

MOSFETs progress in power switching

Selection guide



MDmesh 500V Product Range

P / N	V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	R _{DS(on)} *Q _g (typ) [Ω · nC]	I _{D(cont)} [A]	Package	Q _g (typ) @ 10V [nC]	T _{rr} (typ) @ 25C [ns]	Q _{rr} (typ) @ 25C [μC]	I _{rrm} (typ) @ 25C [A]	dv/dt [V/ns]
STE70NM50FD*	500	0.05	8.55	70	ISOTOP	190	250	2.4	11.5	20
STE70NM50	500	0.05	8.55	70	ISOTOP	190	532	9.9	37	15
STY60NM50	500	0.05	8.55	70	Max247	190	532	9.9	37	15
STW47NM50*	500	0.085	6.3	47	TO-247	90	-	-	-	15
STE48NM50	500	0.1	6.96	48	ISOTOP	87	520	7.8	30	15
STW45NM50FD	500	0.1	6.44	45	TO-247	92	245	2.2	18	20
STW45NM50	500	0.1	6.96	45	TO-247	87	520	7.8	30	15
STW26NM50	500	0.12	7.6	30	TO-247	76	400	5.5	27.8	15
STB22NM50T4*	500	0.215	8.5	22	D ² PAK	50	-	-	-	15
STP22NM50*	500	0.215	8.5	22	TO-220	50	-	-	-	15
STF22NM50*	500	0.215	8.5	22	TO-220FP	50	-	-	-	15
STB20NM50FDT4	500	0.25	8.36	20	D²PAK	38	175	1.2	14	20
STB20NM50T4	500	0.25	8	20	D ² PAK	40	350	4.6	26	15
STP20NM50FD	500	0.25	8.36	20	TO-220	38	175	1.2	14	20
STP20NM50	500	0.25	8	20	TO-220	40	350	4.6	26	15
STP20NM50FP	500	0.25	8	20	TO-220FP	40	350	4.6	26	15
STW20NM50FD	500	0.25	8.36	20	TO-247	38	175	1.2	14	20
STW20NM50	500	0.25	8	20	TO-247	40	350	4.6	26	15
STB12NM50T4	500	0.35	7.5	12	D ² PAK	25	270	2.23	16.5	15
STP12NM50	500	0.35	7.5	12	TO-220	25	270	2.23	16.5	15
STP12NM50FP	500	0.35	7.5	12	TO-220FP	25	270	2.23	16.5	15
STW14NM50	500	0.35	7.5	14	TO-247	25	270	2.23	16.5	15
STW14NM50FD	500	0.4	8.96	14	TO-247	28	116	0.46	8	20
STB12NM50FDT4	500	0.45	11.2	12	D²PAK	28	116	0.46	8	20
STB12NM50FD-1	500	0.45	11.2	12	D²PAK	28	116	0.46	8	20
STP12NM50FD	500	0.45	11.2	12	TO-220	28	116	0.46	8	20
STP12NM50DFP	500	0.45	11.2	12	TO-220FP	28	116	0.46	8	20
STD5NM50T4	500	0.8	9.1	7.5	DPAK	13	185	1.1	11.5	15
STD5NM50T4	500	0.8	9.1	7.5	DPAK	13	185	1.1	11.5	15
STP8NM50	500	0.8	9.1	8	TO-220	13	185	1.1	11.5	15
STD3NM50T4	500	3	13.75	3	DPAK	5.5	210	0.79	7.5	15
STSJ3NM50	500	3	13.75	3	PowerSO-8	5.5	210	0.79	7.5	15

