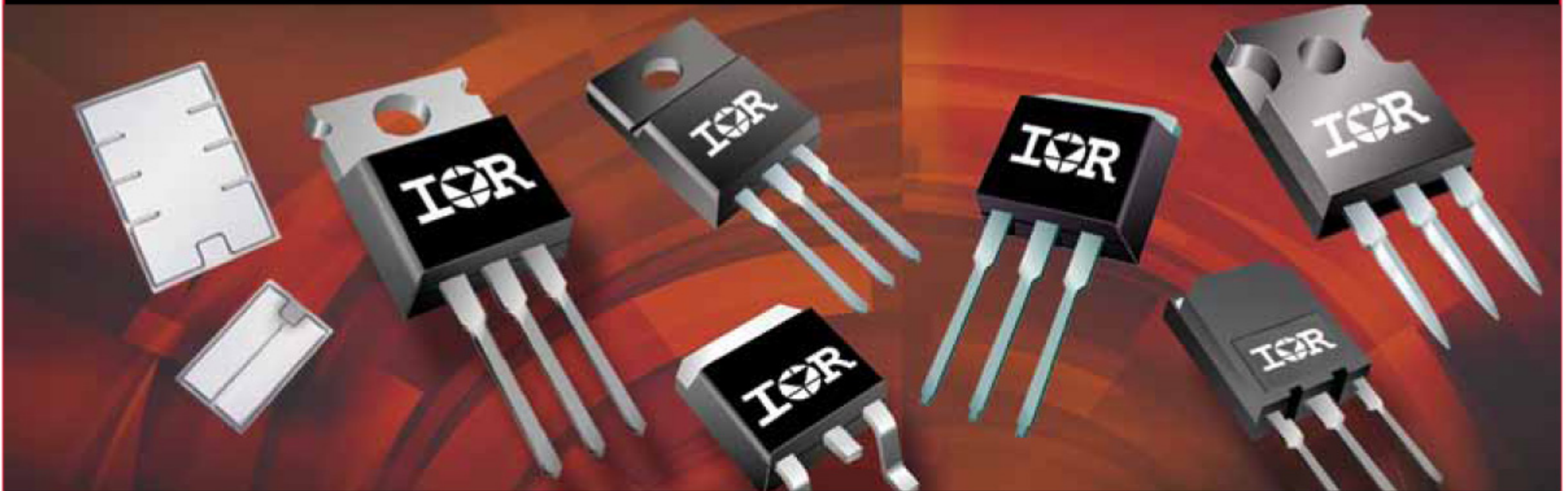


IGBTs Product Selection Guide



International
IR Rectifier
THE POWER MANAGEMENT LEADER

Product Selector IGBT

| Part | VCES (V) | IC @100C (A) | VCE(ON) (V) | Circuit | Package | Switching Speed | | Ets Typ (mJ) | Vf (typ) |
|---------------|----------|--------------|-------------|---------|----------------|-----------------|------------|--------------|----------|
| | | | | | | | | | |
| IRG4P254S | 250 | 55 | 1.5 | Single | TO-247 | Standard | DC-1 kHz | - | - |
| IRGP4072D | 300 | 40 | 1.7 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.2 | 2.3 |
| IRG7I313U | 330 | 10 | 1.5 | Single | TO-220 FullPak | Ultrafast | 8-30 kHz | - | - |
| IRG7I319U | 330 | 15 | 1.5 | Single | TO-220 FullPak | Ultrafast | 8-30 kHz | - | - |
| IRG7R313U | 330 | 20 | 1.4 | Single | D-Pak | Ultrafast | 8-30 kHz | - | - |
| IRG7S319U | 330 | 20 | 1.4 | Single | D2-Pak | Ultrafast | 8-30 kHz | - | - |
| IRG7S313U | 330 | 20 | 1.5 | Single | D2-Pak | Ultrafast | 8-30 kHz | - | - |
| IRG7P313U | 330 | 20 | 1.5 | Single | TO-247 | Ultrafast | 8-30 kHz | - | - |
| IRG6B330UD | 330 | 40 | 1.7 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | - | 1.2 |
| IRG7IA13U | 360 | 10 | 1.5 | Single | TO-220 FullPak | Ultrafast | 8-30 kHz | - | - |
| IRG7IA19U | 360 | 15 | 1.5 | Single | TO-220AB | Ultrafast | 8-30 kHz | - | - |
| IRG7PA19U | 360 | 26 | 1.5 | Single | TO-247 | Ultrafast | 8-30 kHz | - | - |
| IRGS14C40L | 430 | 14 | 1.4 | Single | D2-Pak | Standard | DC-1 kHz | - | - |
| IRGB14C40L | 430 | 14 | 1.4 | Single | TO-220AB | Standard | DC-1 kHz | - | - |
| IRGSL14C40L | 430 | 14 | 1.4 | Single | TO-262 | Standard | DC-1 kHz | - | - |
| IRG4IBC10UD | 600 | 3.9 | 2.2 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.3 | 1.5 |
| IRGB4059D | 600 | 4 | 2.1 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.1 | 1.6 |
| IRGR3B60KD2 | 600 | 4.2 | 2.4 | Co-pack | D-Pak | Ultrafast | 8-30 kHz | 0.1 | 1.5 |
| IRG4RC10U | 600 | 5 | 2.6 | Single | D-Pak | Ultrafast | 8-30 kHz | 0.2 | - |
| IRG4RC10UD | 600 | 5 | 2.6 | Co-pack | D-Pak | Ultrafast | 8-30 kHz | 0.3 | 1.5 |
| IRG4BC10UD | 600 | 5 | 2.6 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.3 | 1.5 |
| IRG4RC10K | 600 | 5 | 2.6 | Single | D-Pak | Ultrafast | 8-30 kHz | 0.3 | - |
| IRG4RC10KD | 600 | 5 | 2.6 | Co-pack | D-Pak | Ultrafast | 8-30 kHz | 0.4 | 1.5 |
| IRG4BC10KD | 600 | 5 | 2.6 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.4 | 1.5 |
| IRG4BC10K | 600 | 5 | 2.6 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.3 | - |
| IRG4BC15UD-S | 600 | 5.5 | 2.0 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.5 | 1.5 |
| IRG4BC15UD | 600 | 5.5 | 2.0 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.5 | 1.5 |
| IRGB4045D | 600 | 6 | 2.0 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.2 | 1.6 |
| IRG4IBC20UD | 600 | 6 | 2.1 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.3 | 1.4 |
| IRGIB6B60KD | 600 | 6 | 2.2 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.2 | 1.3 |
| IRG4IBC20W | 600 | 6.2 | 2.6 | Single | TO-220 FullPak | Warp | 30-150 kHz | 0.1 | - |
| IRG4IBC20KD | 600 | 6.3 | 2.8 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.6 | 1.4 |
| IRG4BC20UD-S | 600 | 6.5 | 2.1 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.3 | 1.4 |
| IRG4BC20UD | 600 | 6.5 | 2.1 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.3 | 1.4 |
