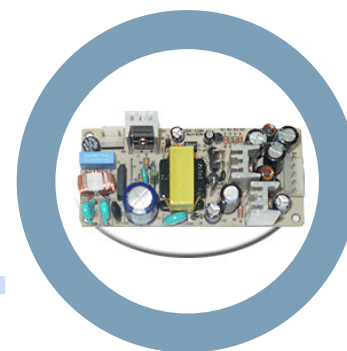


Power MOS-FET Selection Guide

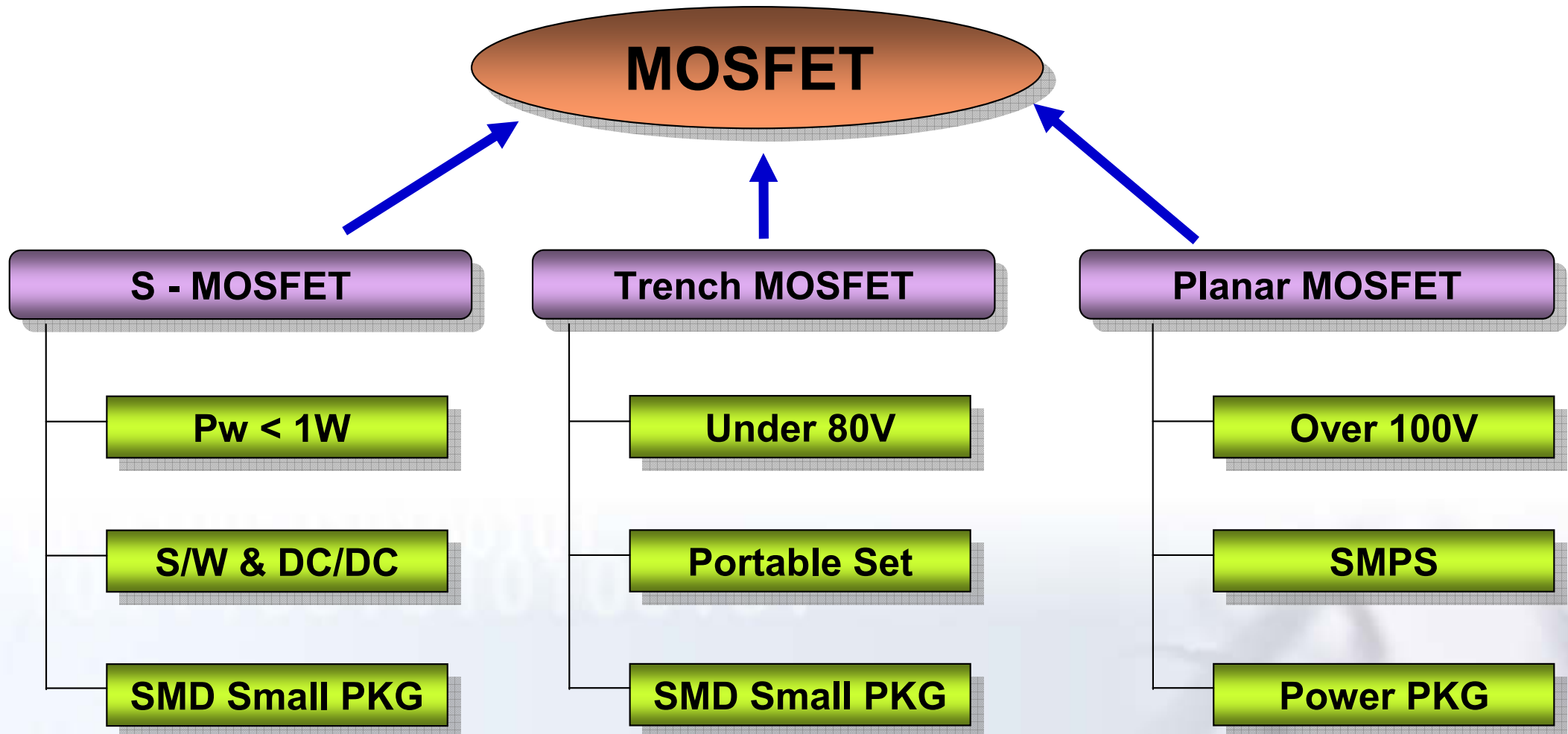
2007. First Version



Designsheet Live

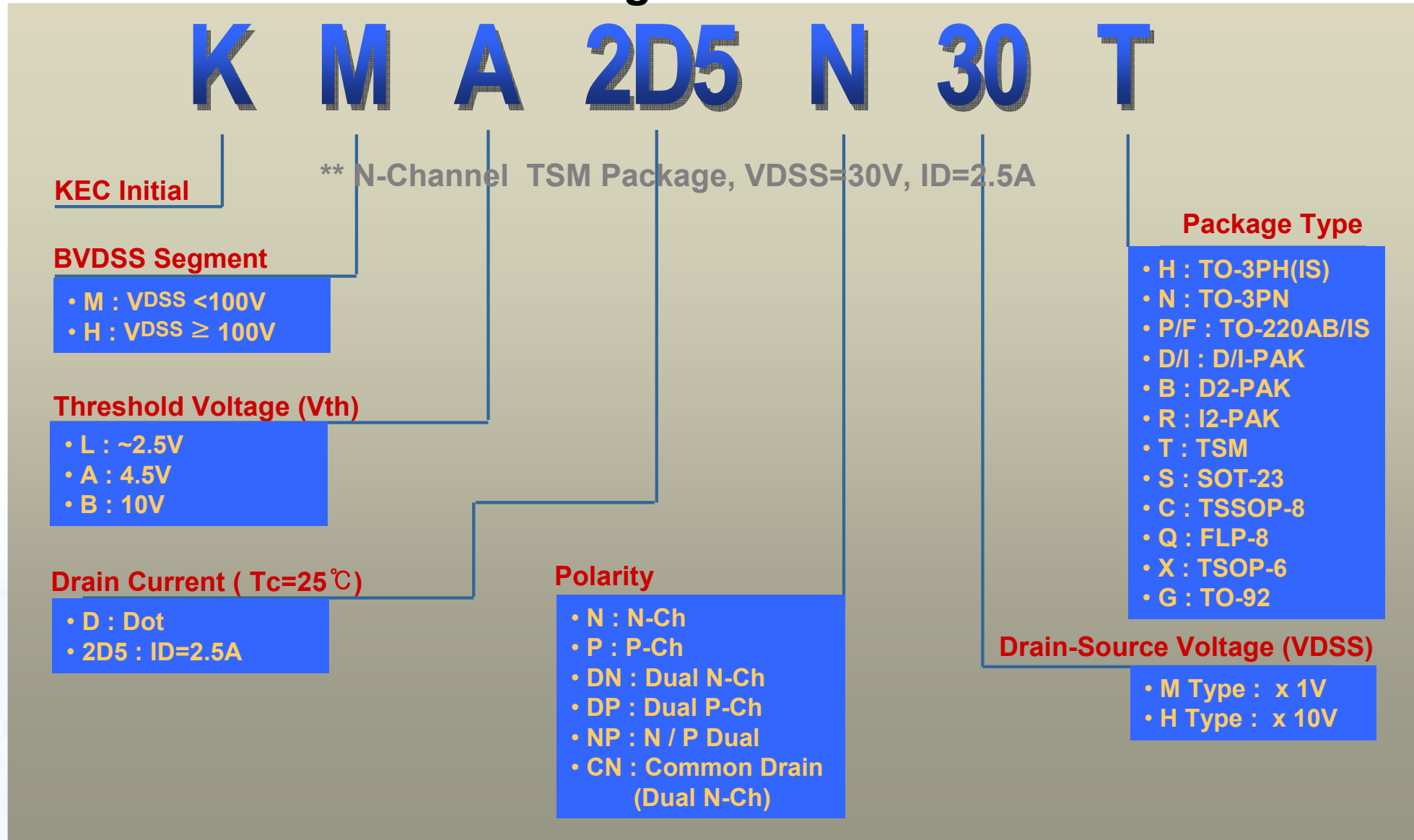
[Http://www.kec.co.kr](http://www.kec.co.kr)

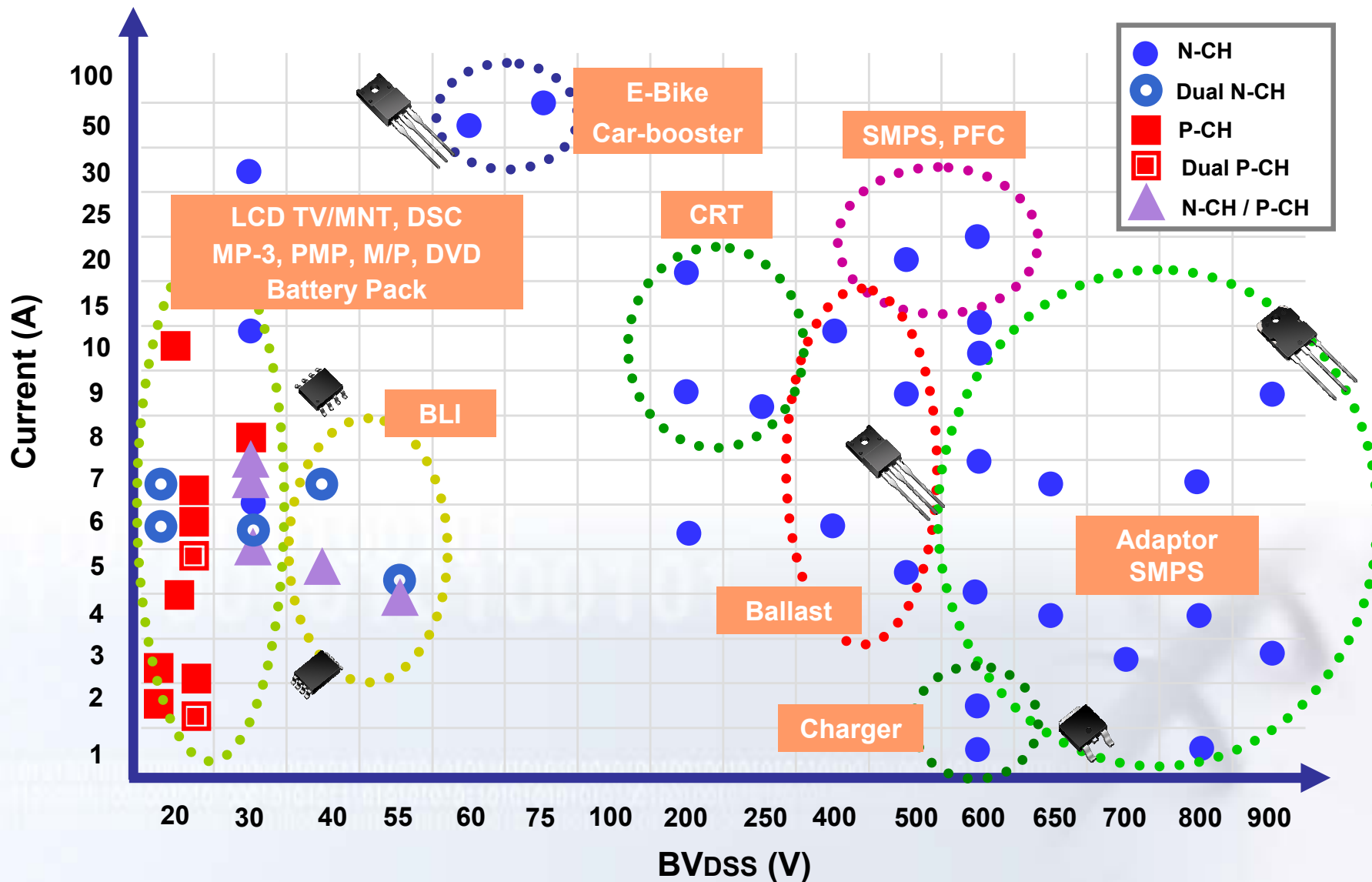
KEC-H Corp.



