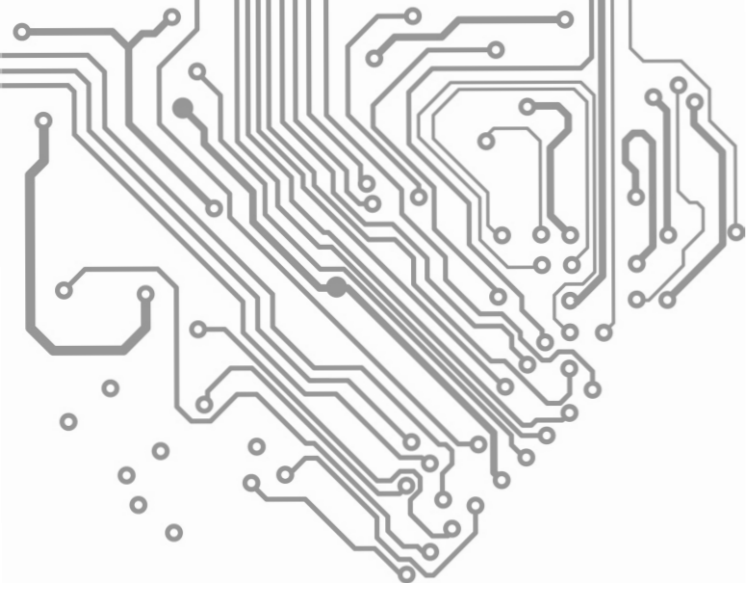


DISCRETE DEVICES & POWER MODULES

TEL: +86-755-8988 8888-60815/67030
E-mail: bydigbt@byd.com / bydipm@byd.com
<http://www.byd.com/microelectronics>

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Automobile Module

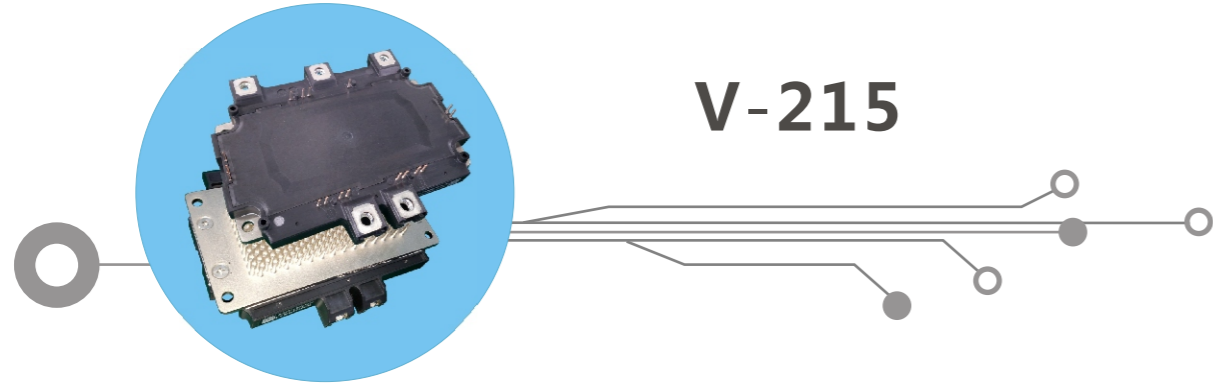
- 02 ● — V-215
- 03 ● — V-305
- 04 ● — V-315
- 05 ● — V-415
- 06 ● — V-DUAL1
- 07 ● — V-PACK1
- 08 ● — V-PACK2
- 09 ● — V-DSC
- 10 ● — BIP30-7931 series

Industrial Module

- 11 ● — 34mm
- 12 ● — 62mm
- 13 ● — PIM
- 14 ● — BIP25-3824 series
- 15 ● — BIP27-4426 series

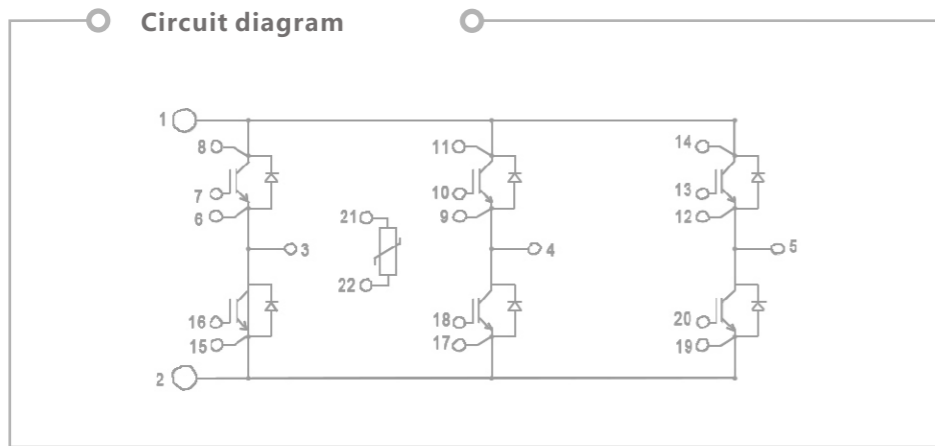
Discrete Device

- 16 ● — SiC MOSFET
- 17 ● — IGBT single-tube

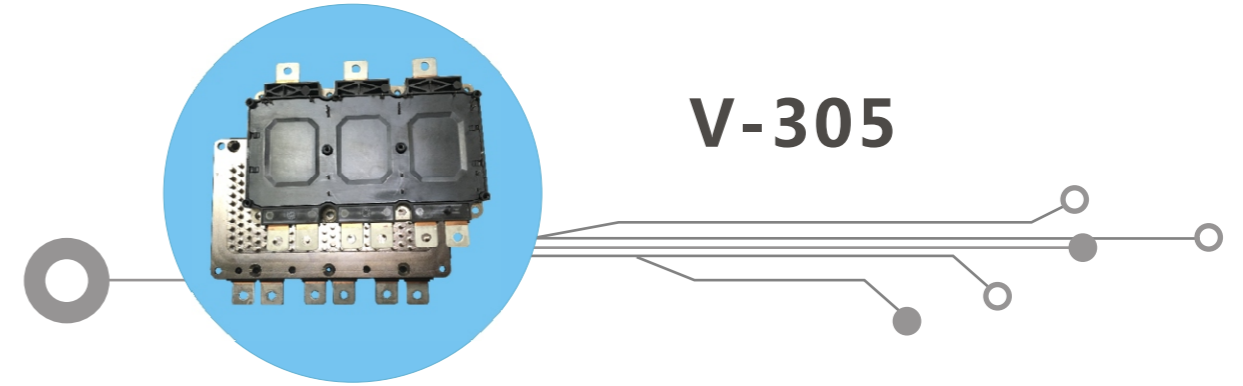
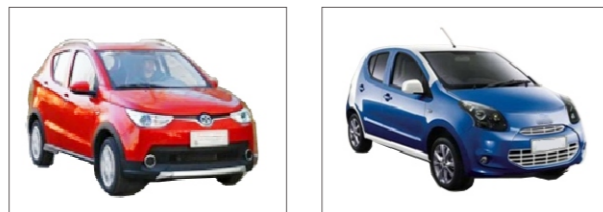