| IRG4BC20U | 600 | 6.5 | 2.1 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.2 | - |
| IRG4PC20U | 600 | 6.5 | 2.1 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.2 | - |
| IRG4BC20W-S | 600 | 6.5 | 2.6 | Single | D2-Pak | Warp | 30-150 kHz | 0.1 | - |
| IRG4BC20W | 600 | 6.5 | 2.6 | Single | TO-220AB | Warp | 30-150 kHz | 0.1 | - |
| IRGS4B60K | 600 | 6.8 | 2.5 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.1 | - |
| IRGS4B60KD1 | 600 | 6.8 | 2.5 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.1 | 1.4 |
| IRGB4B60K | 600 | 6.8 | 2.5 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.1 | - |
| IRGB4B60KD1 | 600 | 6.8 | 2.5 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.1 | 1.4 |
| IRGSL4B60KD1 | 600 | 6.8 | 2.5 | Co-pack | TO-262 | Ultrafast | 8-30 kHz | 0.1 | 1.4 |
| IRGS6B60K | 600 | 7 | 1.8 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.2 | - |
| IRGB6B60K | 600 | 7 | 1.8 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.2 | - |
| IRGS6B60KD | 600 | 7 | 2.0 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.2 | 1.3 |
| IRGB6B60KD | 600 | 7 | 2.0 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.2 | 1.3 |
| IRG4IBC20FD | 600 | 7.7 | 2.0 | Co-pack | TO-220 FullPak | Fast | 1-8 kHz | 0.9 | 1.4 |
| IRG4BC15UD-L | 600 | 7.8 | 2.4 | Co-pack | TO-262 | Ultrafast | 8-30 kHz | 0.5 | 1.5 |
| IRG4RC10S | 600 | 8 | 1.7 | Single | D-Pak | Standard | DC-1 kHz | 2.7 | - |
| IRG4RC10SD | 600 | 8 | 1.7 | Co-pack | D-Pak | Standard | DC-1 kHz | 3.6 | 1.5 |
| IRG4BC10SD | 600 | 8 | 1.7 | Co-pack | TO-220AB | Standard | DC-1 kHz | 3.6 | 1.5 |
| IRG4BC10S | 600 | 8 | 1.7 | Single | TO-220AB | Standard | DC-1 kHz | 2.7 | - |
| IRG4BC10SD-S | 600 | 8 | 1.8 | Co-pack | D2-Pak | Standard | DC-1 kHz | 3.6 | 1.5 |
| IRG4BC10SD-L | 600 | 8 | 1.8 | Co-pack | TO-262 | Standard | DC-1 kHz | 3.6 | 1.5 |
| IRGB4060D | 600 | 8 | 1.9 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.2 | 1.8 |
| IRGIB7B60KD | 600 | 8 | 2.2 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.3 | 1.3 |
| IRG4IBC30W | 600 | 8.4 | 2.7 | Single | TO-220 FullPak | Warp | 30-150 kHz | 0.3 | - |
| IRG4IBC30UD | 600 | 8.9 | 2.1 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.5 | 1.4 |
| IRG4BC20FD | 600 | 9 | 2.0 | Co-pack | TO-220AB | Fast | 1-8 kHz | 0.9 | 1.4 |
| IRG4BC20F | 600 | 9 | 2.0 | Single | TO-220AB | Fast | 1-8 kHz | 0.7 | - |
| IRG4BC15MD | 600 | 9 | 2.3 | Co-pack | TO-220AB | Fast | 1-8 kHz | 2.3 | 1.5 |
| IRG4BC20KD-S | 600 | 9 | 2.8 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.6 | 1.4 |
| IRG4BC20K-S | 600 | 9 | 2.8 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.6 | - |
| IRG4BC20KD | 600 | 9 | 2.8 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.6 | 1.4 |
| IRG4BC20K | 600 | 9 | 2.8 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.4 | - |
| IRG4IBC30KD | 600 | 9.2 | 2.7 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 1.2 | 1.4 |
| IRG4BC20SD-S | 600 | 10 | 1.4 | Co-pack | D2-Pak | Standard | DC-1 kHz | 2.9 | 1.4 |
| IRG4BC20SD | 600 | 10 | 1.6 | Co-pack | TO-220AB | Standard | DC-1 kHz | 2.9 | 1.4 |
| IRG4BC20S | 600 | 10 | 1.6 | Single | TO-220AB | Standard | DC-1 kHz | 2.2 | - |
| IRGB4064D | 600 | 10 | 1.9 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.2 | 2.5 |
| IRGIB10B60KD1 | 600 | 10 | 2.1 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.3 | 1.8 |
| IRG4IBC30FD | 600 | 11 | 1.8 | Co-pack | TO-220 FullPak | Fast | 1-8 kHz | 2.0 | 1.4 |

