

IGBT Selection Guide

Common IGBT applications and topologies

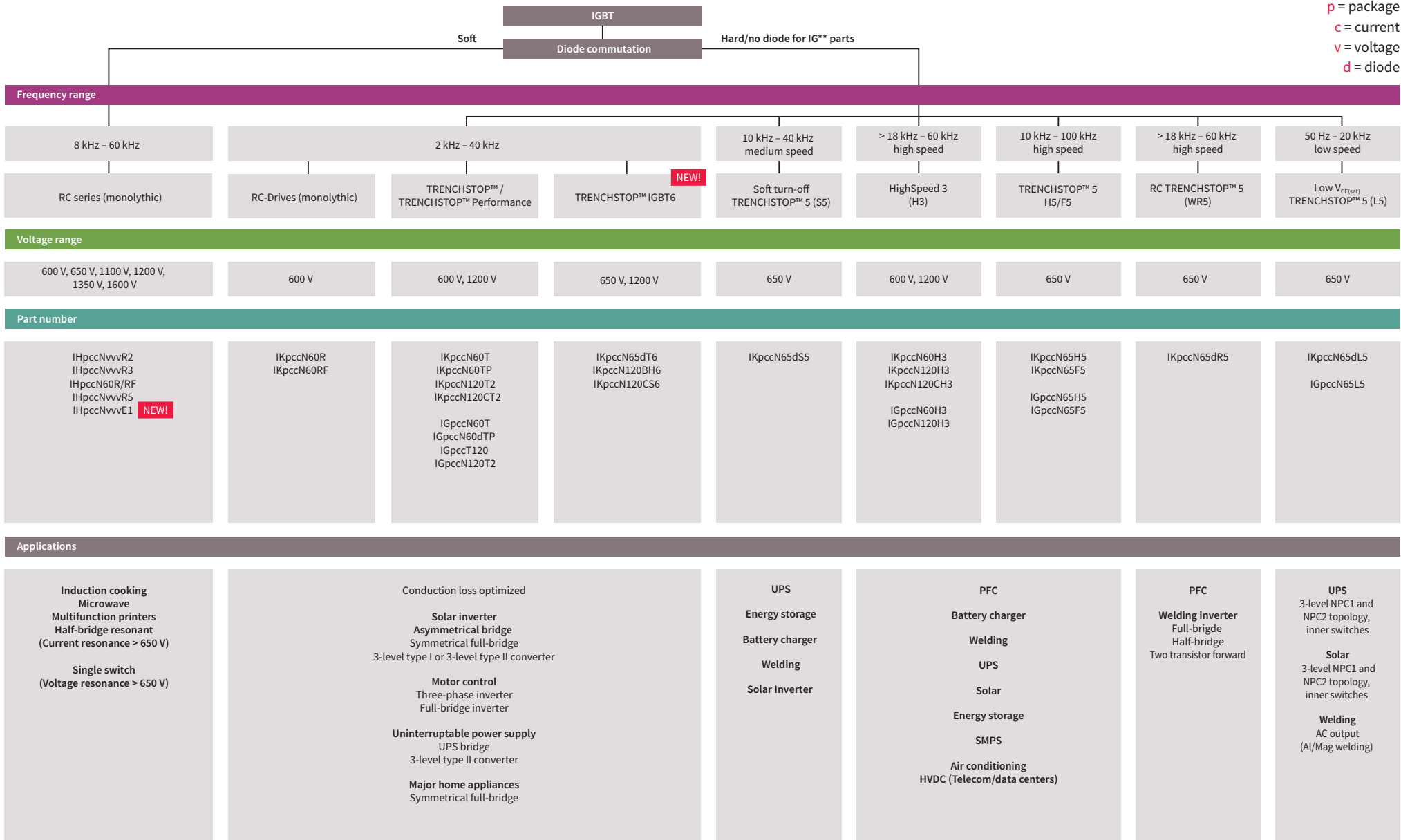


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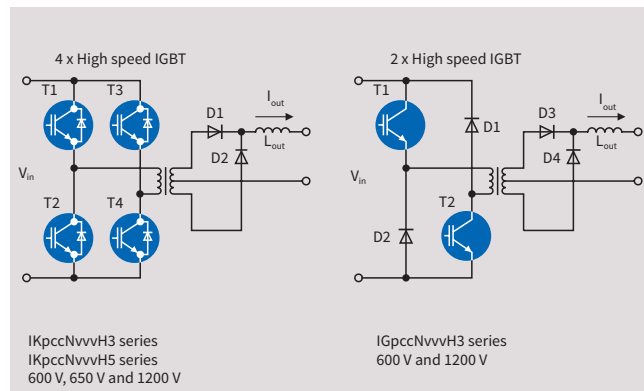
IGBT selection tree

Nomenclature: IGBT
 IKpccNvvvdH3 – IGBT + diode
 IGpccNvvvH3 – Single IGBT
 p = package
 c = current
 v = voltage
 d = diode

