FAIRCHILD SEMICONDUCTOR®

Surface Mount and Through-Hole Power IGBTs

Digi-Reel® RoHS COMPLIANT

Fairchild's IGBT's are designed to replace 500V/600V MOSFETs in switch mode power supply (SMPS), Power Factor Correction (PFC) and other high-power applications without redesign of the gate drive voltage circuitry. SMPS IGBT's are the first-in-class to have full unclamped inductive switching (UIS) capability similar to power MOSFETs, allowing application in all power circuit topologies, including single-switch forward converters. The gate drive voltage requirement has been reduced to 8-10V, allowing for the replacement of larger die-size power MOSFETs or multiple MOSFETs in parallel.

Fig.	V_{CES} (V)	I_C (A)	I_{CM} (A)	P_D (W)	Digi-Key Part No.	Price Each 1	10	100
1	1,200	30	45	186	FGA15N120ANTDTU-ND	2.03	1.62	1.27
	1,200	50	75	312	FGA25N120ANTDTU-ND	2.61	2.10	1.63
	600	40	160	160	FGA40N60UFDTU-ND	2.58	2.07	1.61
	300	40	160	201	FGA70N30TTU-ND	2.85	2.28	1.77
	300	90	220	219	FGA90N30DTU-ND	2.83	2.27	1.77
	300	90	220	219	FGA90N30TU-ND	2.56	2.06	1.60
	300	120	300	290	FGA120N30DTU-ND	2.72	2.17	1.69
	300	180	450	480	FGA180N30DTU-ND	3.78	3.02	2.35
2	1,200	15	45	220	FGA15N120FTDTU-ND	2.52	2.02	1.57
	1,200	20	60	298	FGA20N120FTDTU-ND	2.78	2.23	1.73
	1,200	35	80	298	HGT1S10N120BNSTCT-ND†	2.06	1.65	1.29
	1,200	35	80	298	HGT1S10N120BNSTTR-ND‡		951.35/800	
3	400	21	—	150	FGB3040CSCT-ND†	1.75	1.40	1.05
	400	21	—	150	FGB3040CSTR-ND‡		755.04/800	
4	600	75	180	290	FGP40N6S2-ND	3.66	2.93	2.28
5	600	160	300	250	SGL160N60UFDTU-ND	6.98	5.59	4.72
	1,200	64	120	500	FGL40N120ANDTU-ND	7.56	6.81	6.04
	1,200	64	160	500	FGL40N120ANTU-ND	5.47	4.38	3.70
6	600	45	108	167	FGH30N6S2D-ND	3.07	2.46	1.92
	600	60	90	480	FGH30N60LSDTU-ND	6.95	5.56	4.69
	600	80	120	290	FGH40N60UFDTU-ND	2.29	1.83	1.43
	600	80	120	290	FGH40N60SFDTU-ND	2.29	1.83	1.43
	600	75	240	463	FGH50N6S2-ND	5.98	4.79	4.04
	600	75	240	463	FGH50N6S2D-ND	6.86	6.18	5.48
	600	80	160	290	FGH80N60FDTU-ND	2.90	2.33	1.75
	600	80	160	290	FGH80N60FD2TU-ND	3.99	3.19	2.48
	1,200	35	80	298	HGTG10N120BND-ND	2.88	2.31	1.80
	600	54	96	167	HGTG12N60A4-ND	2.13	1.70	1.33
	600	54	96	167	HGTG12N60A4D-ND	2.53	2.03	1.58
	1,200	54	160	390	HGTG18N120BND-ND	3.81	3.05	2.58
	600	70	280	290	HGTG20N60A4-ND	3.11	2.49	1.94
	600	70	280	290	HGTG20N60A4D-ND	3.76	3.01	2.34
	600	40	160	165	HGTG20N60B3D-ND	3.01	2.41	1.88
	600	75	240	463	HGTG30N60A4-ND	4.67	3.74	3.16
	600	60	240	463	HGTG30N60A4D-ND	5.92	4.74	4.00
	600	60	220	208	HGTG30N60B3D-ND	4.20	3.36	2.84
	600	63	252	208	HGTG30N60C3D-ND	3.96	3.17	2.68
	600	75	300	625	HGTG40N60A4-ND	6.53	5.89	5.22
	600	34	56	125	HGTG7N60A4D-ND	1.63	1.31	1.02
7	300	70	160	49.2	FGPF70N30TDTU-ND	1.73	1.38	1.04
	300	70	160	49.2	FGPF70N30TTU-ND	1.26	1.01	.76
	300	160	—	52	FGPF70N30-ND	1.18	.95	.71
	300	30	80	46	FGPF30N30DTU-ND	1.22	.98	.73
	300	30	80	44.6	FGPF30N30TTU-ND	1.05	.88	.70
	300	80	—	46	FGPF30N30-ND	.96	.80	.64
	300	220	—	56.8	FGPF90N30-ND	1.43	1.15	.86
	450	30	120	50.4	FGPF30N45TTU-ND	1.27	1.02	.77
	450	45	180	51.6	FGPF45N45TTU-ND	1.45	1.17	.88
	300	30	120	46.8	FGPF50N30TTU-ND	1.07	.86	.65
	600	14	21	45	FGPF7N60LSDTU-ND	1.38	1.11	.83
	600	14	21	41	FGPF7N60RUFDTU-ND	1.00	.84	.67
	300	120	180	60	FGPF120N30TU-ND	4.00	3.20	2.49
	1,500	5	20	50	SGS5N150UFTU-ND	2.08	1.66	1.30
8	400	7	29	29	FGD2N40LCT-ND†	.57	.47	.38
	400	7	29	29	FGD2N40LTR-ND‡		611.11/2,500	
	600	6	25	40	FGD3N60LSDTMCT-ND†	.65	.55	.44
	600	6	25	40	FGD3N60LSDTMTR-ND‡		703.84/2,500	
					SMPS IGBTs			
4	600	54	96	167	HGTP12N60A4D-ND	1.96	1.57	1.22
	600	54	96	167	HGTP12N60A4-ND	1.63	1.31	1.02
	600	70	280	290	HGTP20N60A4-ND	3.15	2.53	1.97
	600	17	40	70	HGTP3N60A4D-ND	1.09	.88	.66
	600	17	40	70	HGTP3N60A4-ND	.94	.78	.63
	600	34	56	125	HGTP7N60A4D-ND	1.55	1.24	.93
	600	34	56	125	HGTP7N60A4-ND	1.09	.88	.66
9	600	70	280	290	HGT1S20N60A4S9A-ND	3.01	2.41	1.88
	600	54	96	167	HGT1S12N60A4S9ACT-ND†	1.87	1.49	1.16
	600	54	96	167	HGT1S12N60A4S9ATR-ND‡		860.75/800	
	600	34	56	125	HGT1S7N60A4DS-ND	1.56	1.25	.94
	600	14	56	60	HGT1S7N60C3DS-ND	1.42	1.13	.85