Product Selector IGBT, Continued

| Part | V _{CES} (V) | I _{C @100C} (A) | V _{CE(ON)} (V) | Circuit | Package | Switching Speed | | E _{ts Typ} (mJ) | V _f (typ) |
|---------------|-------------------------|-----------------------------|----------------------------|---------|----------------|-----------------|------------|-----------------------------|-------------------------|
| IRG4BC20MD-S | 600 | 11 | 2.1 | Co-pack | D2-Pak | Fast | 1-8 kHz | 2.4 | 1.4 |
| IRG4BC20MD | 600 | 11 | 2.1 | Co-pack | TO-220AB | Fast | 1-8 kHz | 2.4 | 1.4 |
| IRGIB15B60KD1 | 600 | 12 | 1.8 | Co-pack | TO-220 FullPak | Ultrafast | 8-30 kHz | 0.5 | 1.7 |
| IRGS4056D | 600 | 12 | 1.9 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.3 | 2.1 |
| IRGB4056D | 600 | 12 | 1.9 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.3 | 2.1 |
| IRG4BC30U-S | 600 | 12 | 2.0 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.4 | - |
| IRG7IC28U | 600 | 12 | 2.0 | Single | TO-220AB | Ultrafast | 8-30 kHz | - | - |
| IRG4BC30W-S | 600 | 12 | 2.1 | Single | D2-Pak | Warp | 30-150 kHz | 0.3 | - |
| IRG4RC20F | 600 | 12 | 2.1 | Single | D-Pak | Fast | 1-8 kHz | 1.1 | - |
| IRG4BC30UD | 600 | 12 | 2.1 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.5 | 1.4 |
| IRG4BC30U | 600 | 12 | 2.1 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.4 | - |
| IRG4PC30UD | 600 | 12 | 2.1 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 0.5 | 1.4 |
| IRG4PC30U | 600 | 12 | 2.1 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.4 | - |
| IRGS10B60KD | 600 | 12 | 2.2 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.4 | 1.3 |
| IRGB10B60KD | 600 | 12 | 2.2 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.4 | 1.3 |
| IRGSL10B60KD | 600 | 12 | 2.2 | Co-pack | TO-262 | Ultrafast | 8-30 kHz | 0.4 | 1.3 |
| IRG4BC30W | 600 | 12 | 2.7 | Single | TO-220AB | Warp | 30-150 kHz | 0.3 | - |
| IRG4PC30W | 600 | 12 | 2.7 | Single | TO-247 | Warp | 30-150 kHz | 0.3 | - |
| IRG4IBC30S | 600 | 13 | 1.6 | Single | TO-220 FullPak | Standard | DC-1 kHz | 3.7 | - |
| IRG7SC12F | 600 | 13 | 1.9 | Single | D2-Pak | Fast | 1-8 kHz | - | - |
| IRGP35B60PD | 600 | 15 | 2.2 | Co-pack | TO-247 | Warp | 30-150 kHz | 0.4 | 1.3 |
| IRGS15B60K | 600 | 15 | 2.2 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.6 | - |
| IRGS15B60KD | 600 | 15 | 2.2 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.6 | 1.2 |
| IRGB15B60KD | 600 | 15 | 2.2 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.6 | 1.2 |
| IRGSL15B60KD | 600 | 15 | 2.2 | Co-pack | TO-262 | Ultrafast | 8-30 kHz | 0.6 | 1.2 |
| IRG4BC30KD-S | 600 | 16 | 2.7 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 1.2 | 1.4 |
| IRG4BC30K-S | 600 | 16 | 2.7 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.9 | - |
| IRG4BC30KD | 600 | 16 | 2.7 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 1.2 | 1.4 |
| IRG4BC30K | 600 | 16 | 2.7 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.9 | - |
| IRG4PC30KD | 600 | 16 | 2.7 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.2 | 1.4 |
| IRG4PC30K | 600 | 16 | 2.7 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.9 | - |
| IRG4BC30FD-S | 600 | 17 | 1.8 | Co-pack | D2-Pak | Fast | 1-8 kHz | 2.0 | 1.4 |
| IRG4BC30FD | 600 | 17 | 1.8 | Co-pack | TO-220AB | Fast | 1-8 kHz | 2.0 | 1.4 |
| IRG4BC30FD1 | 600 | 17 | 1.8 | Co-pack | TO-220AB | Fast | 1-8 kHz | 1.8 | 1.4 |