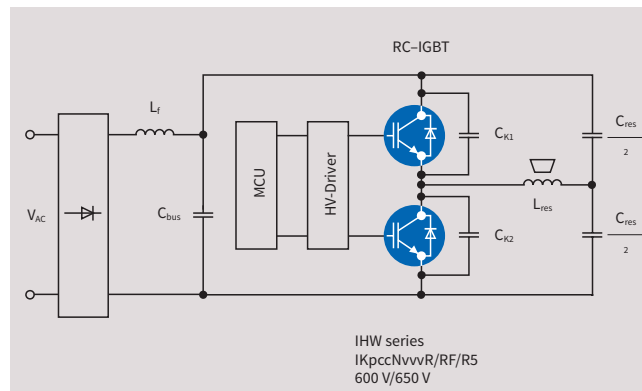


Common IGBT applications and topologies

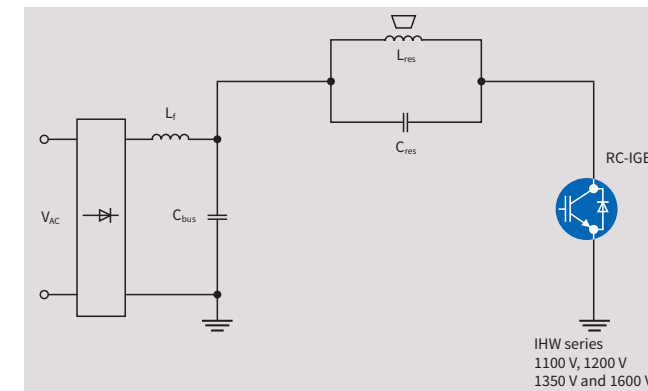
Full-bridge/two transistor forward: welding inverter



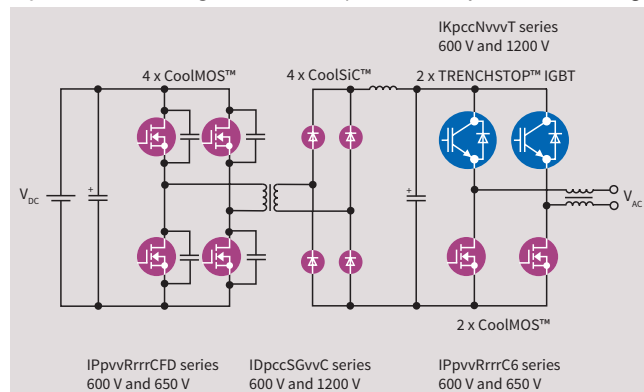
Half-bridge: induction heating inverter (current resonance)



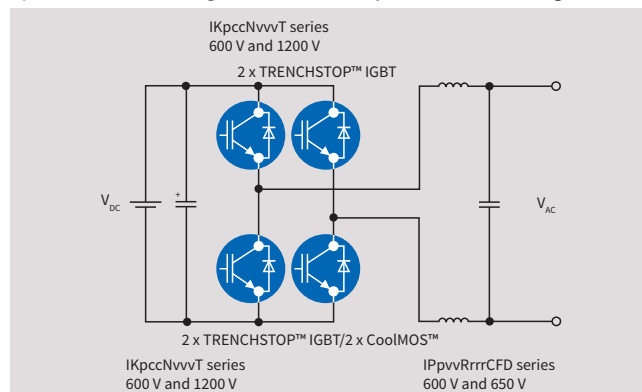
Single switch: induction heating inverter (voltage resonance)



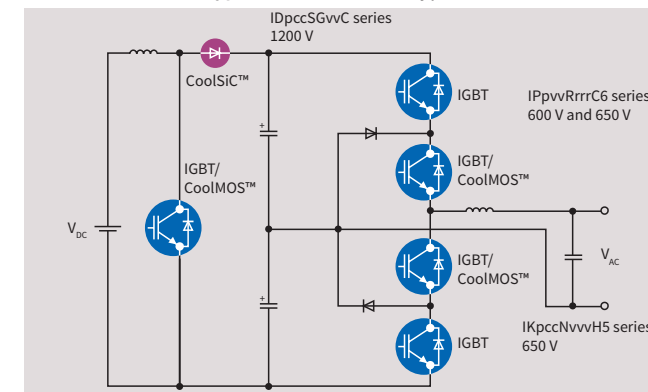
Asymmetrical full-bridge: solar inverter (phase-shift / asymmetrical full-bridge)



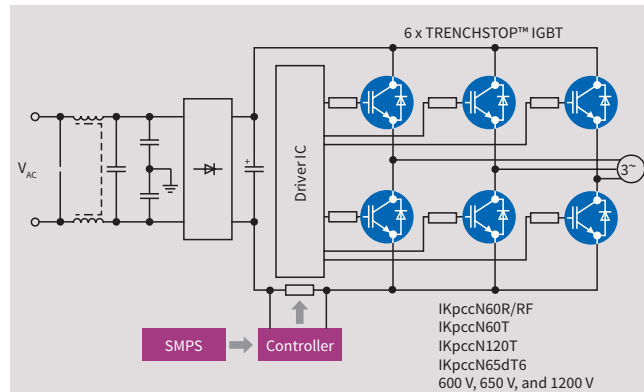
Symmetrical full-bridge: solar inverter (symmetrical full-bridge)