* Coming soon

Fast Diode version in blue characters

MDmesh 600V Product Range

P / N	V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	R _{DS(on)} *Q _g (typ) [Ω · nC]	I _{D(cont)} [A]	Package	Q _g (typ) @ 10V [nC]	T _{rr} (typ) @ 25C [ns]	Q _{rr} (typ) @ 25C [μC]	I _{rrm} (typ) @ 25C [A]	dv/dt [V/ns]
STE70NM60	600	0.055	8.9	70	ISOTOP	178	450	14.4	48	15
STY60NM60	600	0.055	8.9	60	Max247	178	600	14.4	48	15
STW47NM60*	600	0.095	8	47	TO-247	100	-	-	-	15
STE48NM60	600	0.11	8.64	48	ISOTOP	96	508	10	40	15
STW45NM60	600	0.11	8.64	45	TO-247	96	508	10	40	15
STW26NM60	600	0.135	9.12	30	TO-247	73	450	7	30.5	15
STW30NM60D*	600	0.135	9.12	30	TO-247	73	-	-	-	20
STB22NM60T4*	600	0.25	10.5	22	D ² PAK	50	-	-	-	15
STP22NM60*	600	0.25	10.5	22	TO-220	50	-	-	-	15
STF22NM60*	600	0.25	10.5	22	TO-220FP	50	-	-	-	15
STB20NM60T4	600	0.29	9.75	20	D ² PAK	39	390	5	25	15
STB20NM60-1	600	0.29	9.75	20	I ² PAK	39	390	5	25	15
STP20NM60FD	600	0.29	10.4	20	TO-220	40	-	-	-	20
STP20NM60	600	0.29	9.75	20	TO-220	39	390	5	25	15
STF20NM60D	600	0.29	10.4	20	TO-220FP	40	-	-	-	20
STP20NM60FP	600	0.29	9.75	20	TO-220FP	39	390	5	25	15
STW20NM60FD	600	0.29	10.4	20	TO-247	40	-	-	-	20
STW20NM60	600	0.29	24	20	TO-247	96	390	5	25	15
STB11NM60T4	600	0.45	12	11	D ² PAK	30	390	3.8	19.5	15
STB11NM60-1	600	0.45	12	11	I ² PAK	30	390	3.8	19.5	15
STP11NM60FD	600	0.45	11.2	11	TO-220	28	194	1.1	11.5	20
STP11NM60	600	0.45	12	11	TO-220	30	390	3.8	19.5	15
STP11NM60FD	600	0.45	11.2	11	TO-220FP	28	194	1.1	11.5	20
STP11NM60FP	600	0.45	12	11	TO-220FP	30	390	3.8	19.5	15
STD9NM60T4*	600	0.7	16.25	9	DPAK	25	-	-	-	-
STD5NM60T4	600	1	11.7	5	DPAK	13	300	1.95	13	15
STP8NM60	600	1	11.7	5	TO-220	13	300	1.95	13	15
STP8NM60FP	600	1	11.7	5	TO-220FP	13	300	19.5	13	15
STD3NM60T4	600	1.5	13	3	DPAK	10	224	1	9	15
STD3NM60-1	600	1.5	13	3	IPAK	10	224	1	9	15
STP4NM60	600	1.5	13	3	TO-220	10	224	1	9	15
STD2NM60T4	600	3.2	16.8	2	DPAK	6	516	0.516	2	15
STD2NM60-1	600	3.2	16.8	2	IPAK	6	516	0.516	2	15

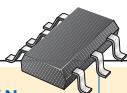
MDmesh 800V Product Range

P / N	V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	R _{DS(on)} *Q _g (typ) [Ω · nC]	I _{D(cont)} [A]	Package	Q _g (typ) @ 10V [nC]	T _{rr} (typ) @ 25C [ns]	Q _{rr} (typ) @ 25C [μC]	I _{rrm} (typ) @ 25C [A]	dv/dt [V/ns]
STB11NM80T4*	800	0.4	14	11	D ² PAK	40	490	6.5	26	15
STP11NM80*	800	0.4	14	11	TO-220	40	490	6.5	26	15
STW11NM80*	800	0.4	14	11	TO-247	40	490	6.5	26	15

* Coming soon

Fast Diode version in blue characters

SOT23-6L

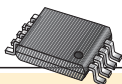


V_{DSS} [V]	$R_{DS(on)}(max)$ @ 4.5V [Ω]	P / N	$I_D(cont)$ [A]	$R_{DS(on)}(max)$ @ 2.7V [Ω]	Q_g (typ) @ 4.5V [nC]
-20	0.11	STT4PF20V	-4	0.135	6.2
	0.2	STT3PF20V	-3	0.25	3.8
20	0.04	STT5NF20V	5	0.045	8.5