V-215

| Part Number | V _{CE(s)} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|---------------|---|--------------------|---|---|
| BG400F07LP | 650 | 400 | 1.50 | 25.0 |
| BG400F07LP2 | 650 | 400 | 1.50 | 25.0 |
| BG300F08A13L2 | 750 | 300 | 1.30 | 13.5 |
| BG600F08A14L2 | 750 | 600 | 1.30 | 33.0 |

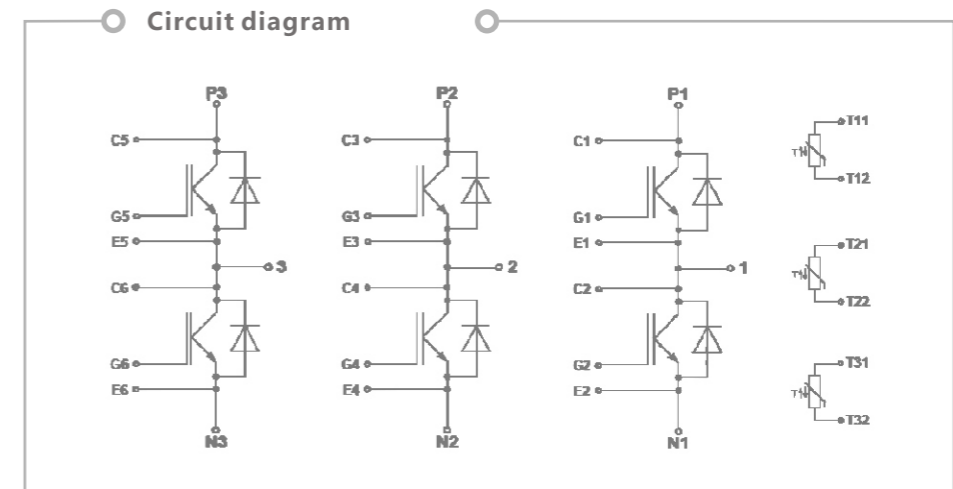


Application Mini-BEV



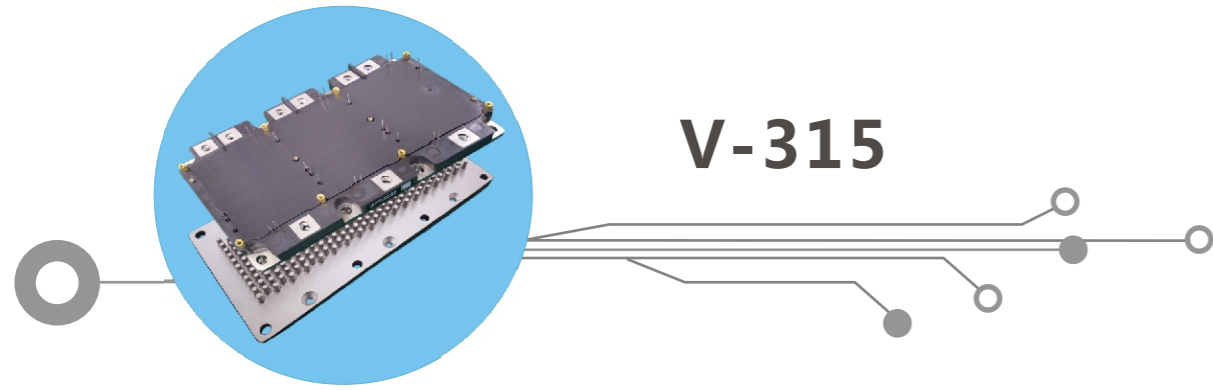
V-305

| Part Number | V _{CE(s)} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|---------------|---|--------------------|---|---|
| BG820F12B14L4 | 750 | 820 | 1.25 | 26.5 |
| BG820F12B14L | 750 | 820 | 1.50 | 29.0 |
| BG400F12LP4 | 1200 | 400 | 2.00 | 31.0 |