| IRG4BC30F | 600 | 17 | 1.8 | Single | TO-220AB | Fast | 1-8 kHz | 1.4 | - |
| IRG4PC30FD | 600 | 17 | 1.8 | Co-pack | TO-247 | Fast | 1-8 kHz | 2.0 | 1.4 |
| IRG4PC30F | 600 | 17 | 1.8 | Single | TO-247 | Fast | 1-8 kHz | 1.4 | - |
| IRG4BC30S-S | 600 | 18 | 1.6 | Single | D2-Pak | Standard | DC-1 kHz | 3.7 | - |
| IRG4BC30S | 600 | 18 | 1.6 | Single | TO-220AB | Standard | DC-1 kHz | 3.7 | - |
| IRG4PC30S | 600 | 18 | 1.6 | Single | TO-247 | Standard | DC-1 kHz | 3.7 | - |
| IRGB4061D | 600 | 18 | 2.0 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.4 | 2.3 |
| IRGS8B60K | 600 | 19 | 2.2 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.3 | - |
| IRGB8B60K | 600 | 19 | 2.2 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.3 | - |
| IRG4BC40U | 600 | 20 | 2.1 | Single | TO-220AB | Ultrafast | 8-30 kHz | 0.7 | - |
| IRG4PC40UD | 600 | 20 | 2.1 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.1 | 1.3 |
| IRG4PC40U | 600 | 20 | 2.1 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.7 | - |
| IRG4BC40WS | 600 | 20 | 2.5 | Single | D2-Pak | Warp | 30-150 kHz | 0.3 | - |
| IRG4BC40W | 600 | 20 | 2.5 | Single | TO-220AB | Warp | 30-150 kHz | 0.3 | - |
| IRG4PC40W | 600 | 20 | 2.5 | Single | TO-247 | Warp | 30-150 kHz | 0.3 | - |
| IRG4BC40WL | 600 | 20 | 2.5 | Single | TO-262 | Warp | 30-150 kHz | 0.3 | - |
| IRGB20B60PD1 | 600 | 22 | 2.4 | Co-pack | TO-220AB | Warp | 30-150 kHz | 0.2 | 1.5 |
| IRGP20B60PD | 600 | 22 | 2.4 | Co-pack | TO-247 | Warp | 30-150 kHz | 0.2 | 1.4 |
| IRGS4062D | 600 | 24 | 2.0 | Co-pack | D2-Pak | Ultrafast | 8-30 kHz | 0.7 | 1.8 |
| IRGB4062D | 600 | 24 | 2.0 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.7 | 1.8 |
| IRGP4062D | 600 | 24 | 2.0 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 0.7 | 1.8 |
| IRG4BC40K | 600 | 25 | 2.6 | Single | TO-220AB | Ultrafast | 8-30 kHz | 1.0 | - |
| IRG4PC40KD | 600 | 25 | 2.6 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.7 | 1.3 |
| IRG4PC40K | 600 | 25 | 2.6 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.0 | - |
| IRG4BC40F | 600 | 27 | 1.7 | Single | TO-220AB | Fast | 1-8 kHz | 2.2 | - |
| IRG4PC40FD | 600 | 27 | 1.7 | Co-pack | TO-247 | Fast | 1-8 kHz | 3.0 | 1.3 |
| IRG4PC40F | 600 | 27 | 1.7 | Single | TO-247 | Fast | 1-8 kHz | 2.2 | - |
| IRG4PC50UD | 600 | 27 | 2.0 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.6 | 1.3 |
| IRG4PC50U | 600 | 27 | 2.0 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.7 | - |
| IRG4PC50W | 600 | 27 | 2.3 | Single | TO-247 | Warp | 30-150 kHz | 0.4 | - |
| IRG7SC28U | 600 | 30 | 2.0 | Single | D2-Pak | Ultrafast | 8-30 kHz | - | - |
| IRG4PC50KD | 600 | 30 | 2.2 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 2.5 | 1.3 |
| IRG4PC50K | 600 | 30 | 2.2 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.1 | - |
| IRGP30B60KD-E | 600 | 30 | 2.4 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.2 | 1.3 |
| IRG4BC40S | 600 | 31 | 1.5 | Single | TO-220AB | Standard | DC-1 kHz | 7.0 | - |
| IRG4PC40S | 600 | 31 | 1.5 | Single | TO-247 | Standard | DC-1 kHz | 7.0 | - |
| IRG7PC28U | 600 | 33 | 2.0 | Single | TO-247 | Ultrafast | 8-30 kHz | - | - |
| IRGP35B60PD-E | 600 | 34 | 1.9 | Co-pack | TO-247AD | Warp | 30-150 kHz | 0.4 | 1.3 |
| IRG4PC50F-E | 600 | 39 | 1.5 | Single | TO-247AD | Fast | 1-8 kHz | 2.5 | - |