V_{DSS} [V]	$R_{DS(on)}(max)$ @ 10V [Ω]	P / N	$I_D(cont)$ [A]	$R_{DS(on)}(max)$ @ 4.5V [Ω]	Q_g (typ) @ 10V [nC]
-60	0.25	STT2PF60L	-2	0.3	10
-30	0.165	STT3PF30L	-3	0.2	11
	0.05	STT5NF30L	5	0.06	12
30	0.065	STT4NF30L	4	0.09	16
100	0.8	STT1NF100	1		4

V = Super Logic Level

TSSOP8

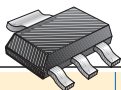


V_{DSS} [V]	$R_{DS(on)}(max)$ @ 4.5V [Ω]	P / N	$I_D(cont)$ [A]	$R_{DS(on)}(max)$ @ 2.7V [Ω]	Q_g (typ) @ 4.5V [nC]
20	0.04	STC5NF20V*	5	0.045	8.5
30	0.025	STC6NF30V*	6	0.03 @ 2.5V	11

V = Super Logic Level

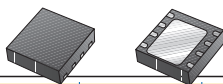
* Two dice in the same package; electrical parameters refer to a single die

SOT-223



V_{DSS} [V]	$R_{DS(on)}(max)$ @ 10V [Ω]	P / N	$I_D(cont)$ [A]	$R_{DS(on)}(max)$ @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
-60	0.2	STN3PF06	-2.5		16
30	0.05	STN4NF03L	4	0.06	12
	0.1	STN3NF06	3		10
60	0.1	STN3NF06L	3	0.12	12
	0.26	STN2NF10	2		10
	0.4	STN2NE10L	2	0.45	16
	0.8	STN1NF10	1		4
200	1.5	STN1N20	1		11
800	20	STN1NB80	0.2		10

PowerFLAT



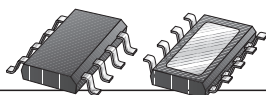
V_{DSS} [V]	$R_{DS(on)}(max)$ @ 10V [Ω]	P / N	$I_D(cont)$ [A]	$R_{DS(on)}(max)$ @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
	0.0065	STL28NF3LL	28	0.0095	40 @ 4.5V
30	0.008	STL35NF3LL	35	0.015	39 @ 4.5V
	0.01	STL30NF3LL	30	0.013	28 @ 4.5V
60	0.03	STL34NF06	34		32
	0.065	STL22NF10	22		30
100	0.03	STL35NF10	35		60
300	0.4	STL9NK30Z	9		30
550	1.4	STL6NK55Z	0.86		25
650	1.8	STL5NK65Z	5		31

* Coming soon

LL = 4.5V Drive Optimization

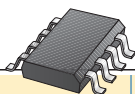
▪ Upon Request

PowerSO-8



V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
30	0.0055	STSJ80NF3LL*	80	0.007	26 @ 4.5V
	0.0105	STSJ25NF3LL	25	0.013	24 @ 4.5V
	0.019	STSJ18NF3LL*	18	0.019	11 @ 4.5V
500	2.5	STSJ3NM50	3		5.5

SO-8



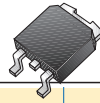
V_{DSS} [V]	$R_{DS(on)}$ (max) @ 4.5V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 2.7V [Ω]	Q_g (typ) @ 4.5V [nC]
-20	0.11	STS3DPF20V	-3	0.135	6.2
	0.11	STS4PF20V	-4	0.135	6.2
	0.2	STS2DPFS20V	-2	0.25	3.8
20	0.04	STS5DNF20V	5	0.045	8.5
	0.04	STS6NF20V	6	0.045	8.5
30	0.03	STS6DNF30V	6	0.038 @ 2.5V	11

V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
-250	2.8	STS1C1S250*	0.6		16
250	1.4		0.8		15
-30	0.08	STS7C4F30L	-4	0.1	23.5
30	0.022		7	0.026	30
-30	0.165	STS3C3F30L	-3	0.2	11
30	0.065		3	0.09	16