Application New energy vehicle

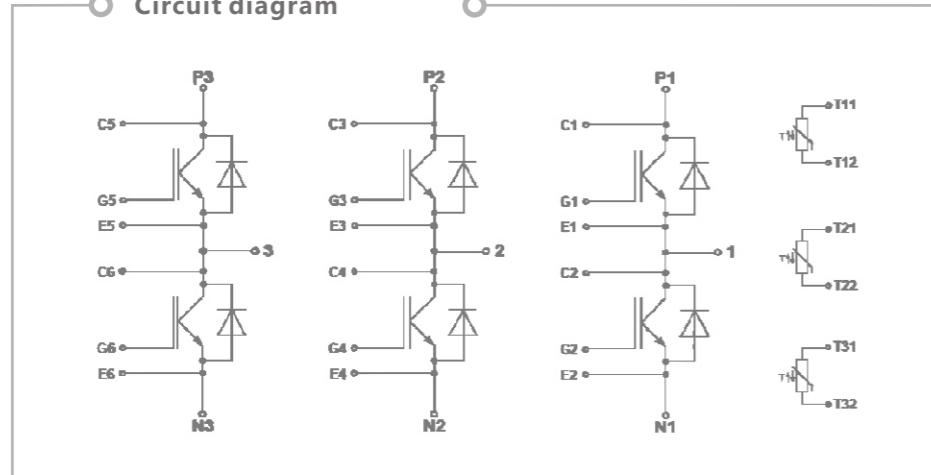




V-315

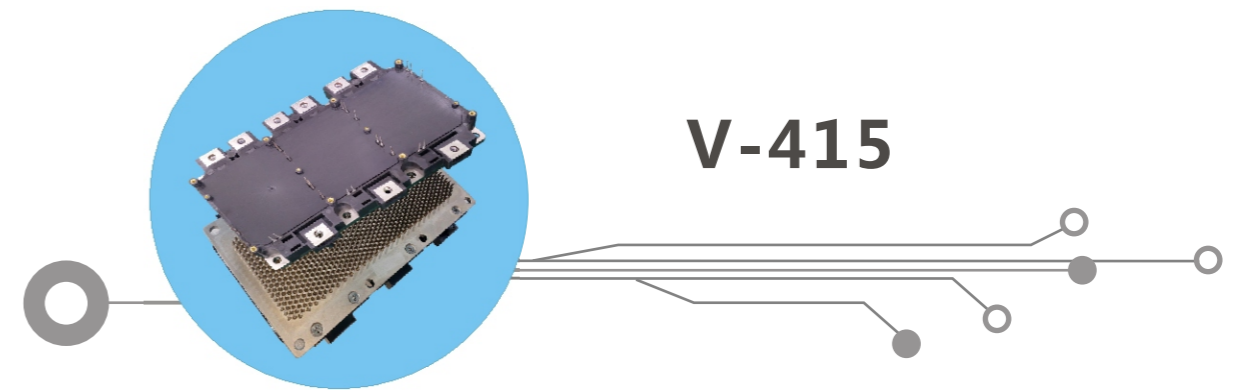
| Part Number | V _{CE(s)} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|----------------|---|--------------------|---|---|
| BG600F12LNP4 | 1200 | 600 | 2.05 | 42.0 |
| BG600F12LNP4-S | 1200 | 450 | 2.05 | 32.0 |
| BG600F12LNP8 | 1200 | 600 | 2.05 | 42.0 |
| BG800F08LP3 | 750 | 820 | 1.50 | 29.1 |

Circuit diagram



Application

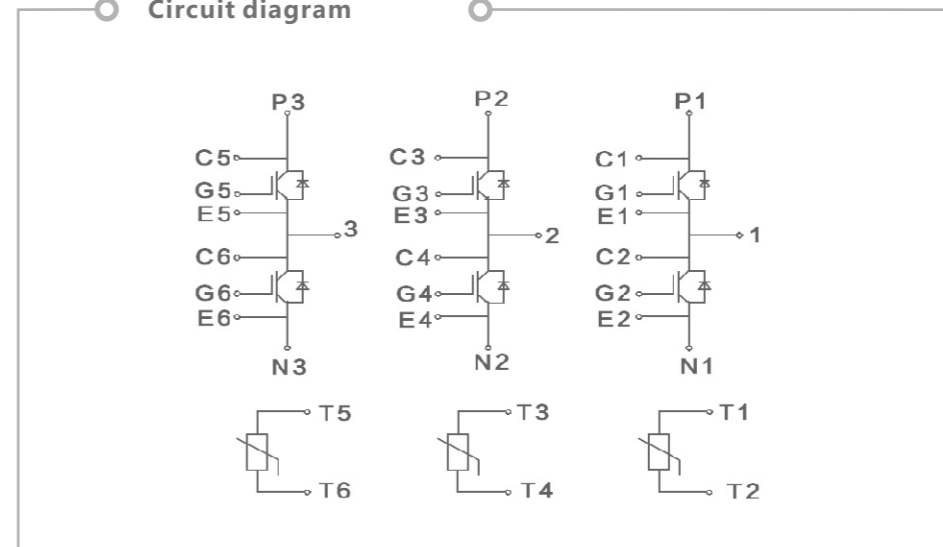
New energy vehicle



V-415

| Part Number | V _{CE(s)} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|----------------|---|--------------------|---|---|
| BG800F12LNP4 | 1200 | 800 | 2.05 | 85.0 |
| BG800F12LNP4-S | 1200 | 600 | 2.05 | 57.0 |
| BG800F12LNP8 | 1200 | 800 | 2.05 | 85.0 |
| BG800F12LNP8-S | 1200 | 600 | 2.05 | 57.0 |

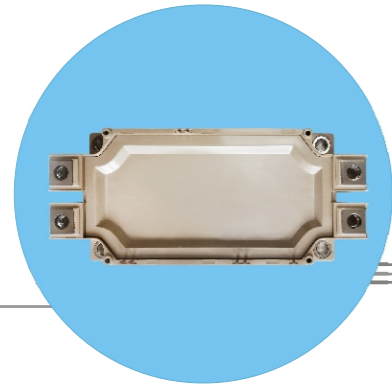
Circuit diagram



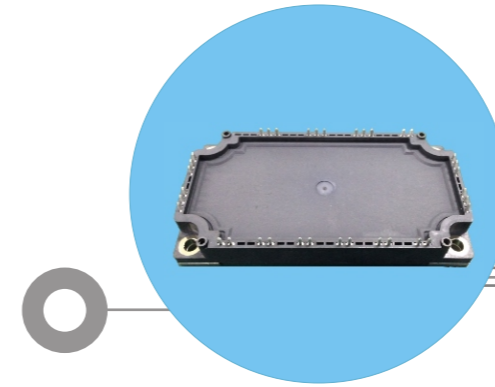
Application

New energy vehicle





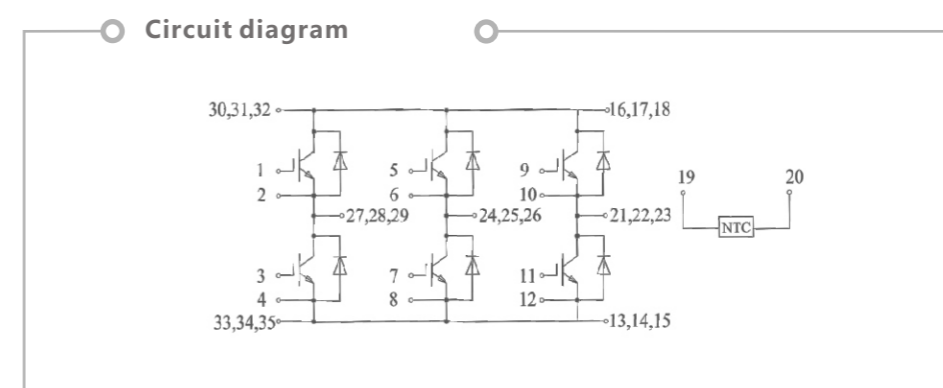
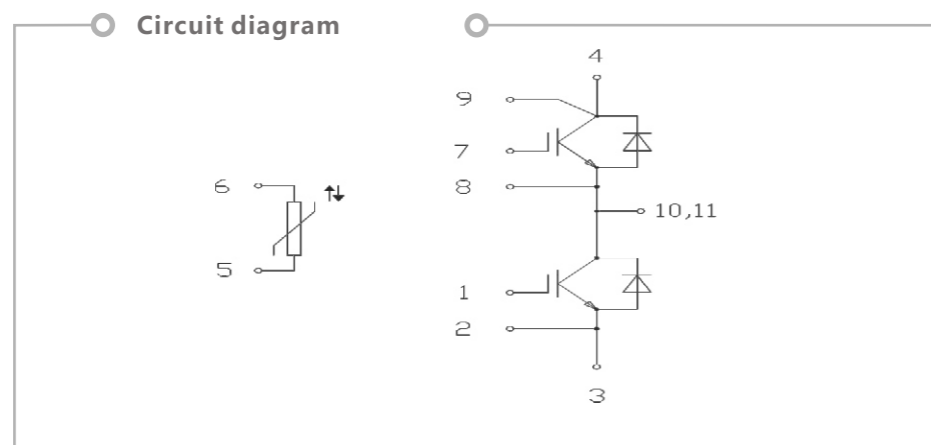
V-DUAL1