Parts Nomenclature

■ MOS-FET Part numbering Scheme





20V Line-up

| Part No. | Configuration | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (mΩ) | | | PKG | Application |
|-------------|---------------|--------------------------|-----------------------|------------------------|------------------------|---------------------------------|------|------|---------|-------------------------------------|
| | | | | | | 10V | 4.5V | 2.5V | | |
| KMC7D0CN20C | Dual N | 20 | 7 | ± 10 | 0.7 | - | 16.5 | 23 | TSSOP-8 | Battery Pack |
| KMA2D3P20S | Single P | -20 | -2.3 | ± 10 | -0.8 | - | 115 | 175 | SOT-23 | DSC, C/P |
| KMA2D4P20S | Single P | | -2.4 | ± 12 | -0.6 (min) | - | 88 | 146 | SOT-23 | DSC, C/P |
| KMA2D8P20X | Single P | | -2.8 | ± 12 | -0.8 | - | 75 | 125 | TSOP-6 | DSC, MP-3 |
| KMA4D5P20X | Single P | | -4.5 | ± 12 | -0.6 (min) | - | 49 | 85 | TSOP-6 | LCD TV/MNT PC Board Note-Book |
| KMA6D0P20X | Single P | | -6.0 | ± 12 | -0.6 (min) | - | 27 | 46 | TSOP-6 | |
| KMA6D5P20Q | Single P | | -6.5 | ± 12 | -0.6 (min) | - | 27 | 46 | FLP-8 | |
| KMA010P20Q | Single P | | -10 | ± 12 | -0.6 (min) | - | 11 | 18 | FLP-8 | |
| KMA2D0DP20X | Dual P | | -2 | ± 10 | -0.8 | - | 115 | 175 | TSOP-6 | |
| KMA5D8DP20Q | Dual P | | 5.8 | ± 12 | -0.6 (min) | - | 29 | 49 | FLP-8 | |

30V Line-up

| Part No. | Configuration | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (mΩ) | | | PKG | Application |
|--------------|---------------|--------------------------|-----------------------|------------------------|------------------------|---------------------------------|------|------|-------|------------------|
| | | | | | | 10V | 4.5V | 2.5V | | |
| KMB6D6N30Q | Single N | 30 | 6.6 | ± 20 | 1.7 | 20 | 42 | - | FLP-8 | DC/DC Con |
| KMB012N30Q | Single N | | 12 | ± 20 | 1.6 | 6 | 8.5 | - | FLP-8 | DC/DC Con |
| KMB030N30D | Single N | | 30 | ± 20 | 1.7 | 13 | 23 | - | DPAK | DC/DC Con |
| KMB6D0DN30Q | Dual N | | 6 | ± 20 | 1.7 | 27 | 52 | - | FLP-8 | Load S/W |
| KMB8D0P30Q | Single P | -30 | -8 | ± 25 | -1.6 | 15 | 22 | - | FLP-8 | Load S/W |
| KMB5D5NP30Q | Dual NP | 30 | 5.5 | ± 20 | 0.8 (min) | 40 | 50 | - | FLP-8 | BLI |
| | | -30 | -4.5 | ± 20 | -1.0 | 55 | 85 | - | | |
| KMB7D0NP30QA | Dual NP | 30 | 7.0 | ± 22 | 1.0 (min) | 18 | 30 | - | FLP-8 | BLI DC/DC Con |
| | | -30 | -4.5 | ± 22 | -1.0 (min) | 35 | 62 | - | | |

■ 40V~ 55V Line-up

| Part No. | Configuration | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (mΩ) | | | PKG | Application |
|-------------|---------------|--------------------------|-----------------------|------------------------|------------------------|---------------------------------|------|------|-------|-------------|
| | | | | | | 10V | 4.5V | 2.5V | | |
| KMB7D0DN40Q | Dual N | 40 | 7 | ± 25 | - | 25 | 45 | - | FLP-8 | BLI |
| KMB5D0NP40Q | Dual NP | 40 | 5 | ±20 | 2.0 | 25 | 45 | - | | |
| | | -40 | -4 | | -1.5 | 327 | 50 | - | | |
| KMB4D8DN55Q | Dual N | 55 | 4.8 | | 1.8 | 38 | 60 | - | | |
| KMB4D5NP55Q | Dual NP | 55 | 4.5 | | 2.0 | 40 | 75 | - | | |
| | | -55 | -3 | | -1.6 | 85 | 110 | - | | |

■ 60V~100V Line-up

| Part No. | General Device Name | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (Ω) | | | PKG | Application | Status |
|------------|---------------------------|--------------------------|-----------------------|------------------------|------------------------|--------------------------------|------|------|----------|-------------|---------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KMB050N60P | 50N06 | 60 | 50 | ± 20 | 2.0 (min) | 0.018 | - | - | TO-220AB | E-Bike | '07. 02 |
| KHM060N60P | 60N60 | 60 | 60 | ± 20 | 2.0 (min) | 0.014 | - | - | TO-220AB | Car Booster | '07. 05 |
| KMB075N75P | 75N75 | 75 | 75 | ± 20 | 2.0 (min) | 0.013 | - | - | TO-220AB | DC-DC Con. | '07. 02 |

| Part No. | Type | BVDSS (V) | ID (A) | VGS (V) | Vth (V) | RDS(ON) Max (mΩ) | | | PKG | Application | Status |
|--------------|----------|-----------|--------|---------|-----------|---------------------|------|------|--------|---------------------|---------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KMA2D7P20SA | Single N | 20 | 2.7 | ± 10 | 0.5(min) | - | 80 | 110 | SOT-23 | DSC DC-DC | '07. 01 |
| KMA3D0P20SA | | | 3 | ± 10 | 0.5(min) | - | 60 | 120 | SOT-23 | DSC DC-DC | |
| KMA3D6P20SA | | | 3.6 | ± 10 | 0.6(min) | - | 45 | 65 | SOT-23 | DSC DC-DC | |
| KMA3D4P20SA | Single P | -20 | -3.4 | ± 12 | -0.6(min) | - | 60 | 80 | SOT-23 | DSC L/S | |
| KMA4D7P20QA | Dual P | | -4.7 | ± 12 | -0.6(min) | - | 60 | 100 | FLP-8 | load switch | |
| KMB4D6N30SA | Single N | 30 | 5.8 | ± 20 | 1(min) | 28 | 43 | - | SOT-23 | Battery Pack (N/B) | |
| KMB012N30QA | | | 11.5 | ± 20 | 1(min) | 11 | 16 | - | FLP-8 | DC-DC (Low side) | |
| KMB015N30QA | | | 14.5 | ± 20 | 1(min) | 6 | 7.25 | - | FLP-8 | DC-DC (Low side) | |
| KMB6D0DN30QA | | | Dual N | 6 | ± 20 | 1(min) | 28 | 35 | - | FLP-8 | |
| KMB3D0P30SA | Single P | -30 | -3 | ± 20 | -1(min) | 80 | 140 | - | SOT-23 | LCD MODULE | |
| KMB010P30QA | | | -10 | ± 25 | -1.3(min) | 20 | 28 | - | FLP-8 | Battery Pack (N/B) | |
| KMB014P30QA | | | -14 | ± 25 | -1.4(min) | 10 | 18 | - | FLP-8 | Battery Pack (N/B) | |
| KMB7D1DP20QA | | | Dual P | -7.1 | ± 20 | -1(min) | 25 | 41 | - | FLP-8(D) | |
| KMB7D0NP30QA | Dual NP | 30 | 7 | ± 20 | 1(min) | 28 | 40 | - | FLP-8 | BLI | |
| | | -30 | -5 | ± 20 | -1(min) | 52 | 80 | - | | | |
| KMB7D0DN40QA | Dual N | 40 | 7 | ± 25 | 1(min) | 25 | 45 | - | FLP-8 | BLI | |
| KMB010N40DA | Single N | | 10 | ± 20 | 1(min) | 55 | 80 | - | D-PAK | LCD-M BLI(P-P) | |
| KMB8D2N60QA | Single N | 60 | 8.2 | ± 20 | 1(min) | 22 | 27 | - | FLP-8 | LCD BLI | |
| KMB010N60DA | | | 10 | ± 20 | 1(min) | 35 | 60 | - | D-PAK | LCD-M BLI(P-P) | |

| Part No. | Type | BVDSS (V) | ID (A) | VGS (V) | Vth (V) | RDS(ON) Max (mΩ) | | | PKG | Application | Status |
|---------------|----------|-----------|--------|---------|-----------|---------------------|------|------|------------|----------------------------|--------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KMB12D0N40DA | Single N | 40 | 12 | ± 20 | 1(min) | 33 | 47 | - | DPAK | BLI | '07 02 |
| KMB54D0N40DA | Single N | 40 | 54 | ± 20 | 1(min) | 8.5 | 11 | - | DPAK | BLI, Power supply | |
| KMB6D0NP40QA | Dual NP | 40 | 6/-5 | ± 20 | 1(min) | 23 | 32 | | FLP-8 | BLI | |
| KMB8D0NP40DA | Dual NP | 40 | 8/-8 | ± 20 | 1(min) | 27 | 37 | | DPAK-5 | BLI | |
| KMA15D0NP40DA | Dual NP | 40 | 15/-12 | | | | | | DPAK-5 | Built in BLI/ESD | |
| KML1D8P20XA | Single P | -20 | - 1.8 | ± 12 | -0.5(min) | - | 200 | 340 | TSOP-6 | DC-DC Con. SBD built in | '07 03 |
| KML3D5P20CA | Single P | -20 | -3.5 | ± 12 | -0.6(min) | - | 45 | 75 | TSSOP-8 | DC-DC/ SBD built in | |
| KMB8D8P30CA | Single P | -30 | - 8.8 | ± 20 | -1(min) | - | 12 | 19 | TSSOP-8 | NB Battery pack | |
| KMB46D0N30QA | Single N | 30 | 46 | ± 12 | 1(min) | 10.5 | 12.5 | - | FLP-8(B/D) | DC-DC for NB | |
| KMA3865DV | Dual NP | 8 | ± 2.7 | - | - | - | 80 | 110 | TSOP-6 | Load SW (Level shift) | '07 04 |
| KMA6326L | Dual NP | 20 | 1.8 | | | 125 | - | - | TSOP-6 | Load SW | |
| KML2D0N30TA | Single N | 30 | 2 | ± 12 | 0.5(min) | - | 100 | 154 | TSM-5 | DSC, DC-DC | |
| KMB17D0N30QA | Single N | 30 | 17 | ± 20 | 1(min) | 6 | 8.5 | - | FLP-8 | DC-DC | |
| KMB085N30QA | Single N | 30 | 85 | ± 20 | 1(min) | 4 | 6 | - | FLP-8(B/D) | DC-DC for NB | |
| KML3D4DN30XA | Dual N | 30 | 3.4 | ± 12 | 0.6(min) | 60 | 75 | - | TSOP-6 | BLI | '07 05 |
| FDC633N | Single N | 30 | 5.2 | ± 8 | 0.4(min) | | 33 | 43 | TOP-6 | DSC | |
| KMB11D0N30QA | Single N | 30 | 11 | ± 20 | 1(min) | 12 | 17.5 | - | FLP-8 | DC-DC Con. | |
| KMB40D0N30PA | Single N | 30 | 40 | ± 20 | 1(min) | 22 | 35 | - | TO-220 | PC server | |
| KML4D2N20SA | Single N | 20 | 4.2 | ± 12 | 0.6(min) | - | 45 | 80 | SOT-23 | MP3, DSC | |
| KML8D3P20QA | Single P | -20 | -8.3 | ± 8 | -0.4(min) | - | 16 | 21 | FLP-8 | DC-DC | '07 09 |
| KML5D5P20XA | Single P | -20 | -5.5 | ± 8 | -0.4(min) | - | 33 | 43 | TSOP-6 | Mobile | |
| KMB59D0N35DA | Single N | 35 | 59 | ± 20 | 1(min) | 10 | 13 | - | D-PAK | BLI, Power supply | |
| KML11D0N40QA | Single N | 40 | 11 | ± 12 | 0.8(min) | - | 13 | - | FLP-8 | BLI, DC-DC | |
| KMB12D0P40DA | Single P | -40 | -12 | ± 20 | -1(min) | 45 | 69 | - | D-PAK | BLI | |
| KML4D3P12SA | Single P | -12 | -4.3 | ± 8 | -0.4(min) | - | 50 | 85 | SOT-23 | MP3, DSC | '07 12 |