† Cut Tape ‡ Tape and Reel

Ignition IGBTs

RoHS COMPLIANT

Digi-Reel®

Fairchild ignition IGBTs are the next generation that offers outstanding SCIS capability in the space saving D-PAK (TO-252) as well as the industry standard D2-Pak (TO-263), TO-262 and TO-220 plastic packages. This device is intended for use in automotive ignition circuits, specifically as a coil driver. Internal diodes provide voltage clamping without the need for external components.

Fig.	BV_{CER} (V)	BV_{ECS} (V)	I_{C25} (A)	P_D (W)	Digi-Key Part No.	Cut Tape Price Each 1	10	100	Digi-Key Part No.	Tape and Reel Qty.	Pricing
4	430	24	21	150	ISL9V3040P3-ND†	1.63	1.31	1.02	—	—	—
9	430	24	10	130	ISL9V2040S3STCT-ND	1.44	1.15	.87	ISL9V2040S3STTR-ND	800	619.42
	430	24	21	150	ISL9V3040S3STCT-ND	1.62	1.30	.97	ISL9V3040S3STTR-ND	800	697.83
	390	24	46	250	ISL9V5036S3STCT-ND	2.63	2.11	1.64	ISL9V5036S3STTR-ND	800	1215.61
10	390	24	46	250	ISL9V5036S3-ND†	1.62	1.30	.97	—	—	—
11	430	24	10	130	ISL9V2040D3STCT-ND	1.29	1.04	.78	ISL9V2040D3STTR-ND	2,500	659.79/M
	430	21	21	150	ISL9V3040D3STCT-ND	1.71	1.37	1.03	ISL9V3040D3STTR-ND	2,500	873.53/M

† Bulk

Fig. 1 — TO-3P

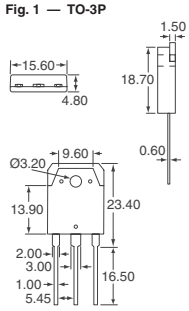


Fig. 2 — TO-3PN

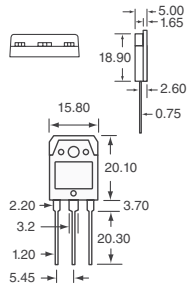


Fig. 3 — TO263-6

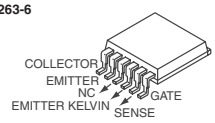


Fig. 4 — TO-220AB

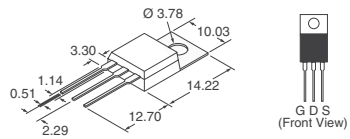


Fig. 5 — TO-264

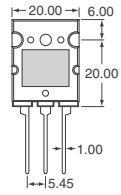


Fig. 6 — TO-247

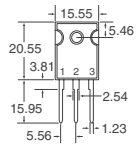


Fig. 7 — TO-220F

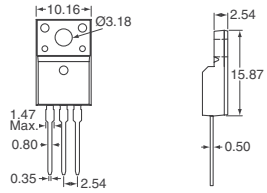


Fig. 8 — D-PAK

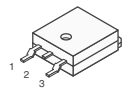


Fig. 9 — TO-263AB

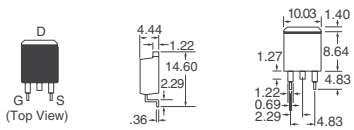


Fig. 10 — TO-262AA

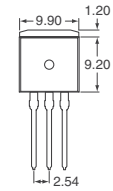
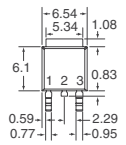


Fig. 11 — TO-252AA



Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

Free shipping on orders over £50! ***All prices are in British pound sterling and include duties.***