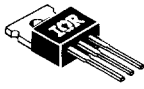
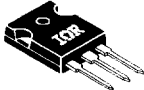


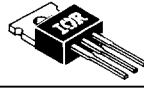

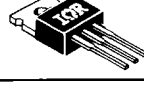

Co-Packs – IGBT's

Other Products From IR

Fast Speed Co-Packs Applications: Motor Controls, UPS's Industrial

Part Number	V _{(BR)CES} Collector to Emitter Breakdown Voltage (V)	V _{GE(th)} Gate to Emitter Threshold Voltage		V _{CE(on)} Collector to Emitter Saturation Voltage Max (V)	I _C Continuous Collector Current		ETS Typ. Total Switching Loss T _J = 150°C V _{CC} = 0.8 BV _{CES}		Case Style
		Min (V)	Max (V)		T _C = 25°C	T _C = 100°C	Typ (mJ)	Typ (A)	
					Typ (A)	Typ (A)			
IRGBC20FD2 IRGBC30FD2 IRGBC30FD1	600	3	5.5	2.8 2.1 2.1	16 31 31	9 17 17	1.8 4.0 4.0	9 17 17	TO-220 
IRGPC40FD2 IRGPC40FD1 IRGPC50FD2 IRGPC50FD1 IRGPC50MD2	600	3	5.5	2.0 2.0 1.7 1.7 2.2 typ	49 49 70 70 70	27 27 39 39 39	7.0 7.0 10.0 10.0 10.0	27 27 39 39 39	TO-247 
IRGPH40MD2 IRGPH50MD2 IRGPH40FD2 IRGPH40FD1 IRGPH50FD2 IRGPH50FD1	1200	3	5.5	TBD 2.8 3.3 3.3 2.9 2.9	26 40 29 29 45 45	14 22 17 17 25 25	11 16 8.3 8.3 13 13	17 25 17 17 25 25	


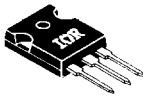
UltraFast Co-Packs Applications: SMPS's, UPS's, HVAC, Motor Controls, Robotics

Part Number	V _{(BR)CES} Collector to Emitter Breakdown Voltage (V)	V _{GE(th)} Gate to Emitter Threshold Voltage		V _{CE(on)} Collector to Emitter Saturation Voltage Max (V)	I _C Continuous Collector Current		ETS Typ. Total Switching Loss T _J = 150°C V _{CC} = 0.8 BV _{CES}		Case Style
		Min (V)	Max (V)		T _C = 25°C	T _C = 100°C	Typ (mJ)	Typ (A)	
					Typ (A)	Typ (A)			
IRGB420UD2	500	3.0	5.5	3.0	14	7.5	0.35	7.5	TO-220 
IRGP420UD2 IRGP430UD2 IRGP440UD2 IRGP450UD2				3.0 3.0 3.0 TBD	14 25 40 TBD	7.5 15 22 TBD	0.35 0.76 0.96 TBD	7.5 15 22 TBD	TO-247 
IRGBC20UD2 IRGBC30UD2 IRGBC30UD1	600	3	5.5	3.0 3.0 3.0	13 23 23	6.5 12 12	0.55 0.59 1.2	6.5 12 12	TO-220 
IRGPC40UD2 IRGPC40UD1 IRGPC50KD2 IRGPC50UD2 IRGPC50UD1	600	3.0	5.5	3.0 3.0 2.2 typ 3.0 3.0	40 40 55 55 55	20 20 27 27 27	2.2 2.2 3.0 2.3 2.3	20 20 27 27 27	TO-247 


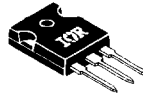
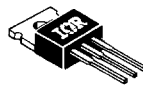
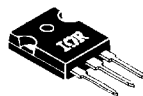
Other Products From IR