200V Line-up

| Part No. | General Device Name | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (Ω) | | | PKG | Application | Status |
|--------------|---------------------|-----------------------|--------------------|---------------------|---------------------|-----------------------------|------|------|---------------|-------------|---------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KHB5D0N20D/I | - | 200 | 5.0 | ± 20 | 2.0 (min) | 0.8 | - | - | D / I-PAK | LED Driver | '07. 12 |
| KHB9D5N20P/F | 630 | | 9.5 | ± 30 | 2.0 (min) | 0.345 | - | - | TO-220AB / IS | CRT TV | M/P |
| KHB019N20P/F | 640 | | 19.0 | ± 30 | 2.0 (min) | 0.14 | - | - | | | |
| KHB8D8N25P/F | 634 | 250 | 8.8 | ± 30 | 2.0 (min) | 0.36 | - | - | | | |

400V~500V Line-up

| Part No. | General Device Name | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (Ω) | | | PKG | Application | Status |
|------------------|---------------------|-----------------------|--------------------|---------------------|---------------------|-----------------------------|------|------|----------------------------|-------------|---------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KHB6D0N40P/F | 730 | 400 | 6.0 | ± 30 | 2.0 (min) | 0.9 | - | - | TO-220AB / IS | Ballast | M/P |
| KHB011N40P1/F1 | 740 | | 11 | ± 30 | 2.0 (min) | 0.5 | - | - | | | M/P |
| KHB2D0N50D/I/P/F | - | 500 | 2.1 | ± 30 | 2.0 (min) | 5.4 | - | - | D / I-PAK TO-220AB / IS | Ballast | '07. 08 |
| KHB5D0N50D/I | - | | 5.0 | ± 30 | 2.0 (min) | 2.7 | - | - | D / I-PAK | | '07. 08 |
| KHB013N50P/F | - | | 12.5 | ± 30 | 2.0 (min) | 0.43 | - | - | TO-220AB / IS | SMPS | '07. 08 |
| KHB5D0N50P/F | 830 | | 5.0 | ± 30 | 2.0 (min) | 1.24 | - | - | | Ballast | M/P |
| KHB9D0N50P/F | 840 | | 9.0 | ± 30 | 2.0 (min) | 0.65 | - | - | | M/P | |
| KHB020N50 | 20N50 | | 20 | ± 30 | - | - | - | - | | SMPS | '07. 08 |

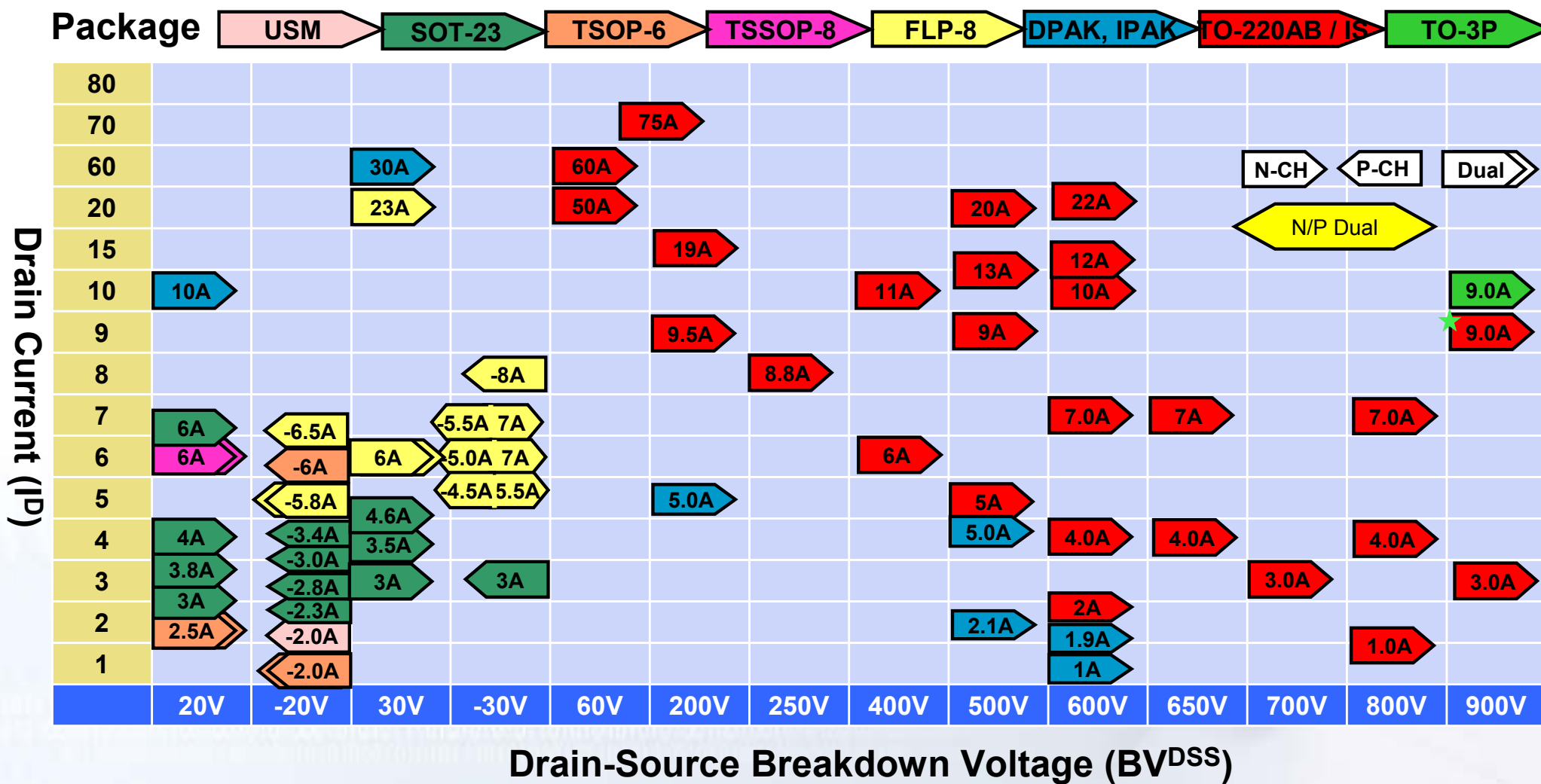
600V ~ 700V Line-up

| Part No. | General Device Name | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (Ω) | | | PKG | Application | Status |
|---------------------|---------------------|-----------------------|--------------------|---------------------|---------------------|-----------------------------|------|------|---------------|----------------|---------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KHB0D35N60G | 1N60 | 600 | 0.3 | ± 30 | 2.0 (min) | 11.5 | - | - | TO-92 | Charger | '07. 07 |
| KHB1D0N60D/I | 1N60 | | 1.0 | ± 30 | 2.0 (min) | 9.7 | - | - | DPAK/IPAK | Charger | M/P |
| KHB1D9N60D/I | 2N60 | | 1.9 | ± 30 | 2.0 (min) | 3.8 | - | - | DPAK/IPAK | Charger | M/P |
| KHB2D0N60P/F | 2N60 | | 2.0 | ± 30 | 2.0 (min) | 3.8 | - | - | TO-220AB / IS | Charger | M/P |
| KHB4D5N60P/F | 4N60 | | 4.5 | ± 30 | 2.0 (min) | 2.2 | - | - | TO-220AB / IS | SMPS, Ballast | M/P |
| KHB7D5N60P1/F1 | 7N60 | | 7.5 | ± 30 | 2.0 (min) | 1.0 | - | - | TO-220AB / IS | SMPS, Ballast | M/P |
| KHB010N60P/F | 10N60 | | 9.5 | ± 30 | 2.0 (min) | 0.73 | - | - | TO-220AB / IS | SMPS | '07. 08 |
| KHB012N60P/F | 12N60 | | 12 | ± 30 | 2.0 (min) | 0.65 | - | - | TO-220AB / IS | SMPS | '07. 08 |
| KHB022N60P/F | 22N60 | | 22 | ± 30 | 2.0 (min) | 0.3 | - | - | TO-220AB / IS | SMPS | '07. 05 |
| KHB4D0N65P/F | 4N65 | | 650 | 4.0 | ± 30 | 2.0 (min) | 2.2 | - | - | TO-220AB / IS | SMPS |
| KHB7D0N65P1/F1 | 7N65 | 7.0 | | ± 30 | 2.0 (min) | 1.2 | - | - | TO-220AB/IS | SMPS , PFC | M/P |
| KHB3D0N70P/F | 3N70 | 700 | 3.0 | ± 30 | 2.0 (min) | - | - | - | TO-220AB/IS | Stand-by Power | M/P |

■ 800V ~ 900V Line-up

| Part No. | General Device Name | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | V _{th} (V) | R _{DS(ON)} Typ (Ω) | | | PKG | Application | Status |
|----------------|---------------------|-----------------------|--------------------|---------------------|---------------------|-----------------------------|------|------|-------------|-------------|---------|
| | | | | | | 10V | 4.5V | 2.5V | | | |
| KHB1D2N80 | 1N80 | 800 | 1.2 | ± 30 | 2.0 (min) | 16 | - | - | TO-220IS | Charger | '07. 03 |
| KHB4D0N80P1/F1 | 4N80 | | 4 | ± 30 | 2.0 (min) | 3.0 | - | - | TO-220AB/IS | SMPS | M/P |
| KHB7D0N80P1/F1 | 7N80 | | 7.0 | ± 30 | 2.0 (min) | 1.25 | - | - | TO-220AB/IS | | M/P |
| KHB3D0N90P1/F1 | 3N90 | 900 | 3.0 | ± 30 | 2.0 (min) | 4.0 | - | - | TO-220AB/IS | | M/P |
| KHB9D0N90P1/F1 | 9N90 | | 9.0 | ± 30 | 2.0 (min) | 1.12 | - | - | TO-220AB/IS | | M/P |
| KHB9D0N90N1 | 9N90 | | 9.0 | ± 30 | 2.0 (min) | 1.12 | - | - | TO-3P | | M/P |

Product Line-up Table (2006)






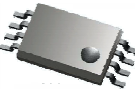

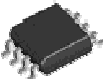






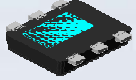

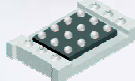
Long Term MOS-FET Process Road-map (1)

| | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------------------|--|---|---|--------------|------------|
| LV MOS (Trench) | <p>N 30V</p> <p>P 30V</p> <p>N 40V</p> <p>N20V / P20V</p> <p>20~30V N.P-Ch</p> | <p>1st Gen.</p> <p>N12/60V</p> <p>P12 / P60V</p> | <p>2nd Gen.</p> <p>(Low Rds(on) & Qg , Built in SBD)</p> <p>Automotive : 60V~150V</p> | | |
| HV MOS (Planar) | <p>200~900V</p> | <p>500~700V Cool MOS</p> | <p>Planar MOSFET 2nd Gen (Lower Rds (on) & Qg)</p> <p>IGBT for 600V 40~80A (IH, motor) 300V 80 ~150A (PDP)</p> | | |
| Package | <p>FLP-8</p> <p>TSSOP-8</p> <p>TSOP-6 (TS6)</p> <p>SOT-23</p> | <p>TSSOP-8</p> <p>TSOP-6</p> <p>FLP-8</p> | <p>SC70-8JW</p> <p>SC70-6 (US6)</p> <p>TO-264</p> <p>TO-3P</p> | <p>SC-75</p> | <p>BGA</p> |

■ Long Term MOS-FET Process Road-map (2)

| | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------|--|---------------------------------|----------------|------|------|
| S-MOSFET | <p>N/P-Ch (60V)</p> <p>Trench N/P-Ch (20~60V/ ~ 1A)</p> <p>Complex type S-MOSFET Line-up</p> | | | | |
| RF-MOSFET | <p>TV Tuner</p> <p>Audio Tuner</p> | <p>RF-Modulator</p> | <p>Line-up</p> | | |
| Package | <p>USV/6</p> <p>TESV/6</p> <p>TSQ</p> | <p>Leadless PKG (3/4/6 Pin)</p> | | | |

Long Term MOS-FET Package Road-map

| Year | 2006 | 2007 | 2008 |
|--------------------|---|--|---|
| Small & Thin |  Leadless(3Pin) 1.0X0.6X0.28  TSV 2.9X1.6X0.7 | | |
| Multi Channel |  Leadless(4,5,6Pin) 1.0X0.6X0.28  TSSOP-8 5.0X4.4X1.0  TSOP-5/6 Flat Lead |  MSOP-8  QFN16  QFN20 | |
| High Power Density |  MSF 3.8X2.4X0.98  TFP 9.2X9.2X3.0 |  SOT-223 6.5X3.5X1.8  LSF 4.5X2.5X1.7  TSOP-6 FLMP |  SC75 FLMP  BGA PW MOS FET |

