3) | n/a | 1.250 (31.8) | 598.0 |
| DC | 3.000 (76.0) | 4.125 (105.0) | 3.078 (78.2) | 4.250 (108.0) | n/a | 1.250 (31.8) | 700.0 |
| DD | 3.000 (76.0) | 4.625 (117.0) | 3.078 (78.2) | 4.750 (120.7) | n/a | 1.250 (31.8) | 802.0 |
| DE | 3.000 (76.0) | 5.125 (130.0) | 3.078 (78.2) | 5.250 (133.4) | n/a | 1.250 (31.8) | 944.0 |
| DF | 3.000 (76.0) | 5.625 (143.0) | 3.078 (78.2) | 5.750 (146.1) | n/a | 1.250 (31.8) | 1004.0 |
| DJ | 3.000 (76.0) | 8.625 (219.0) | 3.078 (78.2) | 8.750 (222.3) | n/a | 1.250 (31.8) | 1403.0 |

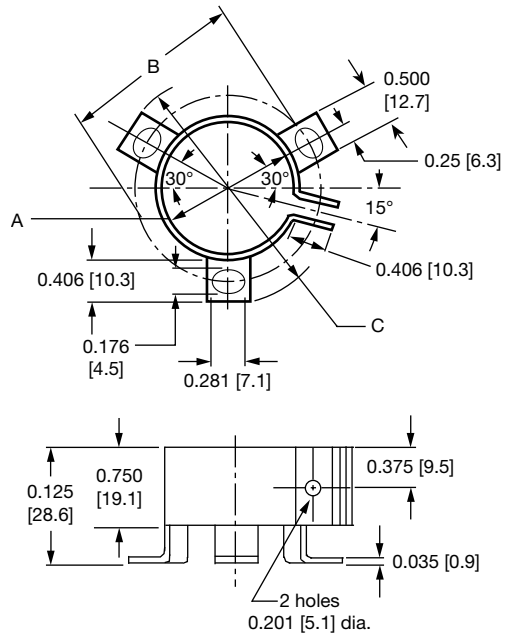
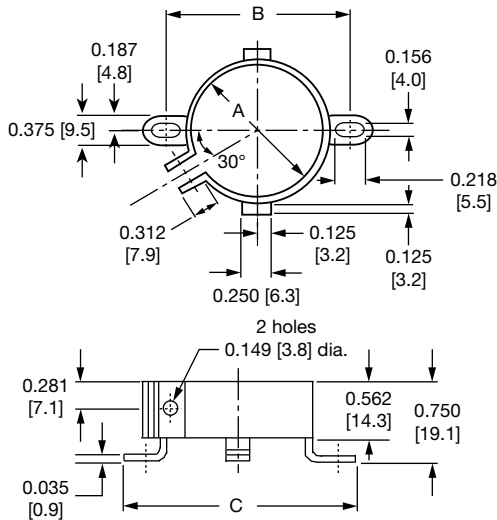
| DIMENSIONS in inches (millimeters) | | | | | | |
|------------------------------------|--------------|--------------|----------------------------|------------------------------|------------------------------|-------------------------|
| BRACKETS (RoHS-COMPLIANT) | | | | | | |
| TYPE | PART NUMBER | A | B | C | FIGURE NUMBER | |
| 2 Feet | 1245860035A | 1.375 (34.9) | 1.781 (45.2) | 2.218 (56.3) | 1 | |
| 3 Feet | 1245860036A | 2.000 (50.8) | 2.500 (63.5) | 2.875 (73.0) | 2 | |
| 3 Feet | 1245860037A | 2.500 (63.5) | 3.000 (76.2) | 3.375 (85.7) | 2 | |
| 3 Feet | 1245860038A | 3.000 (76.2) | 3.500 (88.9) | 3.875 (98.4) | 2 | |
| SCREW INSERT TERMINAL DIMENSIONS | | | | | | |
| TERMINAL CODE | THREAD | THREAD DEPTH | HEIGHT J ± 0.032 (0.81) | DIAMETER S ± 0.010 (0.25) | DIAMETER T ± 0.010 (0.25) | NOTES |
| A | 10-32 NF-28 | 0.219 (5.6) | 0.063 (1.6) | 0.313 (8.0) | 0.438 (11.1) | All cases codes |
| B | 10-32 NF-28 | 0.375 (9.5) | 0.250 (6.4) | 0.313 (8.0) | 0.438 (11.1) | All cases codes |
| D | 1/4-28 NF-28 | 0.344 (8.7) | 0.093 (2.4) | 0.688 (17.5) | - | C and D dia. codes only |