Product Selector IGBT, Continued

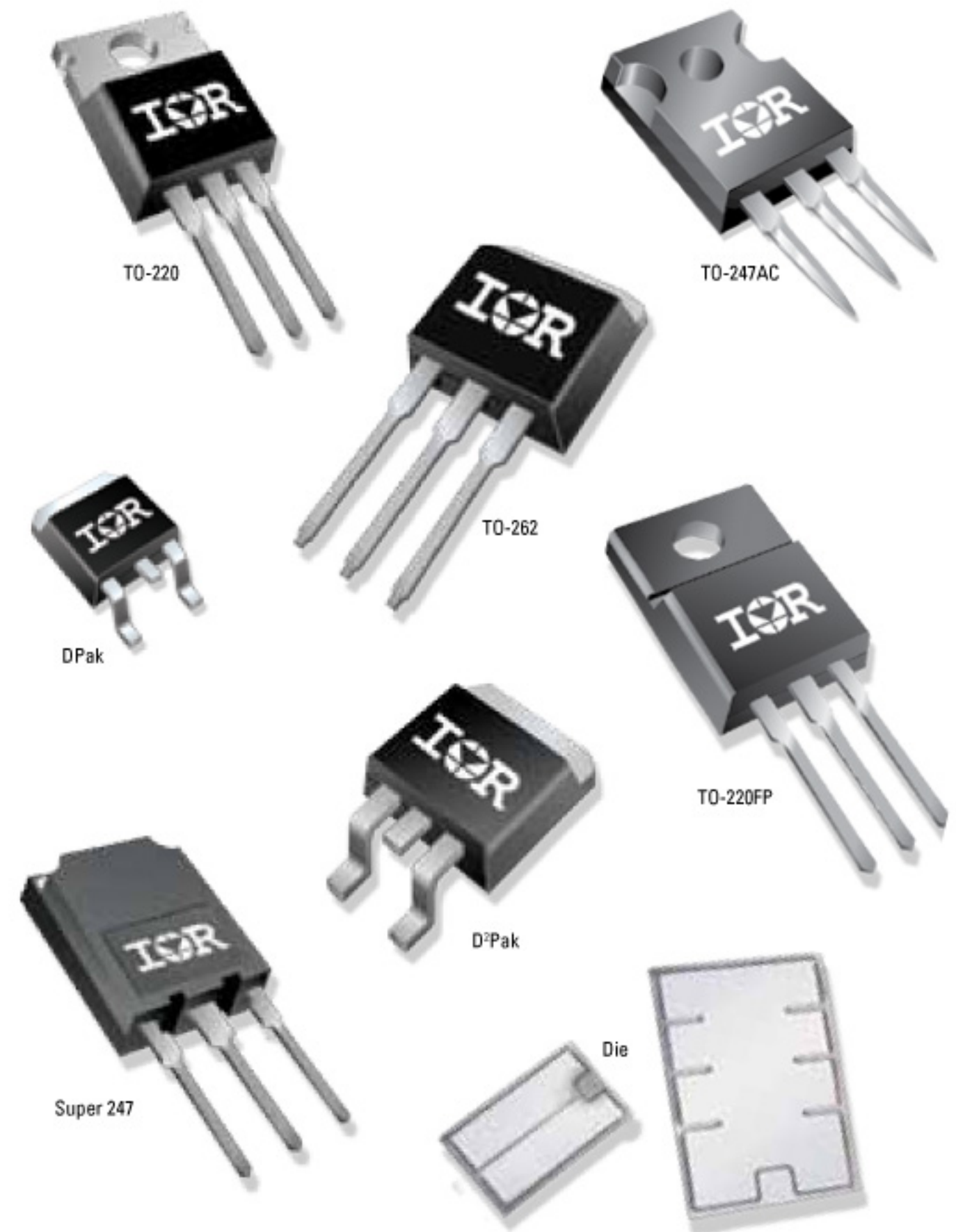
| Part | V _{CE(S)} (V) | I _{C @100C} (A) | V _{CE(ON)} (V) | Circuit | Package | Switching Speed | | E _{ts Typ} (mJ) | V _f (typ) |
|----------------|---------------------------|-----------------------------|----------------------------|---------|----------|-----------------|------------|-----------------------------|-------------------------|
| IRG4PC50FD | 600 | 39 | 1.6 | Co-pack | TO-247 | Fast | 1-8 kHz | 3.9 | 1.3 |
| IRG4PC50F | 600 | 39 | 1.6 | Single | TO-247 | Fast | 1-8 kHz | 2.5 | - |
| IRG4PC60U | 600 | 40 | 2.0 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.3 | - |
| IRG4PC50SD | 600 | 41 | 1.4 | Co-pack | TO-247 | Standard | DC-1 kHz | 9.0 | 1.3 |
| IRG4PC50S | 600 | 41 | 1.4 | Single | TO-247 | Standard | DC-1 kHz | 9.0 | - |
| IRGP50B60PD | 600 | 42 | 2.2 | Co-pack | TO-247 | Warp | 30-150 kHz | 0.7 | 1.5 |
| IRGP50B60PD1-E | 600 | 45 | 2.0 | Co-pack | TO-247AD | Warp | 30-150 kHz | 0.6 | 1.3 |
| IRGP50B60PD1 | 600 | 45 | 2.4 | Co-pack | TO-247 | Warp | 30-150 kHz | 0.6 | 1.3 |
| IRGP4063 | 600 | 48 | 2.1 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.9 | - |
| IRGP4063D | 600 | 48 | 2.1 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.9 | 2.0 |
| IRGP4068D | 600 | 48 | 2.1 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | - | 1.0 |
| IRGP4068D-E | 600 | 48 | 2.1 | Co-pack | TO-247AD | Ultrafast | 8-30 kHz | - | 1.0 |
| IRGP4069 | 600 | 50 | 1.9 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.0 | - |
| IRGP4069D | 600 | 50 | 1.9 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.0 | 2.2 |
| IRGP4069D-E | 600 | 50 | 1.9 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.0 | 2.2 |
| IRGS30B60K | 600 | 50 | 2.4 | Single | D2-Pak | Ultrafast | 8-30 kHz | 1.2 | - |
| IRGB30B60K | 600 | 50 | 2.4 | Single | TO-220AB | Ultrafast | 8-30 kHz | 1.2 | - |
| IRGSL30B60K | 600 | 50 | 2.4 | Single | TO-262 | Ultrafast | 8-30 kHz | 1.2 | - |
| IRGP4069-E | 600 | 51 | 1.9 | Single | TO-247AD | Ultrafast | 8-30 kHz | 1.0 | - |
| IRG4PC60F | 600 | 60 | 1.8 | Single | TO-247 | Fast | 1-8 kHz | 4.9 | - |
| IRG4PSC71UD | 600 | 60 | 2.0 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 5.5 | 1.4 |
| IRG4PSC71U | 600 | 60 | 2.0 | Single | TO-274AA | Ultrafast | 8-30 kHz | 2.4 | - |
| IRG4PSC71KD | 600 | 60 | 2.3 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 6.3 | 1.4 |
| IRG4PSC71K | 600 | 60 | 2.3 | Single | TO-274AA | Ultrafast | 8-30 kHz | 2.8 | - |
| IRGP4066D | 600 | 90 | 2.1 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 4.6 | 2.2 |
| IRGP4066 | 600 | 90 | 2.1 | Single | TO-247 | Ultrafast | 8-30 kHz | 4.6 | - |
| IRGP4066-E | 600 | 90 | 2.1 | Single | TO-247AD | Ultrafast | 8-30 kHz | 4.6 | - |
| IRGP4066D-E | 600 | 90 | 2.1 | Co-pack | TO-247AD | Ultrafast | 8-30 kHz | 4.6 | 2.2 |
| IRG4PF50WD | 900 | 28 | 2.7 | Co-pack | TO-247 | Warp | 30-150 kHz | 4.0 | 2.5 |
| IRG4PF50W | 900 | 28 | 2.7 | Single | TO-247 | Warp | 30-150 kHz | 1.3 | - |
| IRG4BH20K-S | 1200 | 5 | 3.2 | Single | D2-Pak | Ultrafast | 8-30 kHz | 0.9 | - |
| IRG4BH20K-L | 1200 | 5 | 3.2 | Single | TO-262 | Ultrafast | 8-30 kHz | 0.9 | - |
| IRG4PH20KD | 1200 | 5 | 4.3 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 0.9 | 2.5 |
| IRG4PH20K | 1200 | 5 | 4.3 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.9 | - |
| IRGB5B120KD | 1200 | 6 | 2.0 | Co-pack | TO-220AB | Ultrafast | 8-30 kHz | 0.7 | 2.1 |