APPLICATION

Portable Device

LCD MNT / TV

CRT TV

Battery Pack

Electric Ballast

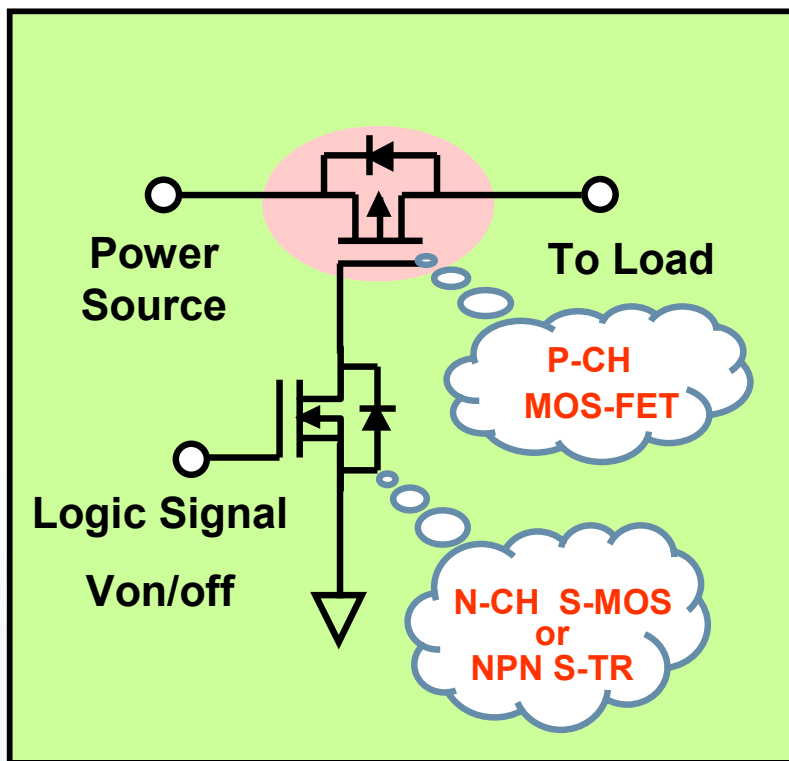
SMPS

CCFL BLI

Car booster

Portable Device (M/P, MP-3, DSC, LCD TV)

Load Switch Schematic

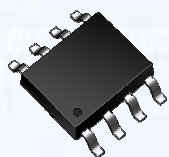


- The RDS(ON) of the P Channel MOS-FET is Very Low

< 0.04Ω

- Direct Control of Load Switch is possible using MCU Signal

| Part Num. | Type | BV _{DSS} | I _D | Package | Status |
|-------------|----------|-------------------|----------------|---------|--------|
| KMA2D4P20S | Single P | -20V | -2.4A | SOT-23 | M/P |
| KMA2D8P20X | Single P | -20V | -2.8A | TSOP-6 | M/P |
| KMA4D5P20X | Single P | -20V | -4.5A | TSOP-6 | 06.06 |
| KMA6D0P20X | Single P | -20V | -6.0A | TSOP-6 | M/P |
| KMA6D5P20Q | Single P | -20V | -6.5A | FLP-8 | M/P |
| KMA010P20Q | Single P | -20V | -10A | FLP-8 | 06.06 |
| KMA2D0DP20X | Dual P | -20V | -2A | TSOP-6 | M/P |
| KMA5D8DP20Q | Dual P | -20V | 5.8A | FLP-8 | M/P |



FLP-8

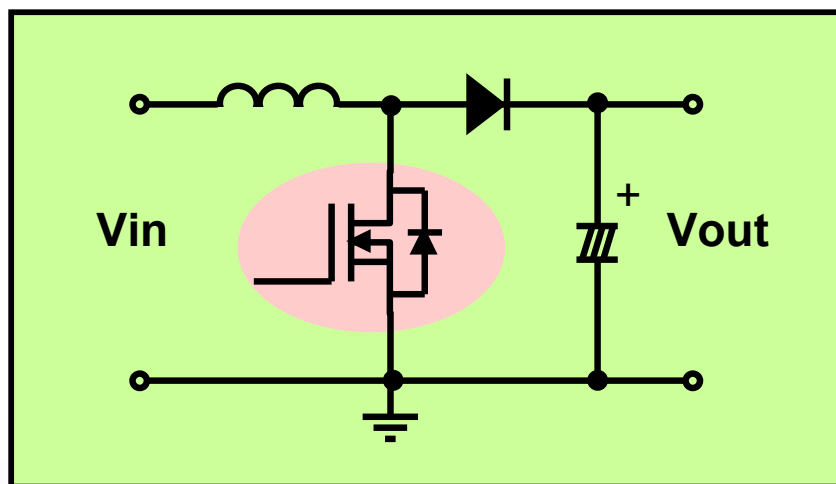


TSOP-6

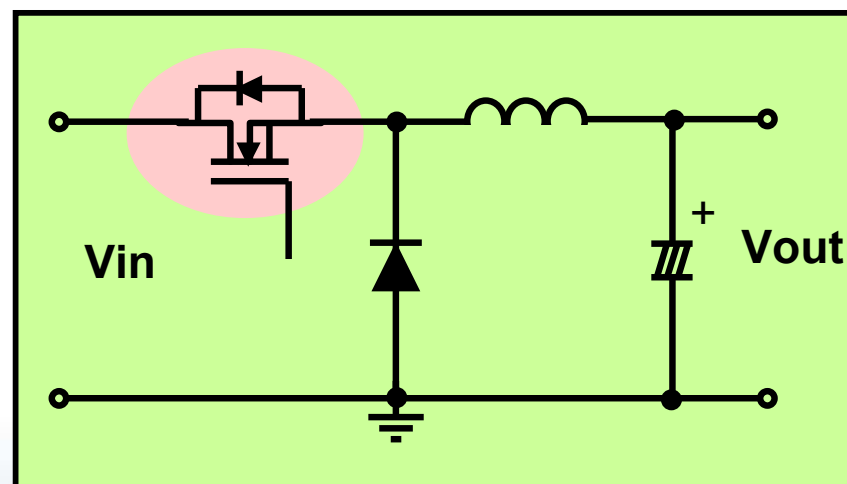
Portable Device (M/P, MP-3, DSC, LCD TV)

DC/DC Converter Switch

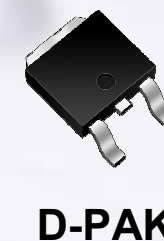
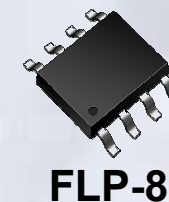
Step-up Converter



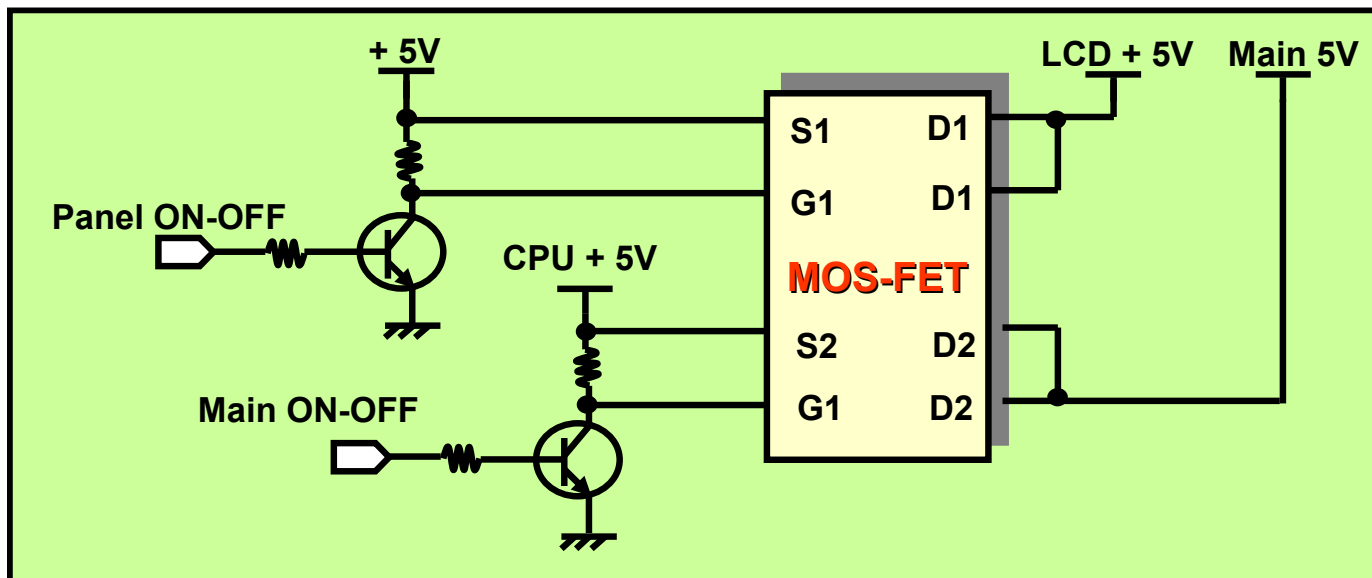
Step-Down Converter



| Part Num. | Type | BV _{DSS} | I _D | Package | Status |
|------------|----------|-------------------|----------------|---------|--------|
| KMB6D6N30Q | Single N | 30V | 6.6A | FLP-8 | M.P |
| KMB012N30Q | Single N | 30V | 12A | FLP-8 | M.P |
| KMB030N30D | Single N | 30V | 30A | DPAK | M.P |

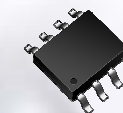


LCD MNT / TV



LCD Panel ON/OFF Control

| Part Num. | BV _{DSS} | I _D | R _{DS(ON)} V _{GS} =2.5V | Package | Polarity |
|-------------|-------------------|----------------|--|---------|-----------|
| KMA5D8DP20Q | -20V | -5.8A | 36mΩ | FLP-8 | Dual P-CH |



FLP-8

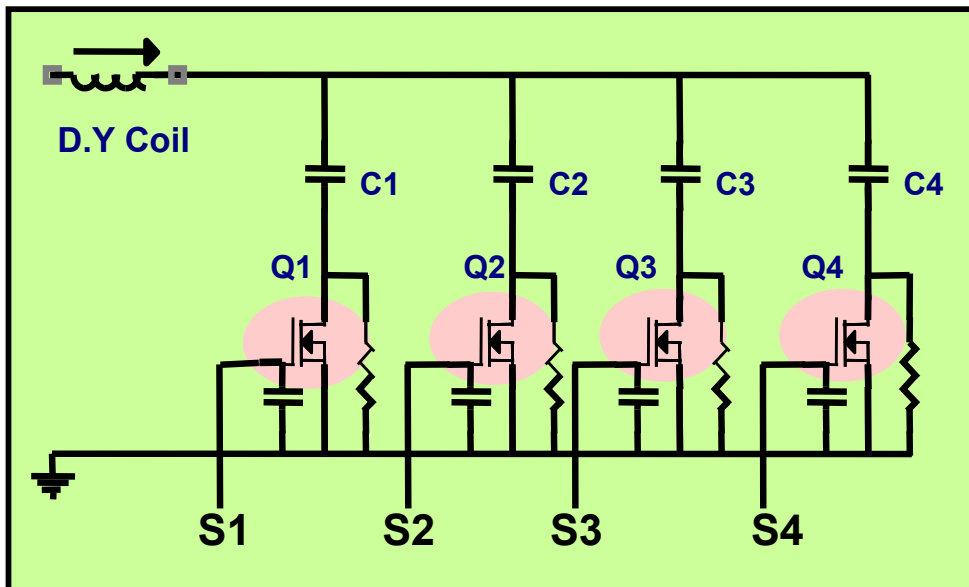
SMPS PFC

| Part Num. | BV _{DSS} | I _D | R _{DS(ON)} | Package | Polarity |
|--------------|-------------------|----------------|---------------------|-------------|-------------|
| KHB9D0N50P/F | 500V | 9.0A | 0.65Ω | TO-220IS/AB | Single N-CH |
| KHB020N50 | 500V | 20A | - | TO-220AB | Single N-CH |