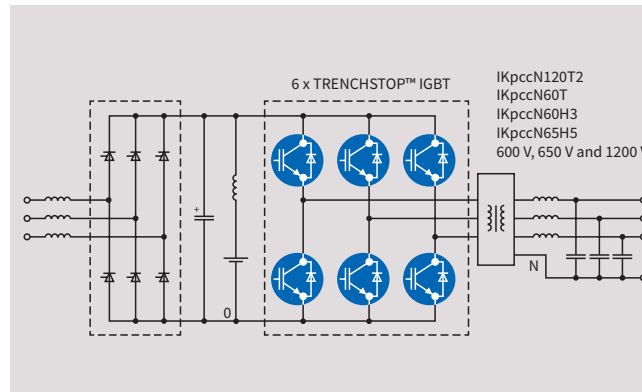
Three level inverter type II: 3-level inverter type II (Solar, UPS)



Motor control: three-phase motor control



Uninterruptable power supply: universal power supply b6-bridge



Nomenclature: IGBT
 IKpccNvvvdH3
 p = package
 c = current
 v = voltage
 d = diode

Nomenclature: MOSFET
 IPpvvRrrrCFD
 p = package
 c = current
 r = resistance

■ IGBT parts
■ Other Infineon parts

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Discrete IGBT with anti-parallel diode

Product type	$V_{CE(max)}$ [V]	Diode	Switching frequency [kHz]	Package	Switching Hard/Soft	Series	$I_{C(max)}$ @ 100° [A]	$V_{CE(sat)}$ (typ.) @ 25° [V]	E_{off} (typ.) @ 25° [mJ]	E_{on} (typ.) @ 25° [mJ]	Q_{rr} (typ.) @ 25° [mC]
IKB20N60H3	600	Y	20 – 100	D2PAK (TO-263)	Hard	HighSpeed 3	20	1,95	0,24	0,45	390
IKP20N60H3	600	Y	20 – 100	TO-220	Hard	HighSpeed 3	20	1,95	0,24	0,45	390
IKW20N60H3	600	Y	20 – 100	TO-247	Hard	HighSpeed 3	20	1,95	0,24	0,56	390
IKW30N60H3	600	Y	20 – 100	TO-247	Hard	HighSpeed 3	30	1,95	0,44	0,94	320
IKW40N60H3	600	Y	20 – 100	TO-247	Hard	HighSpeed 3	40	1,95	0,58	1,10	810
IKW50N60H3	600	Y	20 – 100	TO-247	Hard	HighSpeed 3	50	1,85	0,91	1,45	880
IKW60N60H3	600	Y	20 – 100	TO-247	Hard	HighSpeed 3	60	1,85	1,13	2,10	1200
IKW75N60H3	600	Y	20 – 100	TO-247	Hard	HighSpeed 3	75	1,85	1,70	3,00	1800
IKD04N60R	600	Y	2 – 20	DPAK (TO-252)	Hard	RC Drives	4	1,65	0,15	0,09	220
IKD06N60R	600	Y	2 – 20	DPAK (TO-252)	Hard	RC Drives	6	1,65	0,22	0,11	370
IKD10N60R	600	Y	2 – 20	DPAK (TO-252)	Hard	RC Drives	10	1,65	0,38	0,21	560
IKD15N60R	600	Y	2 – 20	DPAK (TO-252)	Hard	RC Drives	15	1,65	0,53	0,37	760
IKD03N60RF	600	Y	4 – 30	DPAK (TO-252)	Hard	RC Drives Fast	2,5	2,20	0,04	0,05	60
IKD04N60RF	600	Y	4 – 30	DPAK (TO-252)	Hard	RC Drives Fast	4	2,20	0,05	0,06	90
IKD06N60RF	600	Y	4 – 30	DPAK (TO-252)	Hard	RC Drives Fast	6	2,20	0,09	0,09	160
IKD10N60RF	600	Y	4 – 30	DPAK (TO-252)	Hard	RC Drives Fast	10	2,20	0,16	0,19	270
IKD15N60RF	600	Y	4 – 30	DPAK (TO-252)	Hard	RC Drives Fast	15	2,20	0,25	0,27	420
IHW40N60R	600	Y	8 – 60	TO-247	Soft	RC Soft Switching	40	1,65	0,75	-	-
IHW40N60RF	600	Y	20 – 100	TO-247	Soft	RC Soft Switching	40	1,85	0,56	-	-
IKB06N60T	600	Y	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	6	1,50	0,11	0,09	190
IKB10N60T	600	Y	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	18	1,50	0,27	0,16	380
IKB15N60T	600	Y	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	23	1,50	0,35	0,22	240
IKB20N60T	600	Y	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	15	1,50	0,46	0,31	310
IKA06N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	6,2	1,50	0,11	0,09	500
IKA10N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	7,2	1,50	0,27	0,16	380
IKA15N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	8,9	1,50	0,35	0,22	240
IKP04N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	4	1,50	0,08	0,06	79
IKP06N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	6	1,50	0,11	0,09	190
IKP10N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	18	1,50	0,27	0,16	380
IKP15N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	23	1,50	0,35	0,22	240
IKP20N60T	600	Y	2 – 20	TO-220	Hard	TRENCHSTOP™	28	1,50	0,46	0,31	310
IKW20N60T	600	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	28	1,50	0,46	0,31	310
IKW30N60T	600	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	39	1,50	1,10	1,00	920
IKW50N60T	600	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	50	1,50	1,40	1,20	1800
IKW75N60T	600	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	75	1,50	2,90	2,90	2400
IKQ100N60T	600	Y	2 – 20	TO-247PLUS-3	Hard	TRENCHSTOP™	100	1,50	2,50	3,10	2800
IKQ120N60T	600	Y	2 – 20	TO-247PLUS-3	Hard	TRENCHSTOP™	120	1,50	5,90	6,20	3400
IKW30N60DTP	600	Y	2 – 30	TO-247	Hard	TRENCHSTOP™ Perf.	38	1,60	0,74	0,99	1230
IKW40N60DTP	600	Y	2 – 30	TO-247	Hard	TRENCHSTOP™ Perf.	48	1,60	1,05	1,63	1520
IKW50N60DTP	600	Y	2 – 30	TO-247	Hard	TRENCHSTOP™ Perf.	61	1,60	1,39	2,25	2150
IKP08N65F5	650	Y	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	11	1,60	0,02	0,07	140
IKP08N65H5	650	Y	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	11	1,65	0,03	0,07	130
IKP15N65F5	650	Y	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	18	1,60	0,04	0,13	190