V-PACK1

| Part Number | $V_{CES}(V)$ @ $T_j=25^\circ C$ | $I_c(A)$ | $V_{CE(sat)}(V)$ @ $T_j=25^\circ C$ | E_{off} @ $T_j=25^\circ C$ |
|--------------|------------------------------------|----------|--|---------------------------------|
| BG450B12ME4D | 1200 | 450 | 2.16 | 33.0 |
| BG600B12ME4D | 1200 | 600 | 2.30 | 22.0 |
| BG500B08ME4D | 750 | 500 | 1.20 | 35.6 |
| BG700B08ME4D | 750 | 700 | 1.20 | 31.0 |

| Part Number | $V_{CES}(V)$ @ $T_j=25^\circ C$ | $I_c(A)$ | $V_{CE(sat)}(V)$ @ $T_j=25^\circ C$ | E_{off} @ $T_j=25^\circ C$ |
|-------------|------------------------------------|----------|--|---------------------------------|
| BG150P12LP3 | 1200 | 150 | 2.20 | 17.0 |

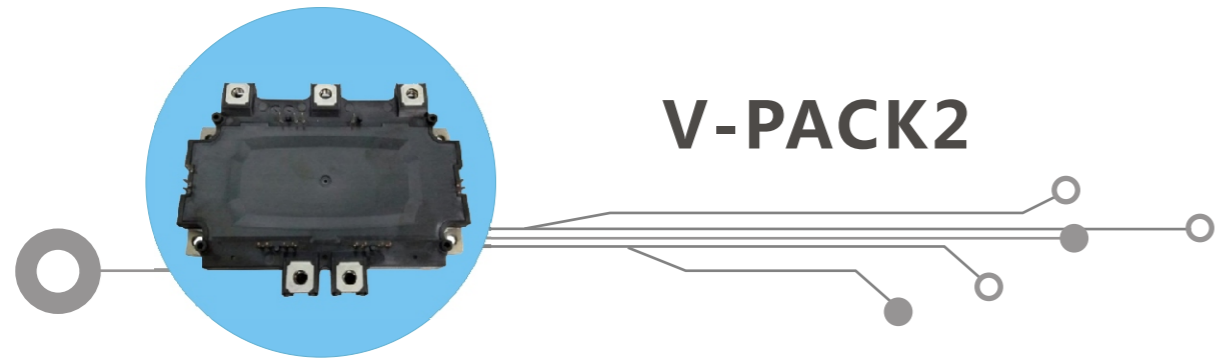


Application New energy vehicle, Photovoltaic, Inverter



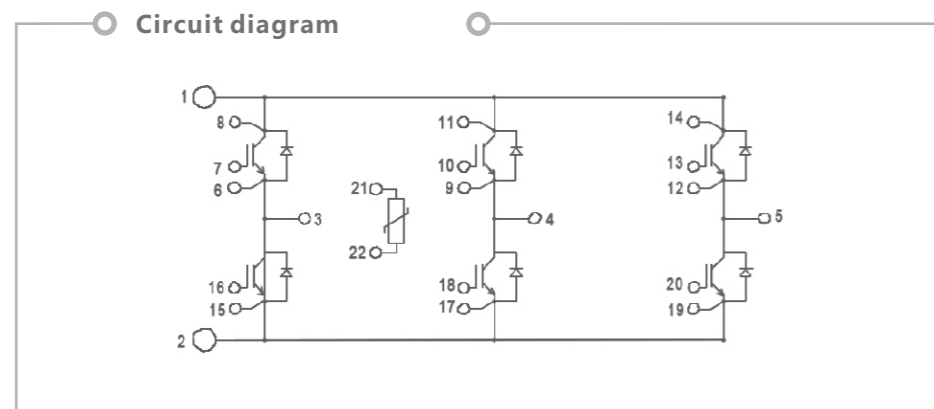
Application Servo drive, Photovoltaic, Inverter, Automobile power steering



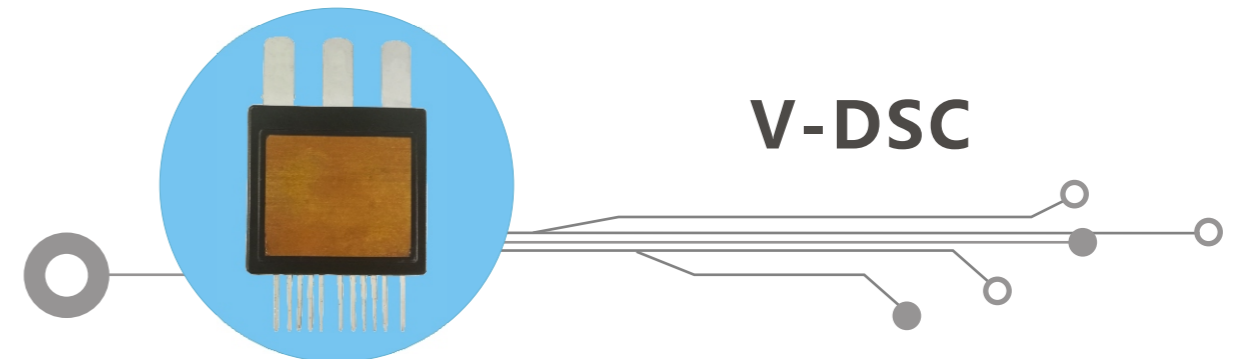


V-PACK2

| Part Number | $V_{CES}(V)$ @ $T_j=25^\circ C$ | $I_c(A)$ | $V_{CE(sat)}(V)$ @ $T_j=25^\circ C$ | E_{off} @ $T_j=25^\circ C$ |
|-------------|------------------------------------|----------|--|---------------------------------|
| BG400F07LP | 650 | 400 | 1.5 | 25 |