Discrete IGBTs

Standard Speed IGBTs Applications: Motor Controls, UPS

Part Number	V _{(BR)CES} Collector to Emitter Breakdown Voltage (V)	V _{GE(th)} Gate to Emitter Threshold Voltage		V _{CE(on)} Collector to Emitter Saturation Voltage Max (V)	I _C Continuous Collector Current		E _{TS} Typ. Total Switching Loss T _J = 150°C V _{CC} = 0.8 BV _{CES} Typ		Case Style 
		Min (V)	Max (V)		T _C = 25°C	T _C = 100°C	(mJ)	(A)	
					Typ (A)	Typ (A)			
IRGBC20S IRGBC30S IRGBC40S	600	3	5.5	2.0 1.9 1.8	19 34 50	10 18 31	4.1 7.1 13	10 18 31	TO-220
IRGPC40S IRGPC50S	600	3	5.5	1.8 1.6	60 70	31 41	13 16	31 41	TO-247 

Fast Speed IGBTs Applications: Motor Controls, UPS, Industrial


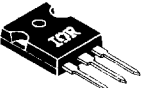
Part Number	V _{(BR)CES} Collector to Emitter Breakdown Voltage (V)	V _{GE(th)} Gate to Emitter Threshold Voltage		V _{CE(on)} Collector to Emitter Saturation Voltage Max (V)	I _C Continuous Collector Current		E _{TS} Typ. Total Switching Loss T _J = 150°C V _{CC} = 0.8 BV _{CES} Typ		Case Style 
		Min (V)	Max (V)		T _C = 25°C	T _C = 100°C	(mJ)	(A)	
					Typ (A)	Typ (A)			
IRGBC20F IRGBC30F IRGBC40F	600	3	5.5	2.8 2.1 2.0	16 31 49	9 17 27	1.8 2.5 4.4	9 17 24	TO-220
IRGPC40F IRGPC50M IRGPC50F	600	3	5.5	2.0 2.2 typ 1.7	49 70 70	27 39 39	4.4 10 6	27 39 39	TO-247 
IRGBF20F IRGBF30F	900	3	5.5	4.3 3.7	9 20	5.3 11	1.1 2	5.3 11	TO-220 
IRGPF20F IRGPF30F IRGPF40F IRGPF50F	900	3	5.5	4.3 3.7 3.3 2.7	9 20 31 51	5.3 11 17 28	1.1 2 3 5.7	5.3 11 17 28	TO-247 
IRGPH40M IRGPH50M IRGPH40F IRGPH50F	1200	3	5.5	TBD 2.8 2.2 2.2	26 40 40 50	14 22 22 27	11 16 5 10	17 25 10 20	TO-247

OTHER
INFORMATION

Discrete IGBTs

Other Products From IR

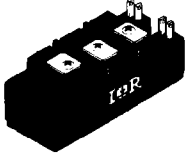
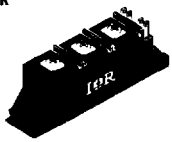
UltraFast IGBTs Applications: SMPS's, Motor Controls, Robotics, PF Correction

Part Number	V(BR)CES Collector to Emitter Breakdown Voltage (V)	VGE(th) Gate to Emitter Threshold Voltage		VCE(on) Collector to Emitter Saturation Voltage Max (V)	IC Continuous Collector Current		ETS Typ. Total Switching Loss T _J = 150°C V _{CC} = 0.8 BV _{CES}		Case Style
		Min (V)	Max (V)		T _C = 25°C	T _C = 100°C	Typ (mJ)	Typ (A)	
					Typ (A)	Typ (A)			
IRGB410U IRGB420U IRGB430U IRGB440U	500	3	5.5	TBD 3.0 3.0 3.0	TBD 14 25 40	TBD 7.5 15 22	TBD 0.35 0.76 0.96	TBD 7.5 15 22	TO-220 
IRGBC20U IRGBC30U IRGBC40U	600	3	5.5	3.0 3.0 3.0	13 23 40	6.5 12 20	0.35 0.59 1.5	6.5 12 20	
IRGP420U IRGP430U IRGP440U IRGP450U	500	3.0	5.5	3.0 3.0 3.0 TBD	14 25 40 TBD	7.5 15 22 TBD	0.35 0.76 0.96 TBD	7.5 15 22 TBD	
IRGPC40U IRGPC50K IRGPC50U	600	3.0	5.5	3.0 2.2 typ 3.0	40 55 55	20 27 27	1.5 3.0 1.7	20 27 27	TO-247 
IRGPF50U	900	3.0	5.5	TBD	TBD	TBD	TBD	TBD	
IRGPH50U	1200	3.0	5.5	3.9	40	21	3.4	20	