DIMENSIONS AND AVAILABLE FORMS

SCREW INSERT TERMINALS



LARGE CAN BRACKETS



ORDERING EXAMPLE

Electrolytic capacitor 36DX series: 36DX 392 G 075 BB 2 A

| DESCRIPTION | |
|-------------|--|
| CODE | EXPLANATION |
| 36DX | Product type |
| 392 | Capacitance value (3900 μ F) |
| G | Tolerance (G = -10 % / +75 %; F = -10 % / +50 %) |
| 075 | Voltage rating at 85 °C (75 V) |
| BB | Can size (see dimensions table) |
| 2 | PVC insulating sleeve |
| A | Terminal code (low insert 10-32 screw thread) |



| ELECTRICAL DATA AND ORDERING INFORMATION (original / improved ratings) | | |
|---|------------------|--------------------|
| CAPACITANCE (μF) | CASE CODE | PART NUMBER |
| TYPE 36D | | |
| 15 V_{DC} AT +85 °C, SURGE = 18 V | | |
| 13 000 | AC | 36D133G015AC2A |
| 25 V_{DC} AT +85 °C, SURGE = 30 V | | |
| 2700 | AA | 36D272G025AA2A |
| 5500 | AB | 36D552G025AB2A |
| 40 V_{DC} AT +85 °C, SURGE = 50 V | | |
| 5500 | AC | 36D552G040AC2A |
| 8400 | BB | 36D842G040BB2A |
| 12 000 | BC | 36D123G040BC2A |
| 50 V_{DC} AT +85 °C, SURGE = 65 V | | |
| 1300 | AA | 36D132G050AA2A |
| 2600 | AB | 36D262G050AB2A |
| 3900 | AC | 36D392G050AC2A |
| 5200 | AE | 36D522G050AE2A |
| 6000 | BB | 36D602G050BB2A |
| 9000 | BC | 36D902G050BC2A |
| 15 000 | CC | 36D153G050CC2A |
| 75 V_{DC} AT +85 °C, SURGE = 95 V | | |
| 3900 | BB | 36D392G075BB2A |
| 10 000 | CC | 36D103G075CC2A |
| 350 V_{DC} AT +85 °C, SURGE = 400 V | | |
| 190 | AB | 36D191F350AB2A |
| TYPE 36DE | | |
| 10 V_{DC} AT +85 °C, SURGE = 12 V | | |
| 23 000 | AA | 36DE233G010AA2A |
| 25 V_{DC} AT +85 °C, SURGE = 30 V | | |
| 40 000 | BB | 36DE403G025BB2A |
| 40 V_{DC} AT +85 °C, SURGE = 50 V | | |
| 24 000 | BB | 36DE243G040BB2A |
| TYPE 36DX | | |
| 15 V_{DC} AT +85 °C, SURGE = 18 V | | |
| 7500 | AA | 36DX752G015AA2A |
| 15 000 | AB | 36DX153G015AB2A |
| 22 000 | AC | 36DX223G015AC2A |
| 34 000 | AF | 36DX343G015AF2a |
| 50 000 | BC | 36DX503G015BC2A |
| 25 V_{DC} AT +85 °C, SURGE = 30 V | | |
| 4500 | AA | 36DX452G025AA2A |
| 9000 | AB | 36DX902G025AB2A |
| 13 000 | AC | 36DX133G025AC2A |
| 20 000 | AF | 36DX203G025AF2A |
| 30 000 | BC | 36DX303G025BC2A |
| 50 000 | CC | 36DX503G025CC2A |



| ELECTRICAL DATA AND ORDERING INFORMATION (original / improved ratings) | | |
|---|------------------|--------------------|
| CAPACITANCE (μF) | CASE CODE | PART NUMBER |
| TYPE 36DX | | |
| 30 V_{DC} AT +85 °C, SURGE = 40 V | | |
| 4000 | AA | 36DX402G030AA2A |
| 8000 | AB | 36DX802G030AB2A |
| 18 000 | AF | 36DX183G030AF2A |
| 26 000 | BC | 36DX263G030BC2A |
| 40 V_{DC} AT +85 °C, SURGE = 50 V | | |
| 2900 | AA | 36DX292G040AA2A |
| 5800 | AB | 36DX582G040AB2A |
| 8700 | AC | 36DX872G040AC2A |
| 20 000 | BC | 36DX203G040BC2A |
| 34 000 | CC | 36DX343G040CC2A |
| 50 V_{DC} AT +85 °C, SURGE = 65 V | | |
| 2400 | AA | 36DX242G050AA2A |
| 4800 | AB | 36DX482G050AB2A |
| 7200 | AC | 36DX722G050AC2A |
| 11 000 | AF | 36DX113G050AF2A |
| 16 000 | BC | 36DX163G050BC2A |
| 24 000 | BF | 36DX243G050BF2A |
| 40 000 | CF | 36DX403G050CF2A |
| 41 000 | DC | 36DX413G050DC2A |
| 75 V_{DC} AT +85 °C, SURGE = 95 V | | |
| 1400 | AA | 36DX142G075AA2A |
| 4200 | AC | 36DX422G075AC2A |
| 10 000 | BC | 36DX103G075BC2A |
| 17 000 | CC | 36DX173G075CC2A |
| 100 V_{DC} AT +85 °C, SURGE = 125 V | | |
| 1700 | AB | 36DX172G100AB2A |
| 200 V_{DC} AT +85 °C, SURGE = 250 V | | |
| 850 | AC | 36DX851F200AC2A |
| 2000 | BC | 36DX202F200BC2A |
| 2800 | BC | 36DX282F200BC2A |
| 3400 | CC | 36DX342F200CC2A |
| 7400 | DF | 36DX742F200DF2A |
| 250 V_{DC} AT +85 °C, SURGE = 300 V | | |
| 500 | AB | 36DX501F250AB2A |
| 10 000 | DJ | 36DX103F250DJ2A |
| 350 V_{DC} AT +85 °C, SURGE = 400 V | | |
| 3100 | DF | 36DX312F350DF2A |
| 3300 | DF | 36DX332F350DF2A |
| 5100 | DJ | 36DX512F350DJ2A |
| 450 V_{DC} AT +85 °C, SURGE = 525 V | | |
| 230 | AC | 36Dx231F450AC2A |
| 2000 | DF | 36DX202F450DF2A |
| 3100 | DJ | 36DX312F450DJ2A |
| 3500 | DJ | 36DX352F450DJ2A |