Product type	$V_{CE(max)}$ [V]	Diode	Switching frequency [kHz]	Package	Switching Hard/Soft	Series	$I_{C(max)}$ @ 100° [A]	$V_{CE(sat)}$ (typ.) @ 25° [V]	E_{off} (typ.) @ 25° [mJ]	E_{on} (typ.) @ 25° [mJ]	Q_{rr} (typ.) @ 25° [mC]
IKP15N65H5	650	Y	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	18	1,65	0,05	0,12	200
IKP20N65F5	650	Y	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	21	1,60	0,06	0,16	280
IKP20N65H5	650	Y	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	21	1,65	0,06	0,17	270
IKP30N65F5	650	Y	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	35	1,60	0,07	0,28	410
IKP30N65H5	650	Y	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	35	1,65	0,10	0,28	410
IKP40N65F5	650	Y	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	46	1,60	0,10	0,36	450
IKP40N65H5	650	Y	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	46	1,65	0,12	0,39	450
IKA08N65F5	650	Y	60 – 120	TO220-3 FP	Hard	TRENCHSTOP™ 5	6,8	1,60	0,02	0,07	140
IKA08N65H5	650	Y	30 – 100	TO220-3 FP	Hard	TRENCHSTOP™ 5	6,8	1,65	0,03	0,07	130
IKA15N65F5	650	Y	60 – 120	TO220-3 FP	Hard	TRENCHSTOP™ 5	8,5	1,60	0,04	0,13	190
IKA15N65H5	650	Y	30 – 100	TO220-3 FP	Hard	TRENCHSTOP™ 5	8,5	1,65	0,05	0,12	200
IHW20N65R5	650	Y	20 – 150	TO-247	Soft	TRENCHSTOP™ 5	20	1,35	0,16	0,54	1550
IHW30N65R5	650	Y	20 – 150	TO-247	Soft	TRENCHSTOP™ 5	30	1,35	0,24	0,85	1900
IHW40N65R5	650	Y	20 – 150	TO-247	Soft	TRENCHSTOP™ 5	40	1,35	0,37	1,10	2750
IHW50N65R5	650	Y	20 – 150	TO-247	Soft	TRENCHSTOP™ 5	50	1,35	0,45	1,50	2750
IKW30N65EL5	650	Y	50 Hz - 20 kHz	TO-247	Hard	TRENCHSTOP™ 5	62	1,05	1,35	0,47	910
IKW30N65H5	650	Y	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	35	1,65	0,10	0,28	410
IKW30N65NL5	650	Y	50 Hz - 20 kHz	TO-247	Hard	TRENCHSTOP™ 5	62	1,05	1,35	0,56	480
IKW30N65WR5	650	Y	20 – 60	TO-247	Hard	TRENCHSTOP™ 5	30	1,40	0,33	0,99	1250
IKW40N65F5	650	Y	60 – 120	TO-247	Hard	TRENCHSTOP™ 5	46	1,60	0,10	0,36	450
IKW40N65H5	650	Y	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	46	1,65	0,12	0,39	450
IKW40N65WR5	650	Y	20 – 60	TO-247	Hard	TRENCHSTOP™ 5	40	1,40	0,42	1,40	1650
IKW50N65EH5	650	Y	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	50	1,65	0,50	1,50	1100
IKW50N65F5	650	Y	60 – 120	TO-247	Hard	TRENCHSTOP™ 5	56	1,60	0,16	0,49	550
IKW50N65H5	650	Y	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	56	1,65	0,18	0,52	570
IKW50N65WR5	650	Y	20 – 60	TO-247	Hard	TRENCHSTOP™ 5	50	1,40	0,70	1,85	1800
IKW75N65EH5	650	Y	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	75	1,65	0,90	2,30	1330
IKW75N65EL5	650	Y	50 Hz - 20 kHz	TO-247	Hard	TRENCHSTOP™ 5	80	1,10	3,20	1,61	1370
IKZ50N65ES5	650	Y	15 – 40	TO-247-4	Hard	TRENCHSTOP™ 5	60,5	1,35	0,88	0,77	1400
IKZ75N65ES5	650	Y	15 – 40	TO-247-4	Hard	TRENCHSTOP™ 5	80	1,42	1,30	1,50	1000
IKZ50N65EH5	650	Y	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	54	1,65	0,19	0,41	820
IKZ50N65NH5	650	Y	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	54	1,65	0,20	0,35	490
IKZ75N65EH5	650	Y	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	75	1,65	0,43	0,68	1020
IKZ75N65EL5	650	Y	50 Hz - 20 kHz	TO-247-4	Hard	TRENCHSTOP™ 5	100	1,10	3,20	1,57	1300
IKZ75N65NH5	650	Y	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	75	1,65	0,52	0,88	570
IKW30N65ES5	650	Y	10 – 30	TO-247	Hard	TRENCHSTOP™ 5	39,5	1,35	0,32	0,56	830
IKW40N65ES5	650	Y	10 – 30	TO-247	Hard	TRENCHSTOP™ 5	50	1,35	0,40	0,86	1100
IKW50N65ES5	650	Y	10 – 30	TO-247	Hard	TRENCHSTOP™ 5	60,5	1,35	0,55	1,23	1250
IKW75N65ES5	650	Y	10 – 30	TO-247	Hard	TRENCHSTOP™ 5	80	1,42	0,95	2,40	1800
IKA08N65ET6	650	Y	5 – 30	TO220-3 FP	Hard	TRENCHSTOP™ IGBT6	7	1,5	0,04	0,11	150
IKA10N65ET6	650	Y	5 – 30	TO220-3 FP	Hard	TRENCHSTOP™ IGBT6	9	1,5	0,07	0,20	210
IKA15N65ET6	650	Y	5 – 30	TO220-3 FP	Hard	TRENCHSTOP™ IGBT6	11	1,5	0,11	0,23	210
IHW30N110R3	1100	Y	8 – 60	TO-247	Soft	RC Soft Switching	30	1,55	1,15	-	-
IKW15N120H3	1200	Y	20 – 100	TO-247	Hard	HighSpeed 3	15	2,05	0,45	1,10	800
IKW15N120T2	1200	Y	2 – 20	TO-247	Hard	HighSpeed 3	15	2,20	1,30	1,50	1300