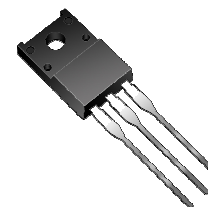
TO220-AB

■ CRT TV

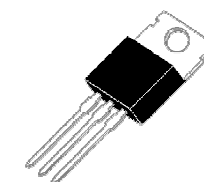


S-Correction

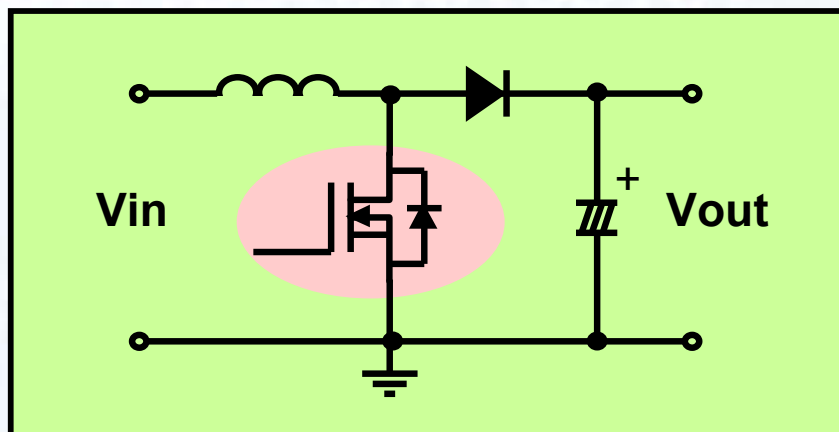
| Part Num. | IRF | BV _{DSS} | I _D | R _{DS} (ON) | Package |
|--------------|-----|-------------------|----------------|----------------------|-------------|
| KHB9D5N20P/F | 630 | 200V | 9.0A | 0.4 | TO-220AB/IS |



TO220-IS



TO220-AB

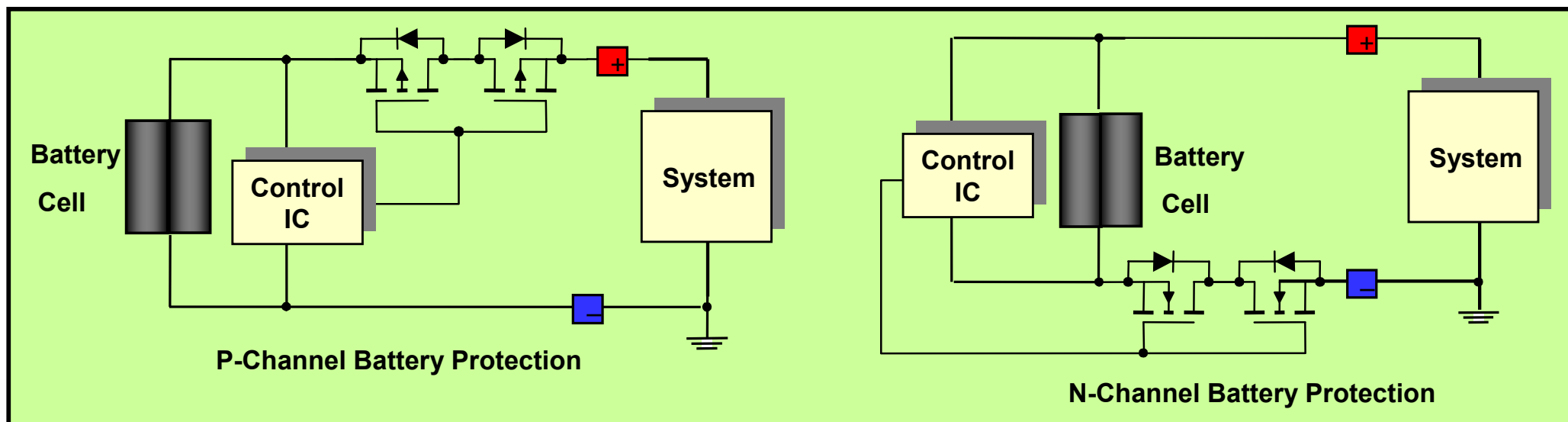


Step-up Converter

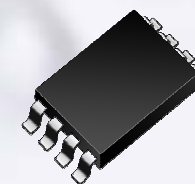
| Part Num. | IRF | BV _{DSS} | I _D | R _{DS} (ON) | Package |
|--------------|-----|-------------------|----------------|----------------------|-------------|
| KHB8D8N25P/F | 634 | 250V | 8.8A | 0.45 | TO-220AB/IS |
| KHB018N20P/F | 640 | 200V | 18.0A | 0.18 | TO-220AB/IS |

Battery Pack

Battery Protector Circuit



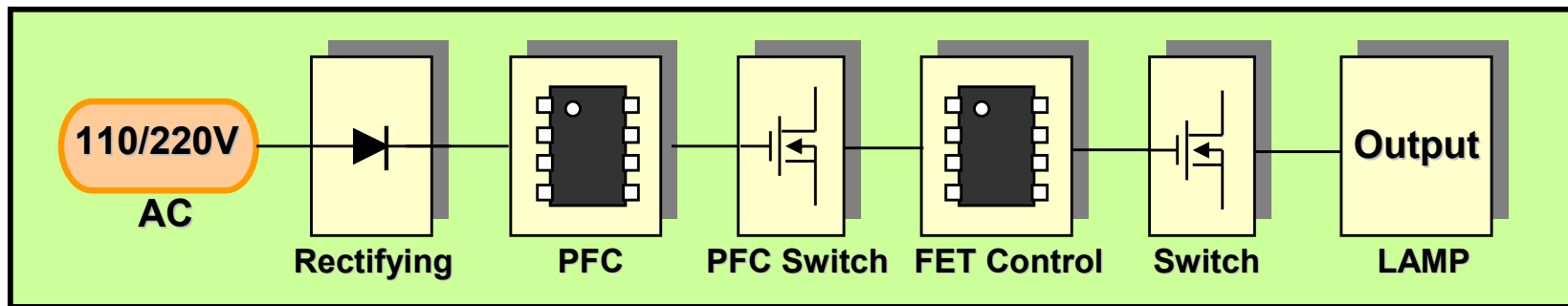
| Part Num. | Type | BV _{DSS} | I _D | R _{DS (ON)} | Package | Remark |
|-------------|-------------------|-------------------|----------------|----------------------|---------|----------------------|
| KMC7D0CN20C | Common Drain N-CH | 20 | 7 | 16.5mΩ | TSSOP-8 | Internal Zener Diode |



TSSOP-8

More Thin Package

Electric Ballast

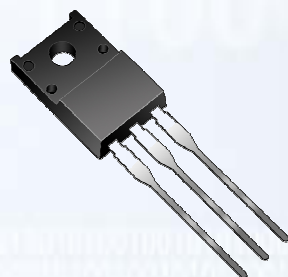


PFC Switch

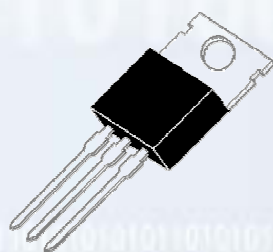
| Part Num. | IRF | BV _{DSS} | I _D | Status |
|--------------|------|-------------------|----------------|--------|
| KHB5D0N50P/F | 830 | 500V | 5.0A | M.P |
| KHB9D0N50P/F | 840 | 500V | 9.0A | M.P |
| KHB7D5N60P/F | 7N60 | 600V | 7.5A | M.P |

Switching

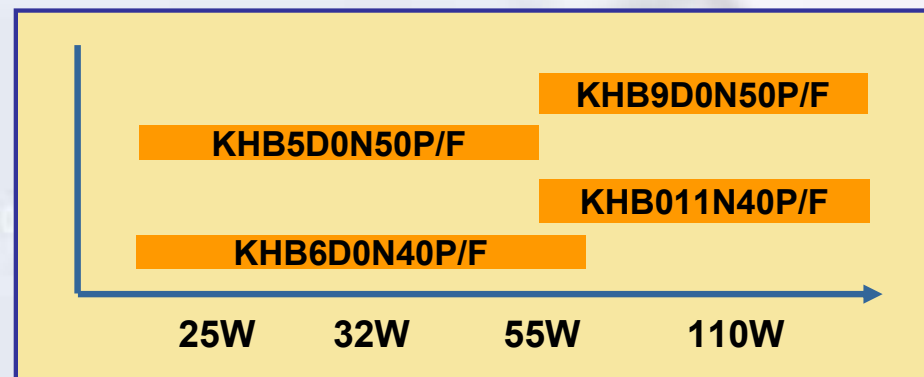
| Part Num. | IRF | BV _{DSS} | I _D | Status |
|--------------|-----|-------------------|----------------|--------|
| KHB6D0N40P/F | 730 | 400V | 6.0A | M.P |
| KHB011N40P/F | 740 | 400V | 11A | M.P |
| KHB5D0N50P/F | 830 | 500V | 5.0A | M.P |
| KHB9D0N50P/F | 840 | 500V | 9.0A | M.P |