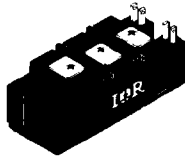
Other Products From IR

Insulated Gate Bipolar Transistor

Fast-Speed IGBT Modules

Part Number	BV _{CE(S)} Collector to Emitter Breakdown Voltage (V)	I _C Collector Current (A)	V _{CE(ON)} @ I _C Max (V)	I _{LM} Clamped Inductive Load Current (A)	P _D Max. Power Dissip. Per Switch @ 25°C (W)	Max. ETS/A	Circuit Type	Case Style					
									T _C = 25°C				
IRGTI065F06 IRGTI120F06 IRGTI165F06 IRGTI200F06	600	65	2.3	130	179	3.0	Half Bridge						
IRGKI065F06 IRGKI120F06 IRGKI165F06 IRGKI200F06		65	2.3	130	179		Low Side Switch Chopper						
IRGNI065F06 IRGNI120F06 IRGNI165F06 IRGNI200F06		65	2.3	130	179		High Side Switch Chopper						
IRGTI0025M12 IRGTI0050M12 IRGTI0075M12 IRGTI0100M12		1200	25	2.8	50		125		0.6	Half Bridge			
IRGKI0025M12 IRGKI0050M12 IRGKI0075M12 IRGKI0100M12			25	2.8	50		125			Low Side Switch Chopper			
IRGNI0025M12 IRGNI0050M12 IRGNI0075M12 IRGNI0100M12			25	2.8	50		125			High Side Switch Chopper			
IRGTA050F06 IRGTA090F06			600	50	2.0		100			125	3.0	Half Bridge	
IRGKA050F06 IRGKA090F06 IRGKA120F06				50	2.0		100			125		Low Side Switch Chopper	
IRGNA050F06 IRGNA090F06 IRGHA120F06				50	2.0		100			125		High Side Switch Chopper	
				90	2.1		180			219			
				90	2.1		180			219			
				120	2.0		240			278			
	120			2.0	240	278							
	120			2.0	240	278							
	120			2.0	240	278							

UltraFast™ IGBT Modules

IRGTI050U06 IRGTI090U06 IRGTI115U06 IRGTI140U06	600	505	3.1	100	179	0.12	Half Bridge	
IRGKI050U06 IRGKI090U06 IRGKI115U06 IRGKI140U06		50	3.1	100	179		Low Side Switch Chopper	
IRGNI050U06 IRGNI090U06 IRGNI115U06 IRGNI140U06		50	3.1	100	179		High Side Switch Chopper	
		90	3.0	180	298			
		115	2.8	230	379			
		140	2.7	280	500			
		140	2.7	280	500			
		140	2.7	280	500			
		140	2.7	280	500			
		140	2.7	280	500			
		140	2.7	280	500			
IRGTA035U06 IRGTA065U06		600	35	3.0	70		125	
IRGKA035U06 IRGKA065U06 IRGKA090U06	35		3.0	70	125	Low Side Switch Chopper		
IRGNA035U06 IRGNA065U06 IRGNA090U06	35		3.0	70	125	High Side Switch Chopper		
	65		2.9	130	202			
	65		2.9	130	202			
	90		2.7	180	278			
	90		2.7	180	278			
	90		2.7	180	278			
	90		2.7	180	278			

OTHER INFORMATION