

Electrical Specifications

TYPE	Part Number						I _T		V _{DRM} & V _{RRM}		I _{GT}		I _{DRM} & I _{RRM}			V _{TM}
	Isolated			Non-Isolated												
							Maximum On-State Current (1) (14)		Repetitive Peak Off-State Forward and Reverse Voltage	DC Gate Trigger Current V _D = 12VDC R _L = 30Ω (4)	Peak Off-State Forward and Reverse Current at V _{DRM} and V _{RRM} (13)			Peak On-State Voltage at Max Rated RMS Current T _C = 25°C (3)		
	TO 220AB	TO 218X	TO 218AC	TO 220AB	TO 218X	TO 218AC	Amps					mAmps				
							I _{T(RMS)}	I _{T(AV)}	Volts	mAmps	T _C = 25°C	T _C = 100°C	T _C = 125°C	Volts		
	See "Package Dimensions" section for variations.							MAX		MIN	MIN	MAX	MAX			MAX
20 Amps	S0520L						20	12.8	50	1	30	.01	0.5	1.0	1.6	
	S1020L						20	12.8	100	1	30	.01	0.5	1.0	1.6	
	S2020L						20	12.8	200	1	30	.01	0.5	1.0	1.6	
	S4020L						20	12.8	400	1	30	.01	0.5	1.0	1.6	
	S6020L						20	12.8	600	1	30	.01	0.5	1.0	1.6	
	S8020L						20	12.8	800	1	30	.02	1.0	2.0	1.6	
25 Amps	S0525L			S0525R			25	16	50	1	35	.01	1.0	2.0	1.6	
	S1025L			S1025R			25	16	100	1	35	.01	1.0	2.0	1.6	
	S2025L			S2025R			25	16	200	1	35	.01	1.0	2.0	1.6	
	S4025L			S4025R			25	16	400	1	35	.01	1.0	2.0	1.6	
	S6025L			S6025R			25	16	600	1	35	.01	1.0	2.0	1.6	
	S8025L			S8025R			25	16	800	1	35	.02	1.5	3.0	1.6	
35 Amps		S0535J	S0535K				35	22	50	5	40	.01	1.0	2.0	1.8	
		S1035J	S1035K				35	22	100	5	40	.01	1.0	2.0	1.8	
		S2035J	S2035K				35	22	200	5	40	.01	1.0	2.0	1.8	
		S4035J	S4035K				35	22	400	5	40	.01	1.0	2.0	1.8	
		S6035J	S6035K				35	22	600	5	40	.01	1.0	2.0	1.8	
		S8035J	S8035K				35	22	800	5	40	.02	1.5	3.0	1.8	
40 Amps				S0540R			40	25	50	5	40	.01	1.0	2.0	1.8	
				S1040R			40	25	100	5	40	.01	1.0	2.0	1.8	
				S2040R			40	25	200	5	40	.01	1.0	2.0	1.8	
				S4040R			40	25	400	5	40	.01	1.0	2.0	1.8	
				S6040R			40	25	600	5	40	.01	1.0	2.0	1.8	
				S8040R			40	25	800	5	40	.02	1.5	3.0	1.8	
55 Amps				S0555R	S0555W	S0555M	55	35	50	5	40	.01	1.0	2.0	1.8	
				S1055R	S1055W	S1055M	55	35	100	5	40	.01	1.0	2.0	1.8	
				S2055R	S2055W	S2055M	55	35	200	5	40	.01	1.0	2.0	1.8	
				S4055R	S4055W	S4055M	55	35	400	5	40	.01	1.0	2.0	1.8	
				S6055R	S6055W	S6055M	55	35	600	5	40	.01	1.0	2.0	1.8	
				S8055R	S8055W	S8055M	55	35	800	5	40	.02	1.5	3.0	1.8	
65 Amps		S0565J	S0565K				65	41	50	5	50	.02	1.5	3.0	1.8	
		S1065J	S1065K				65	41	100	5	50	.02	1.5	3.0	1.8	
		S2065J	S2065K				65	41	200	5	50	.02	1.5	3.0	1.8	
		S4065J	S4065K				65	41	400	5	50	.02	1.5	3.0	1.8	
		S6065J	S6065K				65	41	600	5	50	.02	1.5	3.0	1.8	
		S8065J	S8065K				65	41	800	5	50	.02	2.0	5.0	1.8	
70 Amps					S0570W		70	45	50	5	50	.02	1.5	3.0	1.8	
					S1070W		70	45	100	5	50	.02	1.5	3.0	1.8	
					S2070W		70	45	200	5	50	.02	1.5	3.0	1.8	
					S4070W		70	45	400	5	50	.02	1.5	3.0	1.8	
					S6070W		70	45	600	5	50	.02	1.5	3.0	1.8	
					S8070W		70	45	800	5	50	.02	2.0	5.0	1.8	