Product type	V _{CE(max)} [V]	Diode	Switching frequency [kHz]	Package	Switching Hard/Soft	Series	I _{c(max)} @ 100° [A]	V _{CE(sat)} (typ.) @ 25° [V]	E _{off} (typ.) @ 25° [mJ]	E _{on} (typ.) @ 25° [mJ]	Q _{rr} (typ.) @ 25° [mC]
IKW25N120H3	1200	Y	20 – 100	TO-247	Hard	HighSpeed 3	25	2,05	0,85	1,80	1200
IKW40N120H3	1200	Y	20 – 100	TO-247	Hard	HighSpeed 3	40	2,05	1,20	3,20	1900
IKQ40N120CH3	1200	Y	18 – 60	TO-247PLUS-3	Hard	HighSpeed 3	40	2,00	1,30	3,30	3600
IKQ50N120CH3	1200	Y	18 – 60	TO-247PLUS-3	Hard	HighSpeed 3	50	2,00	1,90	3,00	3500
IKQ75N120CH3	1200	Y	18 – 60	TO-247PLUS-3	Hard	HighSpeed 3	75	2,00	2,80	6,40	5100
IKY40N120CH3	1200	Y	18 – 60	TO-247PLUS-4	Hard	HighSpeed 3	40	2,00	1,30	2,18	3000
IKY50N120CH3	1200	Y	18 – 60	TO-247PLUS-4	Hard	HighSpeed 3	50	2,00	1,90	2,30	3400
IKY75N120CH3	1200	Y	18 – 60	TO-247PLUS-4	Hard	HighSpeed 3	75	2,00	2,90	3,40	4900
IHW15N120E1	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	15	1,50	0.03 *	-	-
IHW15N120R3	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	15	1,48	0,70	-	-
IHW20N120R3	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	20	1,48	0,95	-	-
IHW20N120R5	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	20	1,55	0,75	-	-
IHW25N120E1	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	25	1,50	0.08 *	-	-
IHW25N120R2	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	25	1,60	2,54	-	-
IHW30N120R3	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	30	1,55	0.34 *	-	-
IHW40N120R3	1200	Y	8 – 60	TO-247	Soft	RC Soft Switching	40	1,55	0.48 *	-	-
IKW08T120	1200	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	8	2,20	1,20	1,08	1000
IKW25T120	1200	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	25	2,20	4,00	3,00	2300
IKW40T120	1200	Y	2 – 20	TO-247	Hard	TRENCHSTOP™	40	2,30	5,40	5,00	3800
IKW15T120	1200	Y	2 – 20	TO-247	Hard	TRENCHSTOP™ 2	15	2,20	2,10	2,00	1900
IKW25N120T2	1200	Y	2 – 20	TO-247	Hard	TRENCHSTOP™ 2	25	2,20	2,05	2,25	2050
IKW40N120T2	1200	Y	2 – 20	TO-247	Hard	TRENCHSTOP™ 2	40	2,30	3,80	4,50	3300
IKQ40N120CT2	1200	Y	2 – 20	TO-247PLUS-3	Hard	TRENCHSTOP™ 2	40	1,75	2,90	3,10	3100
IKQ50N120CT2	1200	Y	2 – 20	TO-247PLUS-3	Hard	TRENCHSTOP™ 2	50	1,75	3,30	3,80	3900
IKQ75N120CT2	1200	Y	2 – 20	TO-247PLUS-3	Hard	TRENCHSTOP™ 2	75	1,75	4,10	6,70	5100
IHW20N135R3	1350	Y	8 – 60	TO-247	Soft	RC Soft Switching	20	1,60	1,30	-	-
IHW20N135R5	1350	Y	8 – 60	TO-247	Soft	RC Soft Switching	20	1,65	0,95	-	-
IHW30N135R3	1350	Y	8 – 60	TO-247	Soft	RC Soft Switching	30	1,65	0.41 *	-	-
IHW40N135R3	1350	Y	8 – 60	TO-247	Soft	RC Soft Switching	40	1,65	0.55 *	-	-
IHW30N160R2	1600	Y	8 – 60	TO-247	Soft	RC Soft Switching	30	2,35	4,37	-	-
SKB02N120	1200	Y	10 – 40	D2PAK (TO-263)	Hard	Fast	2.8	3,7	0,11	0,27	100
SKP02N120	1200	Y	10 – 40	TO-220	Hard	Fast	2.8	3,7	0,11	0,27	100
IKW15N120BH6	1200	Y	20 – 40	TO-247	Hard	TRENCHSTOP™ IGBT6	15	1,9	0,55	0,7	830
IKW40N120CS6	1200	Y	15 – 35	TO-247	Hard	TRENCHSTOP™ IGBT6	40	1,85	1,55	2,55	2600
IKY40N120CS6	1200	Y	15 – 35	TO-247PLUS-4	Hard	TRENCHSTOP™ IGBT6	40	1,85	1,55	1,45	2600
IKQ75N120CS6	1200	Y	15 – 35	TO-247PLUS-3	Hard	TRENCHSTOP™ IGBT6	75	1,85	2,95	5,15	4700
IKY75N120CS6	1200	Y	15 – 35	TO-247PLUS-4	Hard	TRENCHSTOP™ IGBT6	75	1,85	2,95	2,2	4700
IKB15N65EH5	650	Y	30 – 100	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	32	1,65	0,08	0,4	500
IKB20N65EH5	650	Y	30 – 100	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	40	1,65	0,13	0,56	500
IKB30N65EH5	650	Y	30 – 100	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	40	1,65	0,3	0,86	500
IKB30N65ES5	650	Y	10 – 30	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	40	1,35	0,32	0,56	500
IKB40N65ES5	650	Y	10 – 30	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	40	1,35	0,4	0,84	1100
IKB40N65EH5	650	Y	30 – 100	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	40	1,65	0,12	0,39	1000
IKB40N65EF5	650	Y	60 – 120	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	46	1,6	0,48	1,12	930
IKFW40N60DH3E	600	Y	20 – 100	Advanced Isolation TO-247	Hard	HighSpeed 3	44	2,3	0,36	0,87	400