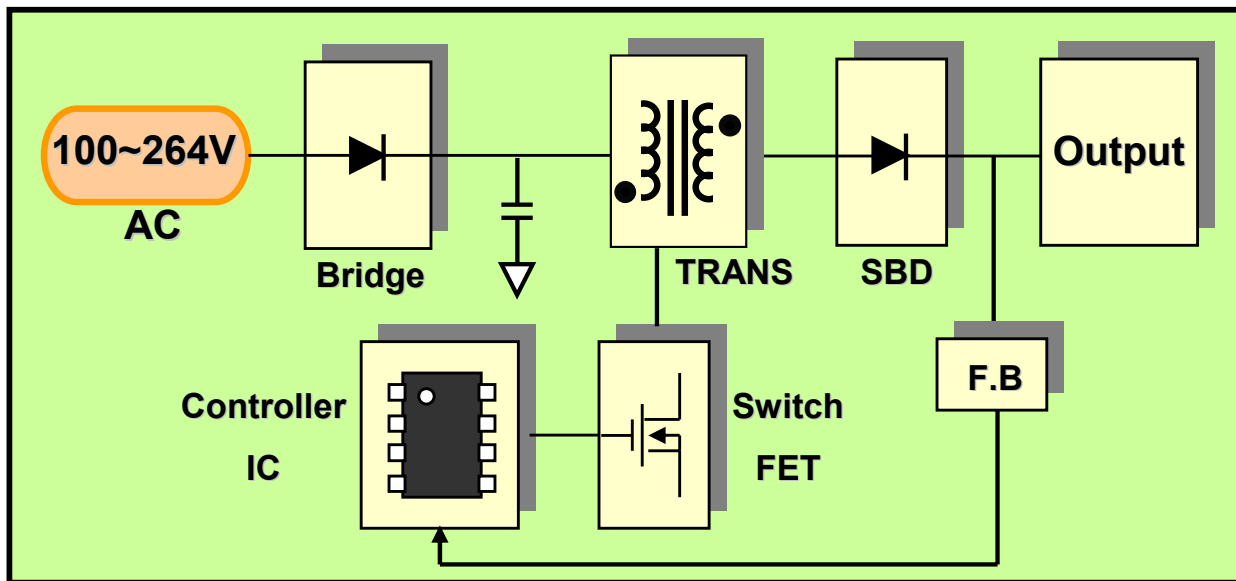
TO220-IS



TO220-AB

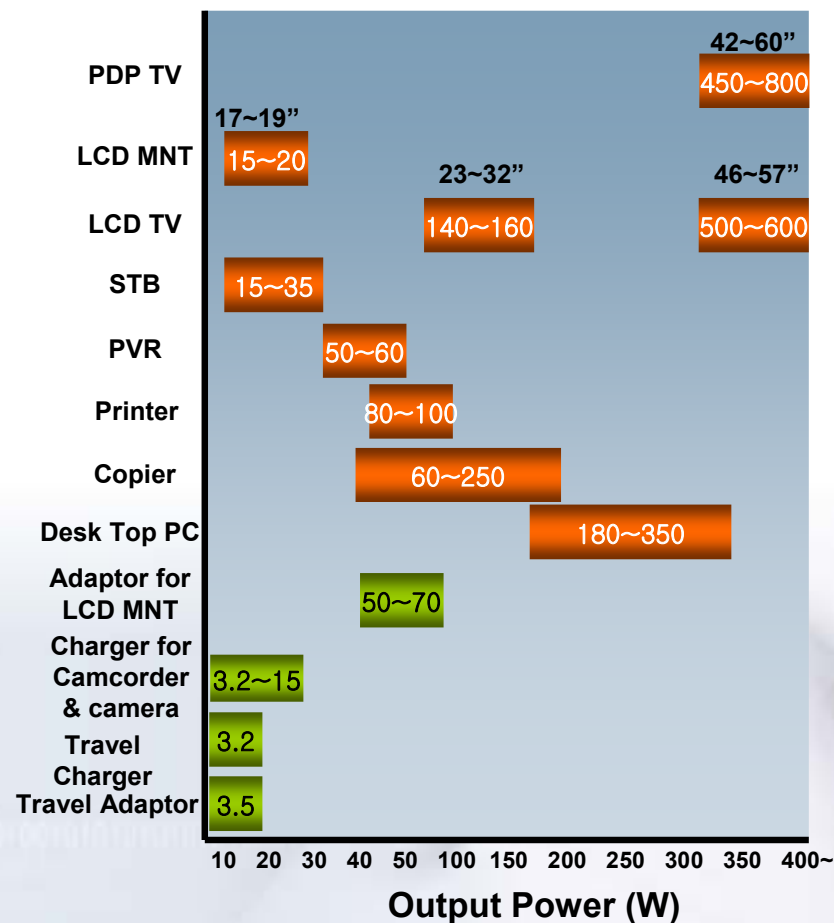


SMPS



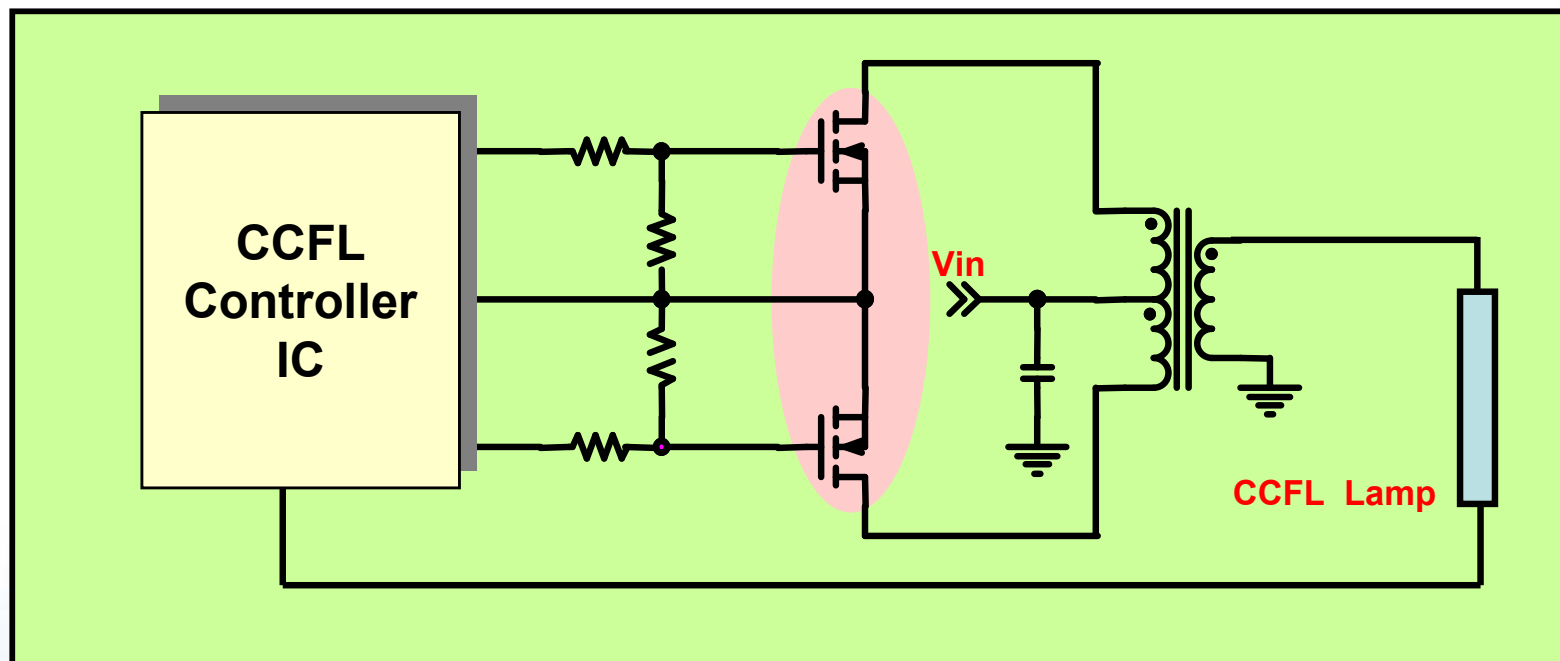
| Part Num. | BV _{DSS} | I _D | Application |
|----------------|-------------------|----------------|--------------------------|
| KHB1D0N60D/I | 600V | 1A | M/P Charger |
| KHB2D0N60P/F | 600V | 2A | Charger, Adaptor |
| KHB4D5N60P/F | 600V | 4.5A | LCD MNT/TV, STB, DVD, OA |
| KHB7D5N60P1/F1 | 600V | 7.5A | |
| KHB7D0N65P1/F1 | 650V | 7.0A | |
| KHB4D0N80P1/F1 | 800V | 4A | |
| KHB7D0N80P1/F1 | 800V | 7A | |
| KHB9D0N90F1/N1 | 900V | 9A | |

Application vs Output Power



■ CCFL Back-light Inverter

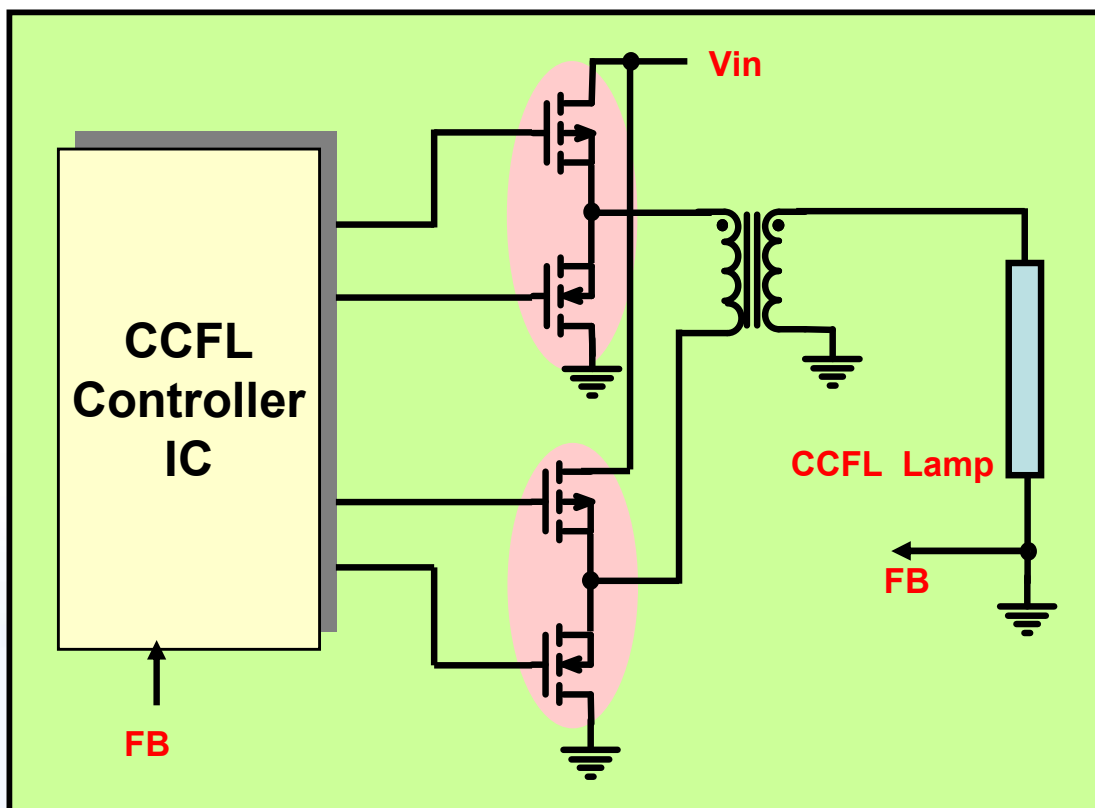
Push Pull Topology



| Part Num. | Type | BV_{DSS} | I_D | Package | Status |
|-------------|--------|------------|-------|---------|--------|
| KMB6D0DN30Q | Dual N | 30V | 6A | FLP-8 | M/P |
| KMB7D0DN40Q | Dual N | 40V | 7A | FLP-8 | M/P |

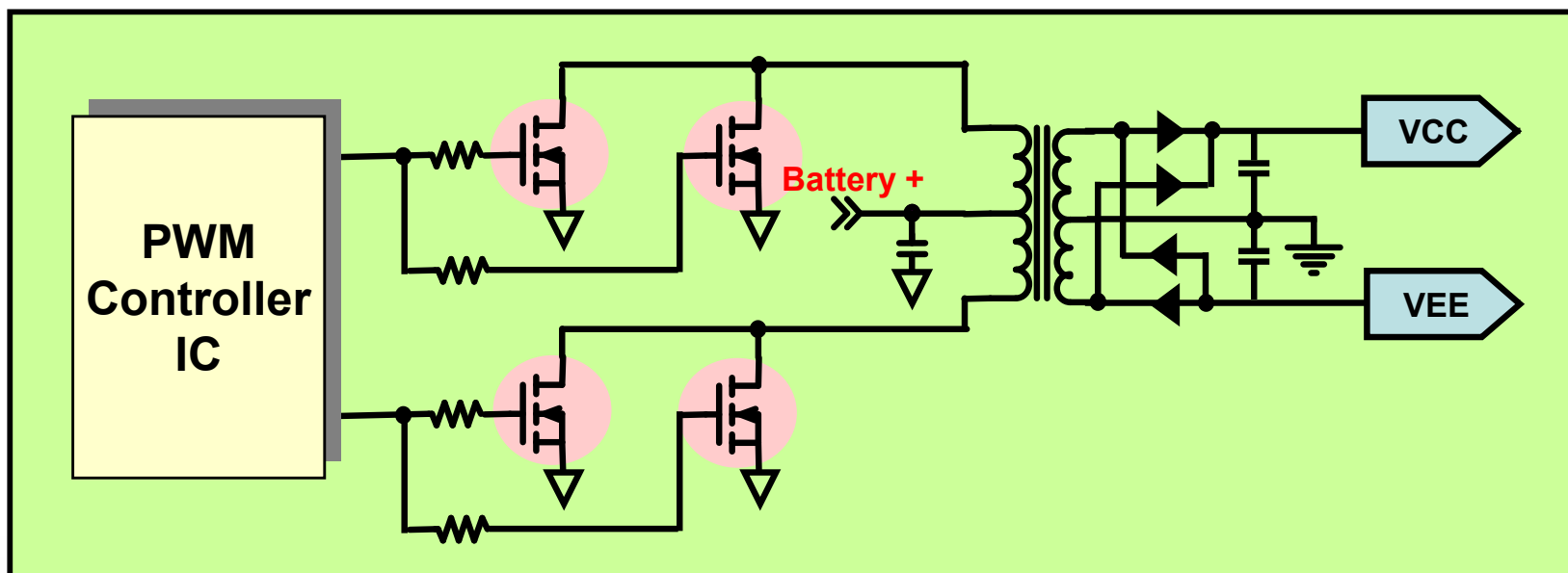
■ CCFL Back-light Inverter

Full Bridge Topology



| Part Num. | BV_{DSS} | I_D | PKG | Status |
|--------------|------------|-------|-------|--------|
| KMB5D5NP30Q | 30V | 5.5A | FLP-8 | M.P |
| | -30V | -4.5A | | |
| KMB7D0NP30Q1 | 30V | 7.0A | FLP-8 | M.P |
| | -30 | -4.5A | | |
| KMB7D0NP30Q | 30 | 7.0A | FLP-8 | M.P |
| | -30 | -5.0A | | |
| KMB5D0NP40Q | 40 | 5.0A | FLP-8 | M.P |
| | -40 | -4.0A | | |
| KMB4D5NP55Q | 55 | 4.5A | FLP-8 | M.P |
| | -55 | -3.0A | | |