| IRG4PH30KD | 1200 | 10 | 4.2 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 2.1 | 3.4 |
| IRG4PH30K | 1200 | 10 | 4.2 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.6 | - |
| IRG4PH40KD | 1200 | 15 | 3.4 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 2.4 | 2.6 |
| IRG4PH40K | 1200 | 15 | 3.4 | Single | TO-247 | Ultrafast | 8-30 kHz | 2.4 | - |
| IRG4PH40UD | 1200 | 15 | 3.5 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.1 | 2.6 |
| IRG4PH40U | 1200 | 15 | 3.5 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.7 | - |
| IRG7PH30K10D | 1200 | 16 | 2.4 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 0.9 | 2.0 |
| IRGP20B120UD-E | 1200 | 20 | 3.1 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.3 | 1.7 |
| IRGP20B120U-E | 1200 | 20 | 3.5 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.3 | - |
| IRG4PH40UD2-E | 1200 | 21 | 3.1 | Co-pack | TO-247AD | Ultrafast | 8-30 kHz | 3.7 | 3.4 |
| IRG7PH30K10 | 1200 | 23 | 2.4 | Single | TO-247 | Ultrafast | 8-30 kHz | 0.9 | - |
| IRG4PH50KD | 1200 | 24 | 3.5 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 5.7 | 2.5 |
| IRG4PH50K | 1200 | 24 | 3.5 | Single | TO-247 | Ultrafast | 8-30 kHz | 3.5 | - |
| IRG4PH50UD | 1200 | 24 | 3.7 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 3.6 | 2.5 |
| IRG4PH50U | 1200 | 24 | 3.7 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.9 | - |
| IRG7PH35UD | 1200 | 25 | 2.2 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.7 | 2.8 |
| IRG7PH35UD1 | 1200 | 25 | 2.2 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 1.7 | 1.2 |
| IRGP30B120KD-E | 1200 | 30 | 2.3 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 2.6 | 1.9 |
| IRG4PH50S | 1200 | 33 | 1.7 | Single | TO-247 | Standard | DC-1 kHz | 21.4 | - |
| IRG4PH50S-E | 1200 | 33 | 1.7 | Single | TO-247AD | Standard | DC-1 kHz | 21.4 | - |
| IRG7PH35U | 1200 | 35 | 2.2 | Single | TO-247 | Ultrafast | 8-30 kHz | 1.7 | - |
| IRGPS40B120UD | 1200 | 40 | 3.5 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 3.1 | 2.0 |
| IRGPS40B120U | 1200 | 40 | 3.5 | Single | TO-274AA | Ultrafast | 8-30 kHz | 3.1 | - |
| IRG4PSH71KD | 1200 | 42 | 3.9 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 8.9 | 2.5 |
| IRG4PSH71K | 1200 | 42 | 3.9 | Single | TO-274AA | Ultrafast | 8-30 kHz | 5.5 | - |
| IRG7PH42UD | 1200 | 45 | 2.0 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 3.3 | 2.0 |
| IRG7PH42UD1 | 1200 | 45 | 2.0 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 3.3 | 1.2 |
| IRG4PSH71UD | 1200 | 50 | 2.7 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 18.2 | 2.9 |
| IRG4PSH71U | 1200 | 50 | 2.7 | Single | TO-274AA | Ultrafast | 8-30 kHz | - | - |
| IRG7PH46UD | 1200 | 57 | 2.0 | Co-pack | TO-247 | Ultrafast | 8-30 kHz | 4.4 | 3.1 |
| IRG7PH42U | 1200 | 60 | 2.0 | Single | TO-247 | Ultrafast | 8-30 kHz | 3.3 | - |
| IRGPS60B120KD | 1200 | 60 | 2.8 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 8.0 | 1.9 |
| IRG7PSH50UD | 1200 | 70 | 2.0 | Co-pack | TO-274AA | Ultrafast | 8-30 kHz | 5.8 | 3.0 |
| IRG7PH46U | 1200 | 75 | 2.0 | Single | TO-247 | Ultrafast | 8-30 kHz | 4.3 | - |
| IRG7PH50U | 1200 | 90 | 2.0 | Single | TO-247 | Ultrafast | 8-30 kHz | 5.8 | - |
| IRG7PH50U-E | 1200 | 90 | 2.0 | Single | TO-247AD | Ultrafast | 8-30 kHz | 5.8 | - |
| IRG7PSH73K10 | 1200 | 130 | 2.3 | Single | TO-274AA | Ultrafast | 8-30 kHz | 12.3 | - |