Product type	$V_{CE(max)}$ [V]	Diode	Switching frequency [kHz]	Package	Switching Hard/Soft	Series	$I_{C(max)}$ @ 100° [A]	$V_{CE(sat)}$ (typ.) @ 25° [V]	E_{off} (typ.) @ 25° [mJ]	E_{on} (typ.) @ 25° [mJ]	Q_{rr} (typ.) @ 25° [mC]
IKFW50N60DH3E	600	Y	20 – 100	Advanced Isolation TO-247	Hard	HighSpeed 3	60	2,2	0,56	1,28	551
IKFW60N60DH3E	600	Y	20 – 100	Advanced Isolation TO-247	Hard	HighSpeed 3	74	2,2	0,72	1,57	550
IKFW50N60DH3	600	Y	20 – 100	Advanced Isolation TO-247	Hard	HighSpeed 3	60	1,85	0,61	1,22	510
IKFW60N60DH3	600	Y	20 – 100	Advanced Isolation TO-247	Hard	HighSpeed 3	63	1,85	0,93	1,74	1240
IKFW90N60DH3	600	Y	20 – 100	Advanced Isolation TO-247	Hard	HighSpeed 3	95	1,85	1,3	2,65	1940
IKFW50N60ET	600	Y	2 – 20	Advanced Isolation TO-247	Hard	TRENCHSTOP™	64	1,50	1,42	1,5	1240
IKFW75N60ET	600	Y	2 – 20	Advanced Isolation TO-247	Hard	TRENCHSTOP™	95	1,50	2,35	2,7	1940