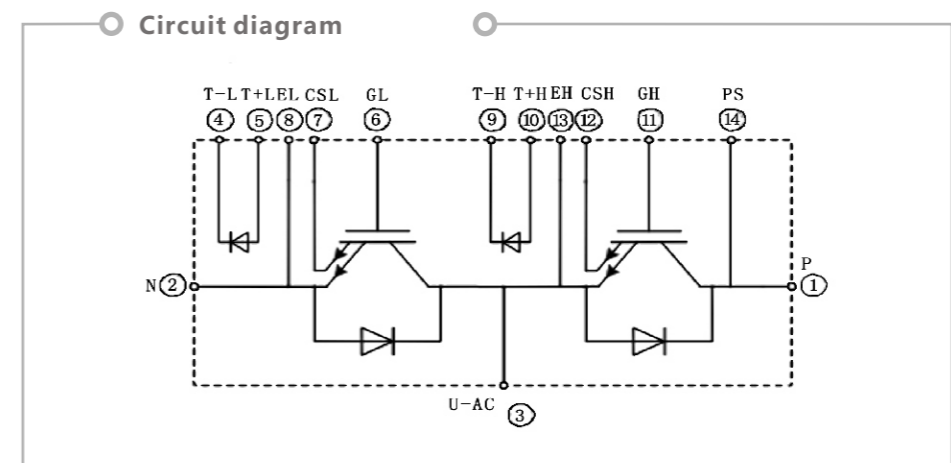


Application Mini-BEV



V-DSC

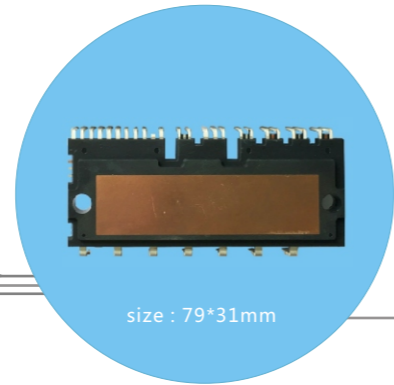
| Part Number | $V_{CES}(V)$ @ $T_j=25^\circ C$ | $I_c(A)$ | $V_{CE(sat)}(V)$ @ $T_j=25^\circ C$ | $E_{on}+E_{off}$ @ $I_c=200A$ $V_{CE}=600V$ $T_j=25^\circ C$ |
|-------------|------------------------------------|----------|--|---|
| BG200B12LD1 | 1200 | 200 | 1.70 | 22.0 |



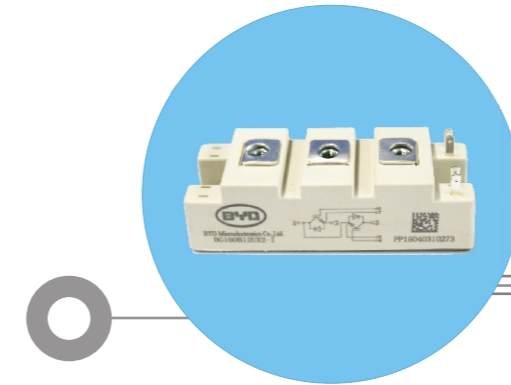
Application Mini-BEV, New energy vehicle



BIP30-7931 series



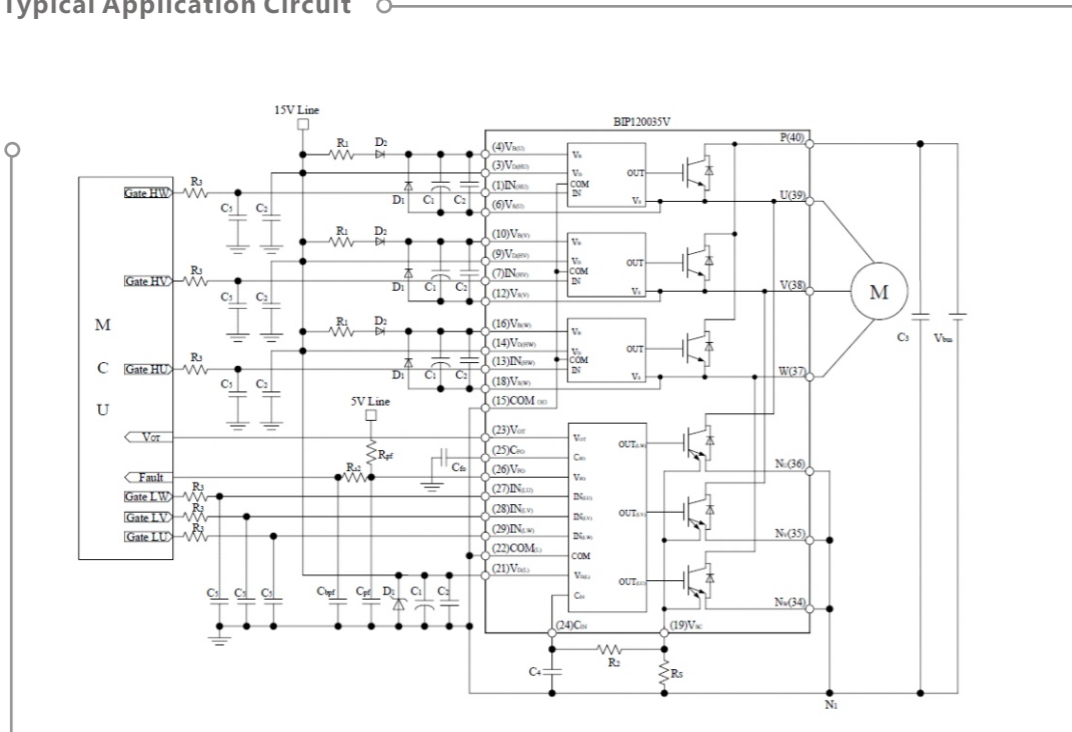
size : 79*31mm



34mm

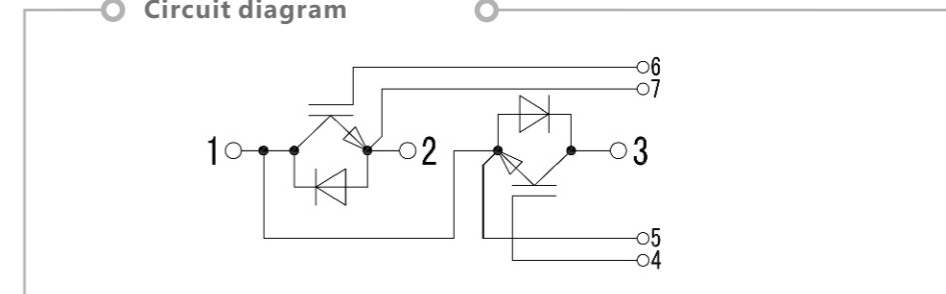
| | | | |
|-------------|--|-------------------------|-----------------------|
| Package | BIP30-7931 DBC | | |
| Part Number | BIP120035V BIP120035C | BIP120050 BIP120050C | BIP60050 BIP60050C |
| Feature | 35A/1200V | 50A/1200V | 50A/600V |
| Application | Commercial air-condition, Motor drive, Air-condition of green car | | Motor drive(220V) |