IGBTs

IR offers a wide portfolio of IGBTs allowing customers to meet design and performance goals. Various technologies such as NPT (Non-Punch Through) and Trench allow lowest switching and conduction losses to increase efficiency, reduce thermal problems and improve power density.

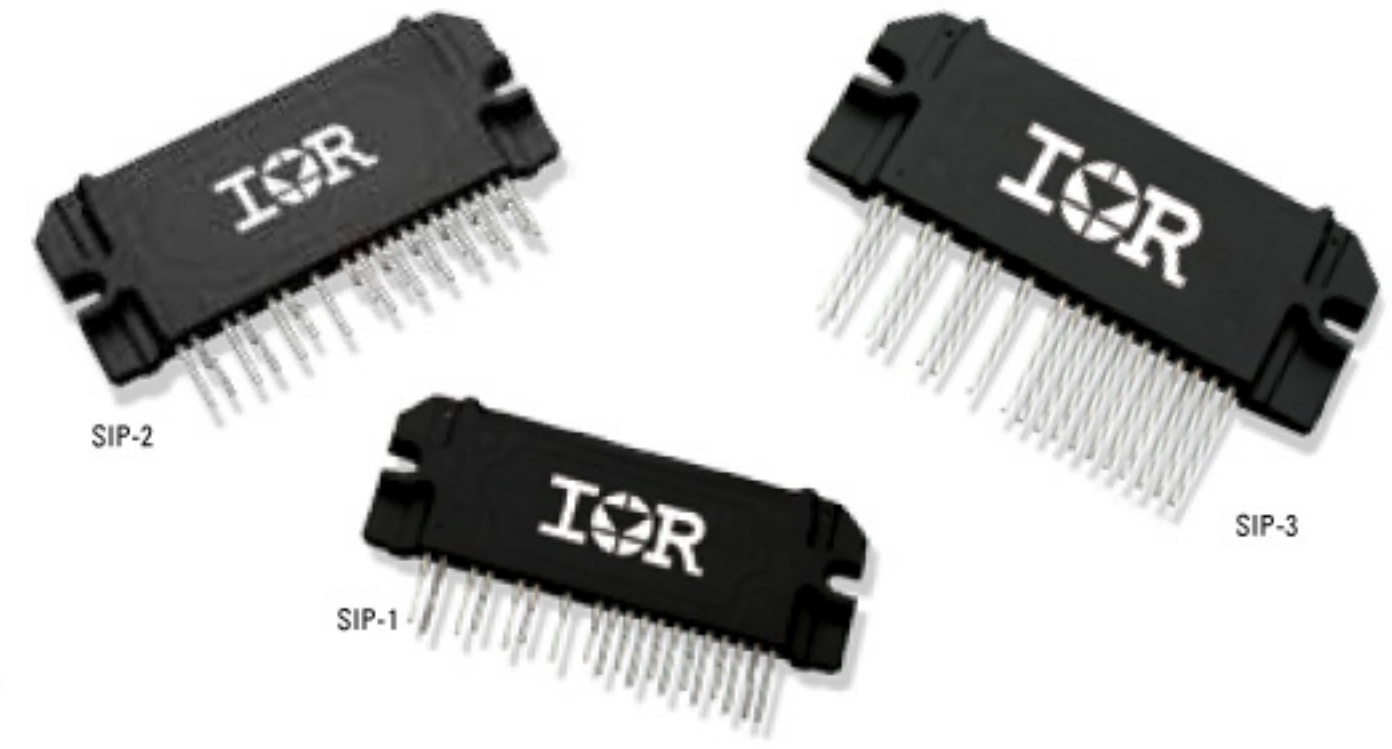
- **Motor Drive** - Recommended for motor drive inverters. They are all co-packaged with freewheeling diode.
- **UPS, Solar Inverter** - Designed for switching frequencies between 15-25 kHz they are typically used in UPS and Solar Inverters.
- **PFC** - Designed with low switching losses for operation at high frequency up to 100kHz.
- **Welding, HID** - Designed for lowest conduction losses, they are best suited for switching frequencies below 1kHz in applications .
- **Die** - Most IGBTs are available on Die. Please contact our Die Sales Team if you require any further information.