■ Car Booster



| Part No. | General Device Name | BV _{DSS} (V) | I _D (A) | V _{GS} (V) | R _{DS(ON)} Typ (Ω) | PKG | Status |
|------------|---------------------|-----------------------|--------------------|---------------------|-----------------------------|----------|--------|
| KMB050N60P | 50N06 | 60V | 50A | ± 20 | 0.018 | TO-220AB | M/P |
| KMB075N75P | 75N75 | 75V | 75A | ± 20 | 0.013 | TO-220AB | M/P |

Cross-Reference

| KEC Part No. | IR | FSC | ST | Fuji | Toshiba |
|------------------|------------|--------------|----------------|----------------------|------------------|
| KMB050N60P | IRLZ44 | FQP50N06 | STB55NF06 | 2SK3364 / 2SK2903-01 | |
| KMB075N75P | | | STP75NE75 | | |
| KHB9D0N20P/F | IRF630 | FQP(F)630 | IRF630M/FP | 2SK2519 / 2SK2520-01 | 2SK2325 |
| KHB018N20P/F | IRF640N | FQP640 | IRF640 | 2SK2521 / 2SK2522-01 | |
| KHB8D8N25P/F | IRF634 | FQP(F)9N25C | STP8NS25 | | |
| KHB6D0N40P/F | IRF730 | FQP(F)6N40C | STP7NK40Z/ZFP | | 2SK2679 |
| KHB011N40P/F | IRF740 | FQP(F)11N40C | STP11NK40Z/ZFP | | 2SK2952 |
| KHB5D0N50P/F | IRF830 | FQP(F)5N50C | STP5NK50Z/ZFP | 2SK2875 / 2SK2876-01 | 2SK2661 / SK2662 |
| KHB9D0N50P/F | IRF840 | FQP(F)9N50C | STP9NK50Z/ZFP | 2SK1981 / 2SK1982-01 | |
| KHB020N50 | IRFB20N50K | | STW20NM50 | | |
| KHB1D0N60D/I | IRFR1N60A | FQN(F)1N60C | STD1NK60 | | |
| KHB2D0N60P/F | IRFBC20 | FQP(F)2N60 | STP3NK60Z | | |
| KHB1D9N60D/I | IRFRC20 | FQD(F)2N60C | STD2NC60 | | |
| KHB4D5N60P/F | IRFPC30 | FQP(F)4N60 | STP4NK60Z/ZFP | 2SK2025 / 2SK2003-01 | 2SK2750 |
| KHB7D5N60P1/F1 | IRFPC40 | FQP(F)7N60 | STP8NM60 | | 2SK3667 |
| KHB7D0N65P/F | | FQP(F)7N65C | STP9NK65Z | | |
| KHB1D2N80D/I | | FQD/FQU1N80 | STD1NB80 | | |
| KHB4D0N80P1/F1 | IRFBE30 | FQP(F)4N80 | STP4NB80 | 2SK2646 / 2SK2647-01 | |
| KHB7D0N80P1/F1 | - | FQP(F)7N80 | STP7NB80 | | |
| KHB3D3N90P1/F1 | IRFBF30 | | STP/STF3HMK90Z | | |
| KHB9D0N90P1 | | FQP(F)9N90C | STP9NK90Z | | |
| KHB9D0N90N1 | | FQA9N90C | STW9NK90Z | 2SK2654 / 2SK2655-01 | |

Cross-Reference

| KEC Part No. | Vishay | FSC | AATI | AOS | Etc. |
|--------------|------------------------|-----------|---------|--------|----------|
| KMC7D0CN20C | SI6880AEDQ | FDW2509NZ | | AO8810 | STG821 |
| KMA2D3P20S | SI2301DS | FDN338P | | AO3413 | STS2309A |
| KMA2D4P20S | SI2301BDS | FDN308P | AAT8401 | AO3413 | |
| KMA2D8P20X | SI3441BDV | FDC634P | | | |
| KMA4D5P20X | SI3443DY | FDC642P | AAT8343 | | |
| KMA6D0P20X | SI3491DY | | AAT8307 | | |
| KMA6D5P20Q | SI9434DY | FDS8434A | AAT8107 | | |
| KMA010P20Q | SI4463DY | FDS6575 | AAT8303 | | |
| KMA2D0DP20X | SI3911DV | FDC6306P | | | STS2621 |
| KMA5D8DP20Q | SI4963DY | FDS6875 | AAT7157 | | |
| KMB6D6N30Q | SI9436DY | | | | STM9410A |
| KMB012N30Q | SI4856DY | FDS6670A | | AO4430 | STM4884A |
| KMB6D0DN30Q | SI4936ADY | | | | STM6912 |
| KMB8D0P30Q | SI4435BDY | FDS4435 | | AO4411 | STM4435 |
| KMB5D5NP30Q | SI4539ADY SI4532ADY | FDS8928A | | | STM4532 |
| KMB7D0NP30Q1 | SI4544DY | FDS8958A | | AO4606 | STM8401 |
| KMB7D0NP30Q | SI4542DY | | | | STM8405 |
| KMB7D0DN40Q | SI4942DY | | | | STM6920 |
| KMB5D0NP40Q | | | | | STM8450A |
| KMB4D8DN55Q | SI4946EY | | | | STM6930A |
| KMB4D5NP55Q | SI4559EY | | | | STM8500A |

High Voltage MOSFET (THD Type)

| Type No. | Max. Ratings | | | R _{DS(ON)} (Ω) | | | | Q _g (nC) | | Package | Outline (Unit: mm) |
|-------------|-----------------------|--------------------|--------------------|-------------------------|-------|---------------------|--------------------|---------------------|---------------------|------------|--------------------|
| | BV _{DSS} (V) | I _D (A) | P _D (W) | Typ. | Max. | V _{GS} (V) | I _D (A) | Typ. | V _{GS} (V) | | |
| KMB050N60P | 60 | 50 | 120 | 0.018 | 0.022 | 10 | 25 | 32 | 10 | TO-220AB | |
| KMB075N75P | 75 | 75 | 190 | 0.013 | 0.017 | 10 | 37.5 | 85 | 10 | | |
| KHB9D5N20P | 200 | 9.5 | 72 | 0.29 | 0.36 | 10 | 4.75 | 20 | 10 | | |
| KHB019N20P1 | 200 | 19 | 140 | 0.14 | 0.18 | 10 | 9.5 | 35 | 10 | | |
| KHB8D8N25P | 250 | 8.8 | 74 | 0.35 | 0.45 | 10 | 4.4 | 29 | 10 | | |
| KHB6D0N40P | 400 | 6 | 73 | 0.83 | 1 | 10 | 3 | 16 | 10 | | |
| KHB011N40P1 | 400 | 10.5 | 135 | 0.5 | 0.53 | 10 | 5.25 | 28 | 10 | | |
| KHB5D0N50P | 500 | 5 | 73 | 1.14 | 1.4 | 10 | 2.5 | 18 | 10 | | |
| KHB9D0N50P1 | 500 | 9 | 135 | 0.65 | 0.8 | 10 | 4.5 | 34.6 | 10 | | |
| KHB2D0N60P | 600 | 2 | 54 | 3.8 | 5 | 10 | 1 | 12.5 | 10 | | |
| KHB4D5N60P | 600 | 4.5 | 100 | 2 | 2.5 | 10 | 2.25 | 22 | 10 | | |
| KHB7D5N60P1 | 600 | 7.5 | 147 | 1 | 1.2 | 10 | 3.75 | 32.5 | 10 | | |
| KHB4D0N65P | 650 | 4 | 106 | - | 3 | 10 | 2 | 20 | 10 | | |
| KHB7D0N65P1 | 650 | 7 | 160 | 1.2 | 1.4 | 10 | 3.5 | 32 | 10 | | |
| KHB3D0N70P | 700 | 3 | 130 | 3 | 3.5 | 10 | 1.5 | 20.5 | 10 | | |
| KHB4D0N80P1 | 800 | 4 | 130 | 3 | 3.6 | 10 | 2 | 25 | 10 | | |
| KHB7D0N80P1 | 800 | 7 | 167 | 1.25 | 1.55 | 10 | 3.5 | 51.5 | 10 | | |
| KHB3D0N90P1 | 900 | 3 | 130 | 4.0 | 4.5 | 10 | 1.5 | 25 | 10 | | |
| KHB9D0N90P1 | 900 | 9 | 205 | 1.12 | 1.4 | 10 | 4.5 | 75 | 10 | | |
| KHB9D5N20F | 200 | 9.5 | 38 | 0.29 | 0.36 | 10 | 4.75 | 20 | 10 | TO-220IS | |
| KHB019N20F1 | 200 | 19 | 50 | 0.14 | 0.18 | 10 | 9.5 | 35 | 10 | | |
| KHB8D8N25F | 250 | 8.8 | 38 | 0.35 | 0.45 | 10 | 4.4 | 29 | 10 | | |
| KHB6D0N40F | 400 | 6 | 38 | 0.83 | 1 | 10 | 3 | 16 | 10 | | |
| KHB011N40F1 | 400 | 10.5 | 44 | 0.5 | 0.53 | 10 | 5.25 | 28 | 10 | | |
| KHB5D0N50F | 500 | 5 | 38 | 1.14 | 1.4 | 10 | 2.5 | 18 | 10 | | |
| KHB9D0N50F1 | 500 | 9 | 44 | 0.65 | 0.8 | 10 | 4.5 | 34.6 | 10 | | |
| KHB2D0N60F | 600 | 2 | 23 | 3.8 | 5 | 10 | 1 | 12.5 | 10 | | |
| KHB4D5N60F | 600 | 4.5 | 33 | 2 | 2.5 | 10 | 2.25 | 22 | 10 | | |
| KHB7D5N60F1 | 600 | 7.5 | 48 | 1 | 1.2 | 10 | 3.75 | 32.5 | 10 | | |
| KHB4D0N65F | 650 | 4 | 36 | - | 3 | 10 | 2 | 20 | 10 | | |
| KHB7D0N65F1 | 650 | 7 | 52 | 1.2 | 1.4 | 10 | 3.5 | 32 | 10 | | |
| KHB3D0N70F | 700 | 3 | 130 | 3 | 3.5 | 10 | 1.5 | 20.5 | 10 | | |
| KHB4D0N80F1 | 800 | 4 | 43 | 3 | 3.6 | 10 | 2 | 25 | 10 | | |
| KHB7D0N80F1 | 800 | 7 | 167 | 1.25 | 1.55 | 10 | 3.5 | 51.5 | 10 | | |
| KHB3D0N90F1 | 900 | 3 | 43 | 4.0 | 4.5 | 10 | 1.5 | 25 | 10 | | |
| KHB9D0N90F1 | 900 | 9 | 68 | 1.12 | 1.4 | 10 | 4.5 | 75 | 10 | | |
| KHB1D0N60I | 600 | 1 | 28 | 9.5 | 12 | 10 | 0.5 | 5.9 | 10 | IPAK | |
| KHB1D9N60I | 600 | 1.9 | 28 | 3.8 | 5 | 10 | 0.95 | 10.9 | 10 | | |
| KHB1D2N80I | 800 | 1.2 | 50 | 13 | 16 | 10 | 0.6 | 7 | 10 | | |
| KHB9D0N90N1 | 900 | 9 | 280 | 1.12 | 1.4 | 10 | 4.5 | 75 | 10 | TO-3P(N) | |
| KHB011N90N | 900 | 11 | 300 | 0.91 | 1.1 | 10 | 5.5 | 60 | 10 | | |
| KHB9D0N90H1 | 900 | 9 | 113 | 1.12 | 1.4 | 10 | 4.5 | 75 | 10 | TO-3P(H)IS | |
| KHB011N90H | 900 | 11 | 120 | 0.91 | 1.1 | 10 | 5.5 | 60 | 10 | | |