Typical Application Circuit



| Part Number | V _{CE(s)} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|----------------|---|--------------------|---|---|
| BG50B12UX3-I | 1200 | 50 | 2.50 | 2.70 |
| BG75B12UX3-I | 1200 | 75 | 2.84 | 2.87 |
| BG100B12UX3-I | 1200 | 100 | 2.80 | 4.90 |
| BG150B12UX2S-I | 1200 | 150 | 2.50 | 5.30 |
| BG50B12UX4-I | 1200 | 50 | 2.50 | 2.70 |
| BG75B12UX4-I | 1200 | 75 | 2.50 | 2.80 |
| BG100B12UX4-I | 1200 | 100 | 2.50 | 4.70 |
| BG150B12UX4-I | 1200 | 150 | 2.50 | 5.30 |

Circuit diagram



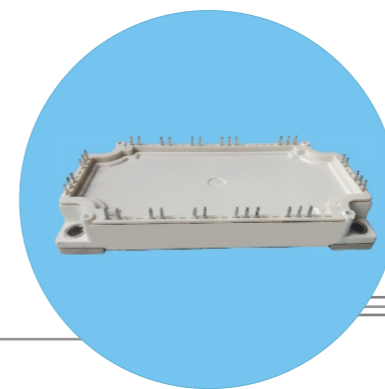
Application

Inverter welding, Eddy-current heating, UPS





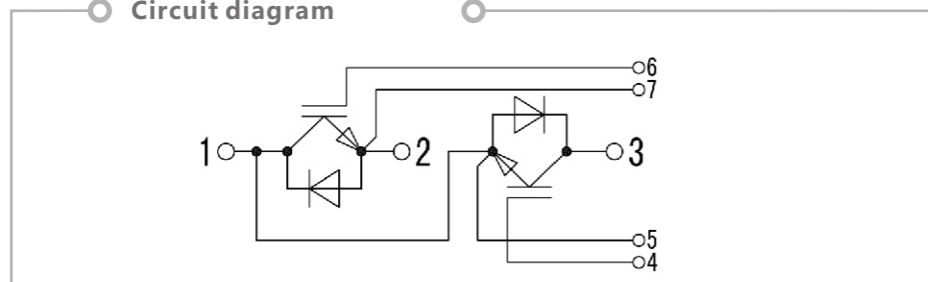
62mm



PIM

| Part Number | V _{CES} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|---------------|---|--------------------|---|---|
| BG150B12UY3-I | 1200 | 150 | 2.80 | 6.50 |
| BG200B12UY3-I | 1200 | 200 | 2.80 | 10.9 |
| BG300B12LY3-I | 1200 | 300 | 2.00 | 34.0 |
| BG400B12LY3-I | 1200 | 400 | 2.00 | 37.0 |
| BG100B12UY4-I | 1200 | 100 | 2.50 | 5.10 |
| BG150B12UY4-I | 1200 | 150 | 2.50 | 6.10 |
| BG200B12UY4-I | 1200 | 200 | 2.50 | 10.2 |
| BG300B12UY4-I | 1200 | 300 | 2.50 | 32.3 |
| BG450B12LY4-I | 1200 | 450 | 2.30 | 42.5 |

Circuit diagram



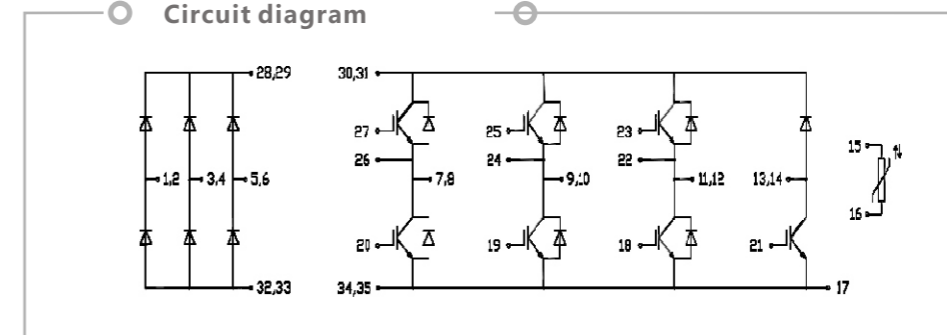
Application

Eddy-current heating, Inverter welding, Inverter



| Part Number | V _{CES} (V) @T _j =25°C | I _c (A) | V _{CE(sat)} (V) @T _j =25°C | E _{off} @T _j =25°C |
|---------------|---|--------------------|---|---|
| BG50P12LP4-I | 1200 | 50 | 2.05 | 2.80 |
| BG75P12LP4-1 | 1200 | 75 | 2.05 | 3.50 |
| BG100P12LP4-1 | 1200 | 100 | 2.05 | 5.20 |