* Soft Switching

Discrete IGBT without anti-parallel diode

Product type	$V_{CE(max)}$ [V]	Diode	Switching frequency [kHz]	Package	Switching Hard/Soft	Series	$I_{C(max)}$ @ 100° [A]	$V_{CE(sat)}$ (typ.) @ 25° [V]	E_{off} (typ.) @ 25° [mJ]	E_{on} (typ.) @ 25° [mJ]	Q_{rr} (typ.) @ 25° [mC]
IGA30N60H3	600	No	20 – 100	TO220-3 FP	Hard	HighSpeed 3	11	1.95	0.44	0.73	n/a
IGB20N60H3	600	No	20 – 100	D2PAK (TO-263)	Hard	HighSpeed 3	20	1.95	0.24	0.45	n/a
IGB30N60H3	600	No	20 – 100	D2PAK (TO-263)	Hard	HighSpeed 3	30	1.95	0.44	0.73	n/a
IGP20N60H3	600	No	20 – 100	TO-220	Hard	HighSpeed 3	20	1.95	0.24	0.45	n/a
IGP30N60H3	600	No	20 – 100	TO-220	Hard	HighSpeed 3	30	1.95	0.44	0.73	n/a
IGW100N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	120	1.85	1.90	3.70	n/a
IGW20N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	20	1.95	0.24	0.56	n/a
IGW30N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	30	1.95	0.60	0.94	n/a
IGW40N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	40	1.95	0.58	1.10	n/a
IGW50N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	50	1.85	0.91	1.45	n/a
IGW60N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	60	1.85	1.13	2.10	n/a
IGW75N60H3	600	No	20 – 100	TO-247	Hard	HighSpeed 3	75	1.85	1.70	3.00	n/a
IGB10N60T	600	No	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	18	1.5	0.27	0.16	n/a
IGB15N60T	600	No	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	23	1.5	0.35	0.22	n/a
IGB30N60T	600	No	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	39	1.5	0.77	0.69	n/a
IGB50N60T	600	No	2 – 20	D2PAK (TO-263)	Hard	TRENCHSTOP™	90	1.5	1.40	1.20	n/a
IGD06N60T	600	No	2 – 20	DPAK (TO-252)	Hard	TRENCHSTOP™	6	1.5	0.11	0.09	n/a
IGP06N60T	600	No	2 – 20	TO-220	Hard	TRENCHSTOP™	6	1.5	0.11	0.09	n/a
IGP10N60T	600	No	2 – 20	TO-220	Hard	TRENCHSTOP™	18	1.5	0.27	0.16	n/a
IGP15N60T	600	No	2 – 20	TO-220	Hard	TRENCHSTOP™	23	1.5	0.35	0.22	n/a
IGP50N60T	600	No	2 – 20	TO-220	Hard	TRENCHSTOP™	64	1.5	1.40	1.20	n/a
IGU04N60T	600	No	2 – 20	TO-251	Hard	TRENCHSTOP™	4	1.5	0.08	0.06	n/a
IGW30N60T	600	No	2 – 20	TO-247	Hard	TRENCHSTOP™	39	1.5	0.77	0.69	n/a
IGW50N60T	600	No	2 – 20	TO-247	Hard	TRENCHSTOP™	64	1.5	1.40	1.20	n/a
IGW75N60T	600	No	2 – 20	TO-247	Hard	TRENCHSTOP™	75	1.5	2.50	2.00	n/a
IGW30N60TP	600	No	2 – 30	TO-247	Hard	TRENCHSTOP™ Perf.	38	1.6	0.74	0.99	n/a
IGW40N60TP	600	No	2 – 30	TO-247	Hard	TRENCHSTOP™ Perf.	48	1.6	1.05	1.63	n/a
IGW50N60TP	600	No	2 – 30	TO-247	Hard	TRENCHSTOP™ Perf.	61	1.6	1.39	2.25	n/a
IGP20N65F5	650	No	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	21	1.6	0.06	0.16	n/a
IGP20N65H5	650	No	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	21	1.65	0.06	0.17	n/a
IGP30N65F5	650	No	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	35	1.6	0.07	0.28	n/a