Statements about product lifetime are based on calculations and internal testing. They should only be interpreted as estimations. Also due to external factors, the lifetime in the field application may deviate from the calculated lifetime. In general, nothing stated herein shall be construed as a guarantee of durability.



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

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

Vishay:

[36DE952G100BC2A](#) [36DX152F350CC2A](#) [36DX412F250CD2A](#) [36DX990F450AA2A](#) [36D122F250BC2A](#)
[36D152F350CC2A](#) [36DX261F350AB2A](#) [36DX222F450DF2A](#) [36D362G040AB2A](#) [36DX471F350AC2A](#)
[36DE254G040DJ2D](#) [36D912G100DD2A](#) [36DX251F250AA2A](#) [36DX122F450DF2A](#) [36DE493G060CF2A](#)
[36D641F200AC2A](#) [36DE103G050AB2A](#) [36DE523G030CB2B](#) [36DE603G100DJ2D](#) [36DE623G015BB2A](#)
[36DE533G015AC2A](#) [36D323G025CC2A](#) [36D283G030CD2A](#) [36DX153G075BF2A](#) [36D252G075AC2A](#)
[36DX663G030DC2A](#) [36DE143G010AN2A](#) [36DX521F400EL2A](#) [36DX222F350CF2A](#) [36D672G075CB2A](#)
[36DX124G040DJ2A](#) [36D212F300DC2A](#) [36D104F030DF2B](#) [36DX122F200AF2A](#) [36D822G025AC2A](#)
[36DE632G060AB2A](#) [36DE363G100DF2D](#) [36D851G075AA2B](#) [36DE313G075CD2A](#) [36DX991F350BC2A](#)
[36D172F350CF2A](#) [36DX142F200BB2A](#) [36DE114G015BC2A](#) [36D592G075BC2A](#) [36DX103F200DF2A](#)
[36D922G015AB2A](#) [36DX182F200BB2A](#) [36DX881F350BC2A](#) [36D282G075AB2A](#) [36DE124G025CD2A](#)
[36D462G015AA2A](#) [36DE123G050AC2A](#) [36DX973G030DF2A](#) [36DX722F200CF2A](#) [36DX982G100CC2A](#)
[36DX103F100BF2A](#) [36D252F350DF2B](#) [36D252F350DF2A](#) [36D213G040CC2A](#) [36DX741F250AC2A](#)
[36D343G015BB2B](#) [36DE263G025AC2A](#) [36DE233G075BF2A](#) [36DE313G050BC2A](#) [36DX252F350DF2A](#)
[36DE193G060BC2A](#) [36D172F075AB2A](#) [36DX611F350BB2A](#) [36D172G075AB2A](#) [36D152F350CE2A](#)
[36DX381F350AC2B](#) [36DX422F250CF2A](#) [36DX301F200AB2A](#) [36D331F450BC2A](#) [36DX782F250DF2A](#)
[36DE193G100CD2A](#) [36D143G075DC2A](#) [36D143F075DC2A](#) [36DE723G060DD2A](#) [36DX632F250DF2A](#)
[36DX232G100BA2A](#) [36D142F200BC2A](#) [36DE582G075AB2A](#) [36DX472F400DG2D](#) [36D163G040BE2A](#)
[36DX222F350CC2A](#) [36DX403G075DF2B](#) [36DX403G075DF2A](#) [36DE303G015AB2A](#) [36DE103G100BF2A](#)
[36DE673G075DF2A](#) [36D213G050BB2A](#) [36DX292F250CC2A](#) [36D271F400AE2A](#) [36D164G010DF2A](#)
[36DE562G050AA2A](#) [36DE103G075BB2B](#) [36DE103G075BB2A](#) [36DX351F450AF2A](#) [36DX191F450AB2B](#)