Circuit diagram

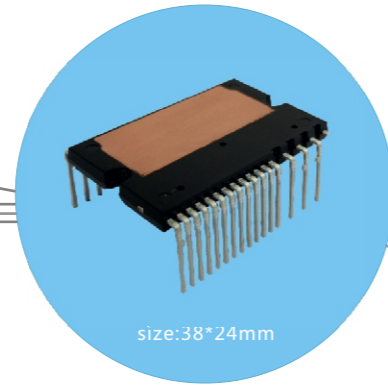


Application

Photovoltaic, Servo drive, Inverter

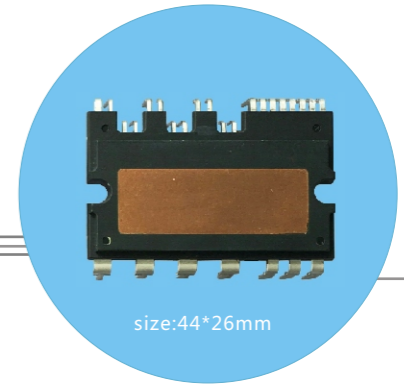


BIP25-3824 series



size:38*24mm

BIP27-4426 series

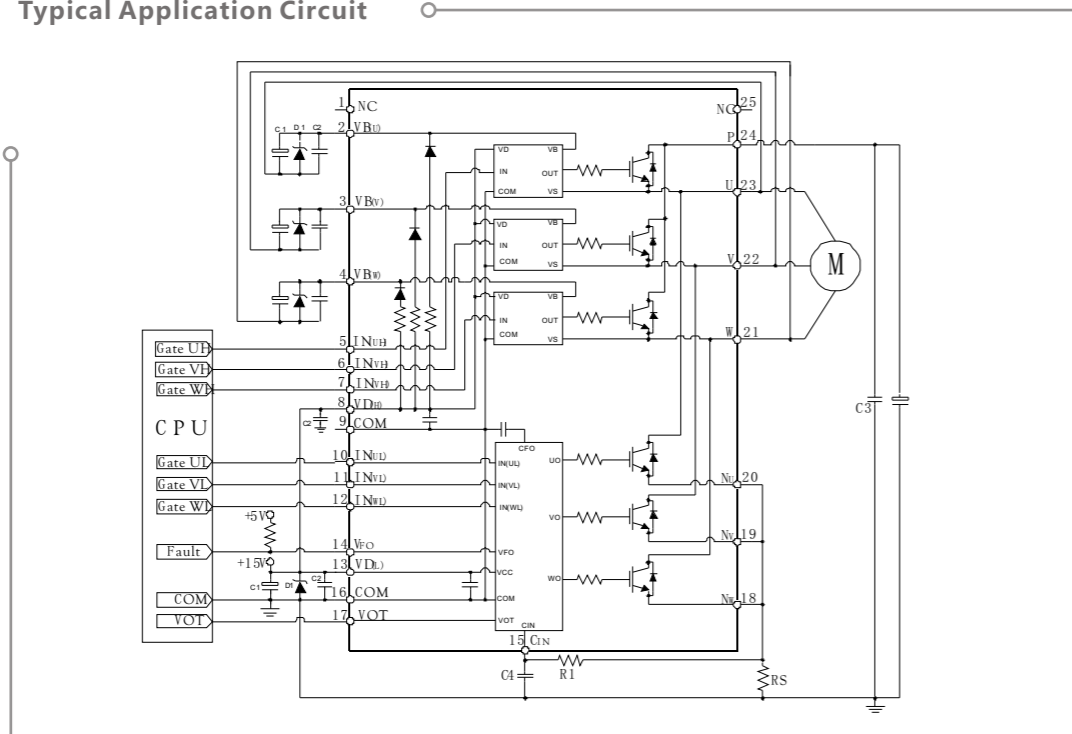


size:44*26mm

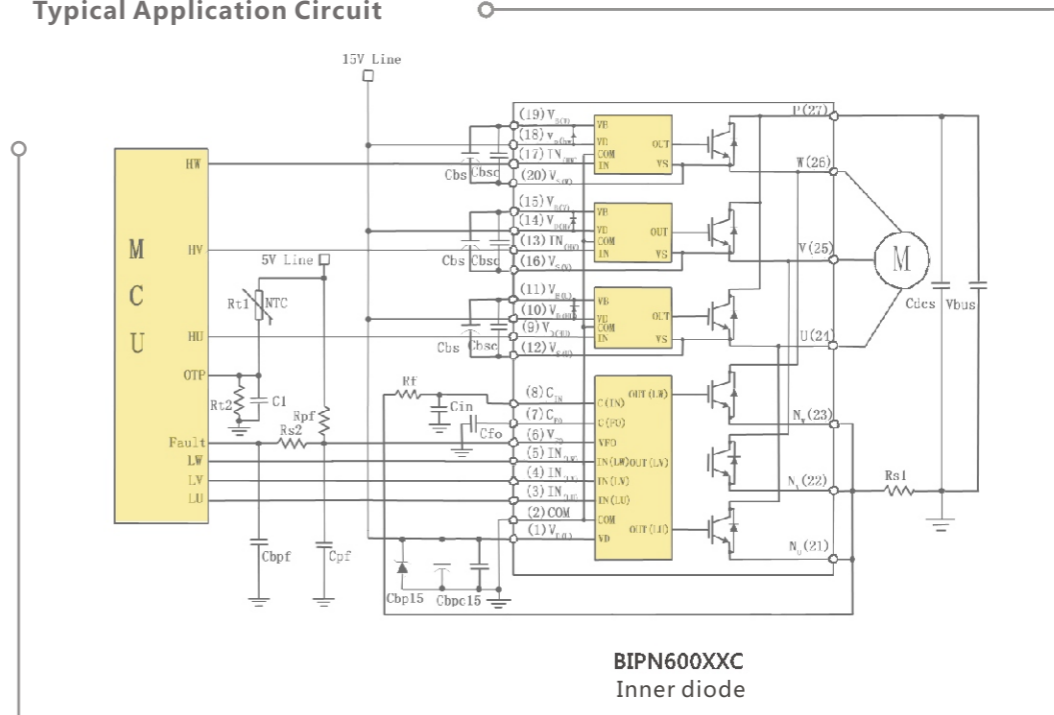
| | | |
|-------------|--|-----------|
| Package | BIP25-3824 | |
| Part Number | BIP60010G | BIP60015G |
| Feature | 10A/600V | 15A/600V |
| Application | white goods, Industrial sewing machine | |

| | | | |
|-------------|---|-----------|-----------|
| Package | BIP27-4426 DBC | | |
| Part Number | BIPN60015 | BIPN60020 | BIPN60030 |
| Feature | 15A/600V | 20A/600V | 30A/600V |
| Application | Frequently-alterable, Frequently converter, Industrial servo system, Stepping motor | | |