Product type	$V_{CE(max)}$ [V]	Diode	Switching frequency [kHz]	Package	Switching Hard/Soft	Series	$I_{C(max)}$ @ 100° [A]	$V_{CE(sat)}$ (typ.) @ 25° [V]	E_{off} (typ.) @ 25° [mJ]	E_{on} (typ.) @ 25° [mJ]	Q_{rr} (typ.) @ 25° [mC]
IGP30N65H5	650	No	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	35	1.65	0.10	0.28	n/a
IGP40N65F5	650	No	60 – 120	TO-220	Hard	TRENCHSTOP™ 5	46	1.6	0.10	0.36	n/a
IGP40N65H5	650	No	30 – 100	TO-220	Hard	TRENCHSTOP™ 5	46	1.6	0.10	0.36	n/a
IGW30N65L5	650	No	50 Hz – 20 kHz	TO-247	Hard	TRENCHSTOP™ 5	62	1.05	1.35	0.47	n/a
IGW40N65F5	650	No	60 – 120	TO-247	Hard	TRENCHSTOP™ 5	46	1.6	0.10	0.36	n/a
IGW40N65H5	650	No	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	46	1.65	0.12	0.39	n/a
IGW50N65F5	650	No	60 – 120	TO-247	Hard	TRENCHSTOP™ 5	56	1.6	0.16	0.49	n/a
IGW50N65H5	650	No	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	56	1.65	0.18	0.52	n/a
IGW75N65H5	650	No	30 – 100	TO-247	Hard	TRENCHSTOP™ 5	75	1.65	0.95	2.25	n/a
IGZ100N65H5	650	No	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	101	1.65	0.77	0.85	n/a
IGZ50N65H5	650	No	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	54	1.65	0.19	0.41	n/a
IGZ75N65H5	650	No	30 – 100	TO-247-4	Hard	TRENCHSTOP™ 5	75	1.65	0.43	0.68	n/a
IGW30N100T	1000	No	2 – 20	TO-247	Hard	TRENCHSTOP™	30	1.55	1.60	2.20	n/a
SGB02N120	1200	No	10 – 40	D2PAK (TO-263)	Hard	Fast	2.8	3.7	0.11	0.27	n/a
SGB07N120	1200	No	10 – 40	D2PAK (TO-263)	Hard	Fast	7.9	3.7	0.70	1.00	n/a
SGB15N120	1200	No	10 – 40	D2PAK (TO-263)	Hard	Fast	15	3.7	1.50	1.90	n/a
SGD02N120	1200	No	10 – 40	DPAK (TO-252)	Hard	Fast	2.8	3.7	0.11	0.27	n/a
SGP02N120	1200	No	10 – 40	TO-220	Hard	Fast	2.8	3.7	0.11	0.27	n/a
SGP07N120	1200	No	10 – 40	TO-220	Hard	Fast	7.9	3.7	0.70	1.00	n/a
SGP15N120	1200	No	10 – 40	TO-220	Hard	Fast	15	3.7	1.50	1.90	n/a
IGW15N120H3	1200	No	20 – 100	TO-247	Hard	HighSpeed 3	15	2.05	0.45	1.10	n/a
IGW25N120H3	1200	No	20 – 100	TO-247	Hard	HighSpeed 3	25	2.05	0.85	1.80	n/a
IGW40N120H3	1200	No	20 – 100	TO-247	Hard	HighSpeed 3	40	2.05	1.20	3.20	n/a
IGW08T120	1200	No	2 – 20	TO-247	Hard	TRENCHSTOP™	8	2.2	1.20	1.08	n/a
IGW15T120	1200	No	2 – 20	TO-247	Hard	TRENCHSTOP™	15	2.2	2.10	2.00	n/a
IGW25T120	1200	No	2 – 20	TO-247	Hard	TRENCHSTOP™	25	2.2	4.00	3.00	n/a
IGW40T120	1200	No	2 – 20	TO-247	Hard	TRENCHSTOP™	40	2.3	5.40	5.00	n/a
IGW60T120	1200	No	2 – 20	TO-247	Hard	TRENCHSTOP™	60	2.3	9.40	6.40	n/a
IGB15N65S5	650	No	10 – 30	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	23	1.35	0.14	0.25	n/a
IGB20N65S5	650	No	10 – 30	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	28	1.35	0.15	0.36	n/a
IGB50N65H5	650	No	30 – 100	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	53.7	1.65	0.75	1.56	n/a
IGB50N65S5	650	No	10 – 30	D2PAK (TO-263)	Hard	TRENCHSTOP™ 5	63	1.35	0.74	1.23	n/a

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