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

V _{GT}		I _H	I _{GM}	P _{GM}	P _{G(AV)}	I _{TSM}		dv/dt		I ² t	di/dt	t _{gt}	t _q
DC Gate Trigger Voltage V _D = 12VDC R _L = 30Ω (8)		DC Holding Current Gate Open (5) (12)	Peak Gate Current (11)	Peak Gate Power Dissipation (11)	Average Gate Power Dissipation	Peak One Cycle Surge Forward Current (6) (10) (15)		Critical Rate-of-Applied Forward Voltage		RMS Surge (Non-Repetitive) On-State Current for a Period of 8.3 msec for Fusing I _{GT} = 150mA with 0.1μS Rise Time	Maximum Rate-of-Change of On-State Current I _{GT} = 150mA with 0.1μS Rise Time	Gate Controlled Turn-On Time Gate Pulse = 150mA Min. Width = 15μS with Rise Time ≤ 0.1μS (7)	Circuit Commutated Turn-Off Time (9) (10)
Volts						Amps		Volts/μSec					
T _C = 25°C	T _C = 125°C					mAmps	Amps	Watts	Watts				
MAX	MIN	MAX						MIN	MIN			TYP	MAX
1.5	0.2	40	3.0	30	0.6	300	255	450	350	374	125	2.0	35
1.5	0.2	40	3.0	30	0.6	300	255	450	350	374	125	2.0	35
1.5	0.2	40	3.0	30	0.6	300	255	450	350	374	125	2.0	35
1.5	0.2	40	3.0	30	0.6	300	255	450	350	374	125	2.0	35
1.5	0.2	40	3.0	30	0.6	300	255	425	325	374	125	2.0	35
1.5	0.2	40	3.0	30	0.6	300	255	400	300	374	125	2.0	35
1.5	0.2	50	3.5	35	0.8	350	300	450	350	510	150	2.0	35
1.5	0.2	50	3.5	35	0.8	350	300	450	350	510	150	2.0	35
1.5	0.2	50	3.5	35	0.8	350	300	450	350	510	150	2.0	35
1.5	0.2	50	3.5	35	0.8	350	300	450	350	510	150	2.0	35
1.5	0.2	50	3.5	35	0.8	350	300	425	325	510	150	2.0	35
1.5	0.2	50	3.5	35	0.8	350	300	400	300	510	150	2.0	35
1.5	0.2	50	3.5	35	0.8	500	425	450	350	1035	150	2.0	35
1.5	0.2	50	3.5	35	0.8	500	425	450	350	1035	150	2.0	35
1.5	0.2	50	3.5	35	0.8	500	425	450	350	1035	150	2.0	35
1.5	0.2	50	3.5	35	0.8	500	425	450	350	1035	150	2.0	35
1.5	0.2	50	3.5	35	0.8	500	425	425	325	1035	150	2.0	35
1.5	0.2	50	3.5	35	0.8	500	425	400	300	1035	150	2.0	35
1.5	0.2	60	3.5	35	0.8	520	430	650	550	1122	175	2.5	35
1.5	0.2	60	3.5	35	0.8	520	430	650	550	1122	175	2.5	35
1.5	0.2	60	3.5	35	0.8	520	430	650	550	1122	175	2.5	35
1.5	0.2	60	3.5	35	0.8	520	430	650	550	1122	175	2.5	35
1.5	0.2	60	3.5	35	0.8	520	430	600	500	1122	175	2.5	35
1.5	0.2	60	3.5	35	0.8	520	430	500	475	1122	175	2.5	35
1.5	0.2	60	4.0	40	0.8	650	550	650	550	1750	175	2.5	35
1.5	0.2	60	4.0	40	0.8	650	550	650	550	1750	175	2.5	35
1.5	0.2	60	4.0	40	0.8	650	550	650	550	1750	175	2.5	35
1.5	0.2	60	4.0	40	0.8	650	550	650	550	1750	175	2.5	35
1.5	0.2	60	4.0	40	0.8	650	550	600	500	1750	175	2.5	35
1.5	0.2	60	4.0	40	0.8	650	550	500	475	1750	175	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	600	500	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	500	475	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	650	550	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	600	500	3745	200	2.5	35
2.0	0.2	80	5.0	50	1.0	950	800	500	475	3745	200	2.5	35