Online IGBT Selection Tool – mypower.irf.com/igbt



IRAM

- SIP1 and SIP2 are widely accepted for 6A, 10A, 16A & 20A modules
- SIP1A is the new Heavy-Duty generation IRAMs featuring new ICs, Trench and improved power cycling ruggedness
- SIP3 carries higher power



Integrated Power Modules

| Part | Voltage & Shunt | Typical Load (W) | IO @ TC = 100°C (A RMS) | Package | Configuration |
|----------------|--------------------|------------------|-------------------------|---------|---------------|
| IRAMS06UP60A | 600V Open Emitter | 400W | 3 | SIP-1 | |
| IRAMS06UP60B | 600V Integr. Shunt | | | | |
| IRAM136-1061A2 | 600V Open Emitter | 750W | 5 | SIP-1A | |
| IRAMS10UP60A | 600V Open Emitter | 750W | 5 | SIP-1 | |
| IRAMS10UP60B | 600V Integr. Shunt | | | | |
| IRAMX16UP60A | 600V Open Emitter | 1500W | 8 | SIP-2 | |
| IRAMX16UP60B | 600V Integr. Shunt | | | | |
| IRAMX20UP60A | 600V Open Emitter | 2500W | 10 | SIP-3 | |
| IRAMY20UP60B | 600V Integr. Shunt | | | | |
| IRAM136-3063B | 600V Integr. Shunt | 3000W | 15 | SIP-3 | |
| IRAM136-3023B | 150V Integr. Shunt | 750W | 15 | | 3-phase, 150V |

Product Line

Applications

Key Products



Energy Saving Products

Integrated design platforms that enable customers to add energy-conserving features that achieve lower operating energy costs and manufacturing Bill of Material (BOM) costs.

- Appliances
- Audio
- Display
- Industrial
- Lighting
- SMPS

- Digital Control ICs
- High-Voltage ICs
- IGBTs
- IRAM Integrated Power Modules
- MERs



Enterprise Power

Optimized power management system solutions that deliver benchmark power density, efficiency and performance in enterprise power.

- Servers
- Storage Networks
- Switchers & Routers
- Workstations
- Notebooks
- Game Stations
- Set-Top Box

- DirectFET[®] plus
- Low-Voltage ICs
- SupIRBuck[®]
- iPOWIR[®]
- PowIRstage[®]
- CHiL Digital Controllers



Automotive

Automotive grade power management solutions qualified to meet the needs of 12V, 24V and HEV/EV applications with a zero defect goal.

- AC and DC Motor Drives
- Powertrain / Engine control
- Body Electronics
- Lighting
- Class D Audio
- Heavy Loads and Actuators

- Automotive Qualified:
- HEXFET[®] Power MOSFETs
 - Intelligent Power Switches
 - Driver ICs
 - IGBTs
 - DirectFET[®]2



Benchmark MOSFETs

IR continues to lead the industry by offering power MOSFETs with the lowest $R_{DS(on)}$ and widest range of packages up to 250V for a diverse range of applications.

- Audio
- Computing
- Communications
- Motor Control
- Power Supply
- Synchronous Rectification

- Discrete HEXFET[®] MOSFETs
- Dual HEXFET[®] MOSFETs
- FETKY[®]



HiRel

Our discrete components, complex hybrid power module assemblies and rugged DC-DC converters utilize leading-edge power technology which, together with demanding environmental specifications help engineers to meet their toughest design challenges.

- Space
- Military
- Commercial Aviation
- Rugged Industrial
- Medical

- RAD-Hard MOSFETs
- Power Modules/Hybrid Solutions
- Motor Control Solutions
- DC-DC Converters