Typical Application Circuit



Typical Application Circuit

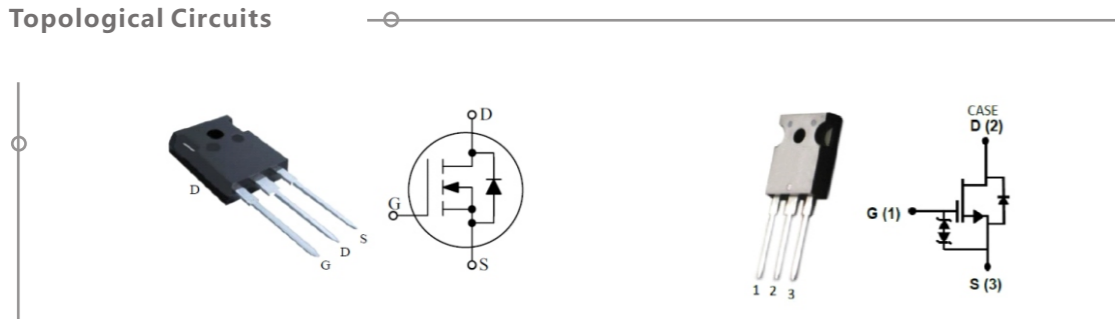


BIPN600XXC
Inner diode

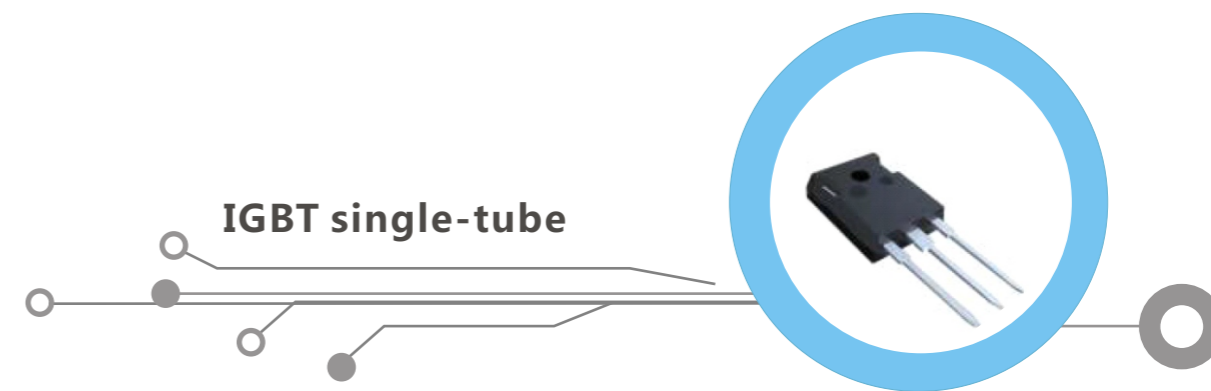
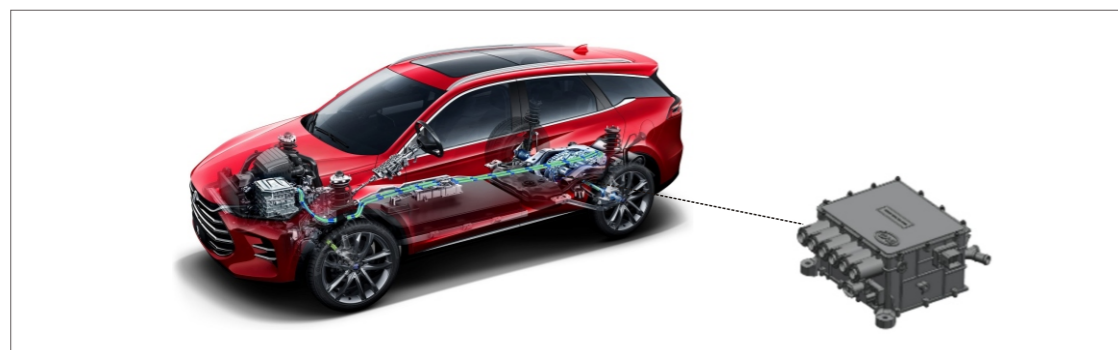


| Major Spec. | Drain-source breakdown voltage (V) | Continuous drain current Tc=25°C (A) | Drain-source onresistance (mΩ) | Package | remarks |
|--------------|------------------------------------|--------------------------------------|--------------------------------|----------|---------|
| B2SC80N120 | 1200 | 30 | 80 | TO247-3L | |
| BF980N120SNU | 1200 | 30 | 80 | TO247-3L | Cascode |
| BF940N120SNU | 1200 | 60 | 40 | TO247-3L | Cascode |
| BF150N120SNU | 1200 | 18 | 150 | TO247-3L | Cascode |
| BF980N65SNU | 650 | 31 | 80 | TO247-3L | Cascode |
| BF930N65SNU | 650 | 85 | 30 | TO247-3L | Cascode |

Topological Circuits

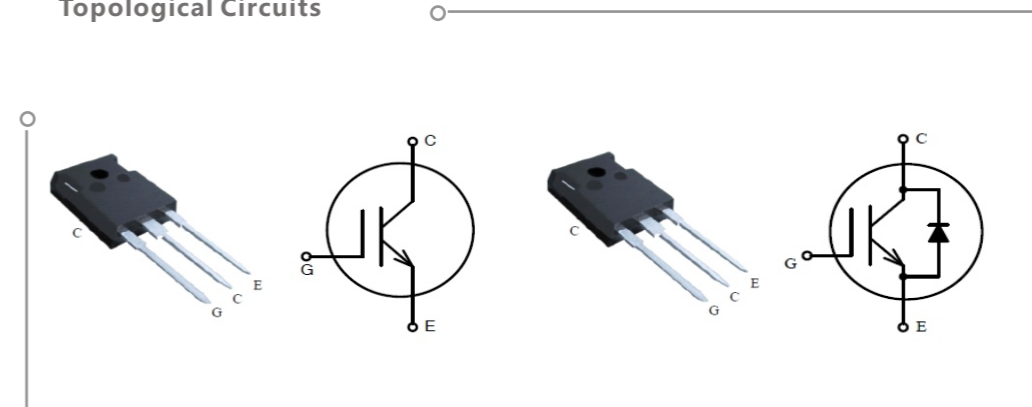


| Application | DCDC & OBC |
|-------------|------------|
|-------------|------------|



| Major Spec. | ollector-emitter voltage (V) | Collector current (A) | Collector-emitter saturation voltage (V) |
|-------------|------------------------------|-----------------------|--|
| BGN50T65SD | 650 | 50 | 1.6 |
| BGN50P120L | 1200 | 50 | 1.9 |
| BGN40Q120K | 1200 | 40 | 1.6 |
| BGN40Q120SD | 1200 | 40 | 2.1 |

Topological Circuits



| Application | Air conditioning compressor, PTC |
|-------------|----------------------------------|
|-------------|----------------------------------|