MOSFETs

High Voltage MOSFET (SMD Type)

| Type No. | Max. Ratings | | | R _{DS(ON)} (Ω) | | | | Q _g (nC) | | Package | Outline (Unit: mm) |
|------------|-----------------------|--------------------|--------------------|-------------------------|------|---------------------|--------------------|---------------------|---------------------|---------|--------------------|
| | BV _{DSS} (V) | I _D (A) | P _D (W) | Typ. | Max. | V _{GS} (V) | I _D (A) | Typ. | V _{GS} (V) | | |
| KHB1D0N60D | 600 | 1 | 28 | 9.5 | 12 | 10 | 0.5 | 5.9 | 10 | DPAK | |
| KHB1D9N60D | 600 | 1.9 | 44 | 3.8 | 5 | 10 | 0.95 | 10.9 | 10 | | |
| KHB1D2N80D | 800 | 1.2 | 50 | 13 | 16 | 10 | 0.6 | 7 | 10 | | |

Low Voltage MOSFET (SMD Type)

| Type No. | Interrall Circuit | Max. Ratings | | | V _{th} (V) | | | | R _{DS(ON)} (mΩ) | | | | Q _g (nC) | | Package | Outline (Unit: mm) |
|-------------|-------------------|-----------------------|--------------------|--------------------|---------------------|----------|---------------------|--------------------|--------------------------|--------|---------------------|--------------------|---------------------|---------------------|-----------|--------------------|
| | | BV _{DSS} (V) | I _D (A) | P _D (W) | Min. | Max. | V _{DS} (V) | I _D (A) | Typ. | Max. | V _{GS} (V) | I _D (A) | Typ. | V _{GS} (V) | | |
| KMA6D5P20Q | | -20 | -6.5 | 2.5 | -0.6 | - | V _{GS} | -250μA | 27 | 35 | -4.5 | -6.5 | 13.6 | -4.5 | FLP-8 | |
| KMA5D8DP20Q | | -20 | -5.8 | 2 | -0.6 | - | V _{GS} | -250μA | 29 | 36 | -4.5 | -5.8 | 14 | -4.5 | | |
| KMB012N30Q | | 30 | 12 | 2.5 | 1 | 3 | V _{GS} | 250μA | 6 | 7 | 10 | 12 | 65 | 10 | | |
| KMB6D6N30Q | | 30 | 6.6 | 2.5 | 1 | 2.5 | V _{GS} | 250μA | 20 | 28 | 10 | 6 | 13.5 | 10 | | |
| KMB8D0P30Q | | -30 | -8 | 2.5 | -1 | -3 | V _{GS} | -250μA | 15 | 20 | -10 | -8 | 33.6 | -10 | | |
| KMB6D0DN30Q | | 30 | 6 | 2 | 1 | 2.5 | V _{GS} | 250μA | 27 | 32 | 10 | 6 | 12.5 | 10 | | |
| KMB7D0DN40Q | | 40 | 4 | 2 | 1 | 2.5 | V _{GS} | 250μA | 20 | 25 | 10 | 6 | 18.2 | 10 | | |
| KMB4D8DN55Q | | 55 | 4.8 | 2 | 1 | 2.5 | V _{GS} | 250μA | 38 | 50 | 10 | 4.5 | 12.95 | 10 | | |
| KMB5D5NP30Q | | 30/-30 | 5.5/-4.5 | 2 | 0.8/-1.0 | 1.8/-2.5 | V _{GS} | 250/-250μA | 28/45 | 40/55 | 10/-10 | 6/-4.9 | 9.3/15.6 | 4.5/-10 | | |
| KMB7D6NP30Q | | 30/-30 | 7.6/-5.3 | 2 | 1.0/-1.0 | 3.0/-3.0 | V _{GS} | 250/-250μA | 14/35 | 20/45 | 10/-10 | 7/-5 | 20.1/13.8 | 10/-10 | | |
| KMB7D0NP30Q | | 30/-30 | 7.0/-5.0 | 2 | 1.0/-1.0 | 2.0/-2.5 | V _{GS} | 250/-250μA | 20/35 | 25/45 | 10/-10 | 6.6/-5.0 | 16.4/13.8 | 10/-10 | | |
| KMB5D0NP40Q | | 40/-40 | 5.0/-4.0 | 2 | 1.0/-0.8 | 3.0/-2.0 | V _{GS} | 250/-250μA | 25/37 | 35/47 | 10/-10 | 5.0/-4.0 | 15.8/19.9 | 10/-10 | | |
| KMB4D5NP55Q | | 55/-55 | 4.5/-3.0 | 2 | 1.0/-1.0 | 3.0/-2.5 | V _{GS} | 250/-250μA | 40/85 | 60/110 | 10/-10 | 4.5/-3.0 | 11.9/13.2 | 10/-10 | | |

Low Voltage MOSFET (SMD Type)

| Type No. | Internal Circuit | Max. Ratings | | | V _{th} (V) | | | | R _{DS(ON)} (mΩ) | | | | Q _g (nC) | | Package | Outline (Unit: mm) | | |
|-------------|------------------|-----------------------|--------------------|--------------------|---------------------|------|---------------------|--------------------|--------------------------|------|---------------------|--------------------|---------------------|---------------------|---------|--------------------|--------|--|
| | | BV _{DSS} (V) | I _D (A) | P _D (W) | Min. | Max. | V _{DS} (V) | I _D (A) | Typ. | Max. | V _{GS} (V) | I _D (A) | Typ. | V _{GS} (V) | | | | |
| KMA6D0P20X | | -20 | -6 | 2.1 | -0.6 | - | V _{GS} | -250μA | 27 | 35 | -4.5 | -6 | 14 | -4.5 | TSOP-6 | | | |
| KMA4D5P20X | | -20 | -4.5 | 2 | -0.6 | - | V _{GS} | -250μA | 49 | 60 | -4.5 | -4.5 | 8.5 | -4.5 | | | | |
| KMA2D7DP20X | | -20 | -2.7 | 1.2 | -0.6 | - | V _{GS} | -250μA | 80 | 100 | -4.5 | -2.7 | 5.9 | -4.5 | | | | |
| KMA2D8P20X | | -20 | -2.8 | 1.25 | -0.5 | -1.5 | V _{GS} | -250μA | 75 | 90 | -4.5 | -2.5 | 3.6 | -4.5 | | | | |
| KMA2D0DP20X | | -20 | -2 | 1 | -0.5 | -1.5 | V _{GS} | -250μA | 115 | 130 | -4.5 | -2 | 3.5 | -4.5 | | | | |
| KMA2D4P20S | | -20 | -2.4 | 1 | -0.6 | - | V _{GS} | -250μA | 88 | 100 | -4.5 | -2.4 | 4 | -4.5 | | | SOT-23 | |
| KMA2D3P20S | | -20 | -2.3 | 1.25 | -0.5 | -1.5 | V _{GS} | -250μA | 115 | 130 | -4.5 | -2.3 | 3.2 | -4.5 | | | | |
| KMB030N30D | | 30 | 30 | 50 | 1 | 2.5 | V _{GS} | 250μA | 13 | 18 | 10 | 20 | 15.3 | 10 | DPAK | | | |
| KMC7D0CN20C | | 20 | 7 | 1.5 | 0.5 | 1.5 | V _{GS} | 250μA | 16.5 | 20 | 4 | 5 | 11.5 | 4 | TSSOP-8 | | | |

SMOS FETs (SMD Type)

| Type No. | Mark | Internal circuit (Top view) | Max. Ratings | | | | I _{DSS} (μA) | | | V _{th} (V) | | | | R _{DS(ON)} (Ω) | | | Package | Outline (Unit: mm) |
|-------------------------------|------|-----------------------------|---------------------|-----------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------|--------------------|
| | | | V _{DS} (V) | V _{GSS} (mV) | I _D (mA) | P _D (mW) | Max. | V _{DS} (V) | V _{GS} (V) | Min. | Max. | V _{DS} (V) | I _D (mA) | Max. | V _{GS} (V) | I _D (mA) | | |
| KTK5131V | KA | | 30 | ±20 | 50 | 100 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 40 | 2.5 | 10 | VSM | |
| KTK5132V | KB | | 30 | ±20 | 100 | 100 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 7 | 2.5 | 10 | | |
| KTK5131E | KA | | 30 | ±20 | 50 | 100 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 40 | 2.5 | 10 | ESM | |
| KTK5132E | KB | | 30 | ±20 | 100 | 100 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 7 | 2.5 | 10 | | |
| KTJ6131E | EB | | -30 | ±20 | -50 | 100 | -1 | -30 | 0 | -0.5 | -1.5 | -3 | -0.1 | 40 | -2.5 | -10 | USM | |
| KTK5132U | KB | | 30 | ±20 | 100 | 200 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 7 | 2.5 | 10 | | |
| *2N7002U | WA | | 60 | ±20 | 300 | 100 | 1 | 60 | 0 | 1.1 | 2.3 | V _{GS} | 0.25 | 2.1 | 5 | 50 | USM | |
| *2N7002KU | WC | | 60 | ±20 | 300 | 100 | 1 | 60 | 0 | 1.1 | 2.35 | V _{GS} | 0.25 | 2.1 | 5 | 50 | | |
| KTK5131S | KA | | 30 | ±20 | 50 | 200 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 40 | 2.5 | 10 | SOT-23 | |
| KTK5132S | KB | | 30 | ±20 | 100 | 200 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 7 | 2.5 | 10 | | |
| KTK5133S | KC | | 30 | ±20 | 150 | 200 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 5.2 | 2.5 | 40 | | |
| KTK5134S | KD | | 30 | ±20 | 200 | 200 | 1 | 30 | 0 | 0.5 | 1.5 | 3 | 0.1 | 2 | 2.5 | 50 | | |
| KTK5162S | KF | | 60 | ±20 | 100 | 200 | 1 | 60 | 0 | 1 | 2.4 | 10 | 0.1 | 7.5 | 10 | 50 | | |
| KTK5164S | KM | | 60 | ±20 | 200 | 200 | 1 | 60 | 0 | 0.5 | 1.5 | 10 | 1 | 2 | 2.5 | 50 | | |
| 2N7002 | WA | | 60 | ±20 | 300 | 200 | 1 | 60 | 0 | 1.1 | 2.3 | V _{GS} | 0.25 | 2.1 | 5 | 50 | SOT-23 | |
| 2N7002A | WB | | 60 | ±20 | 115 | 200 | 1 | 60 | 0 | 1 | 2.5 | V _{GS} | 0.25 | 7.5 | 5 | 50 | | |
| 2N7002K (ESD Protected 2000V) | WC | | 60 | ±20 | 300 | 200 | 1 | 60 | 0 | 1.1 | 2.35 | V _{GS} | 0.25 | 2.1 | 5 | 50 | | |
| KTX321U | BR | | -12 | -500 | 150 | 270 | 680 | -2 | -10 | -0.25 | -200 | -10 | - | 260 | -2 | -10 | US6 | |
| KTX421U | BS | | 12 | 500 | 150 | 270 | 680 | 2 | 10 | 0.25 | 200 | 10 | - | 320 | 2 | 10 | | |

Note) *: Under development

SMOS FETs (THD Type)

| Type No. | Max. Ratings | | | | I _{DSS} (μA) | | | V _{th} (V) | | | | R _{DS(ON)} (Ω) | | | Package | Outline (Unit: mm) |
|-------------------------------|---------------------|-----------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|------|---------------------|---------------------|-------------------------|---------------------|---------------------|---------|--------------------|
| | V _{DS} (V) | V _{GSS} (mV) | I _D (mA) | P _D (mW) | Max. | V _{DS} (V) | V _{GS} (V) | Min. | Max. | V _{DS} (V) | I _D (mA) | Max. | V _{GS} (V) | I _D (mA) | | |
| 2N7000 | 60 | ±20 | 300 | 625 | 1 | 60 | 0 | 1.1 | 2.3 | V _{GS} | 250 | 2.1 | 5 | 50 | TO-92 | |
| 2N7000A | 60 | ±20 | 200 | 400 | 1 | 48 | 0 | 0.8 | 3 | V _{GS} | 500 | 5.3 | 4.5 | 75 | | |
| 2N7000K (ESD Protected 2000V) | 60 | ±20 | 300 | 625 | 1 | 60 | 0 | 1.1 | 2.35 | V _{GS} | 250 | 2.1 | 5 | 50 | | |