V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
-45	0.1	STS3DPFS45	-3		24.5
-30	0.021	STS7PF30L	-7	0.028	60
	0.03	STS6PF30L	-6	0.04	35
	0.08	STS4DPF30L	-4	0.1	30
	0.08	STS5PF30L	-5	0.1	30
	0.09	STS3DPFS30	-3		23
-20	0.07	STS4DPF20L	-4	0.085	30
	0.0035	STS25NH3LL	25	0.005	30 @ 4.5V
30	0.0055	STS17NF3LL	17	0.007	26 @ 4.5V
	0.009	STS12NF30L	12	0.011	66
	0.0105	STS11NF30L	11	0.019	33
	0.019	STS9NF3LL	9	0.022	11 @ 4.5V
	0.02	STS8DNF3LL	8	0.024	11 @ 4.5V
	0.05	STS4DNF30L	4	0.06	12
	0.05	STS4DNFS30L	4	0.06	12
	0.065	STS3DNF30L	3.5	0.09	16
	60	0.0195	STS7NF60L	7.5	0.0215
0.055		STS4DNF60L	4	0.065	32
0.055		STS5NF60L	5	0.065	32
0.08		STS3DNE60L	3	0.1	26
0.23		STS2DNE60	2		12
100	0.06	STS4NF100	4		30
450	4.5	STS1DNC45	0.4		7
600	8.5	STS1HNC60*			7
	15	STS1NK60Z	0.3		5

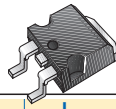
D = Dual; DxFS = x-Channel + Schottky Diode; LL = 4.5V Drive Optimization; C = Complementary Pair; V = Super Logic Level
* Coming soon

DDPAK



V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
-250	2.8	STD3PS25T4*	2.5		16
-60	0.2	STD10PF06T4	-10		16
-30	0.028	STD30PF03LT4	-24	0.04	35
24	0.0038	STD150NH02LT4*	150	0.007	69
	0.0048	STD100NH02LT4	60	0.009	62
	0.006	STD90NH02LT4	60	0.011	47.5
	0.0105	STD50NH02LT4*	50	0.02	24
	0.0135	STD38NH02LT4	38	0.017	18
30	0.006	STD100NH03LT4*	80	0.009	65
	0.009	STD60NH03LT4*	60	0.012	35
	0.0095	STD60NF3LLT4	60	0.0105	28 @ 4.5V
	0.011	STD40NF03LT4	40	0.0195	33
	0.011	STD40NF3LLT4	40	0.0135	24 @ 4.5V
	0.0145	STD38NF03LT4	38	0.0215	35
	0.0195	STD35NF3LLT4	35	0.0215	11 @ 4.5V
	0.025	STD30NF03LT4	30	0.035	31
0.05	STD17NF03LT4	17	0.06	12	
55	0.015	STD60NF55LT4	60	0.017	72
60	0.016	STD60NF06T4	60		49
	0.0195	STD35NF06LT4	35	0.0215	50
	0.02	STD35NF06T4	35		45
	0.025	STD40NF06LZT4	40	0.03	30
	0.028	STD30NF06LT4	28	0.03	42
	0.028	STD30NF06T4	28		43
	0.03	STD40NF06T4	40		32
	0.04	STD20NF06LT4*	20	0.053	23
	0.04	STD20NF06T4	20		23
	0.07	STD16NE06LT4	16	0.085	26
	0.085	STD16NE06T4	16		25
	0.1	STD12NF06LT4	12	0.12	12
	0.1	STD12NF06T4	12		10
100	0.035	STD25NF10LT4	25	0.04	70
	0.038	STD25NF10T4	25		55
	0.065	STD15NF10T4	23		30
	0.085	STD16NE10LT4	22	0.1	45
	0.13	STD10NF10T4	13		15
	0.25	STD6NF10T4	6		10
0.4	STD5NE10LT4	5	0.45	16	
200	0.4	STD7NS20T4	7		31
250	1.1	STD4NS25T4	4		19
400	1	STD7NK40ZT4	6		20
	1.8	STD5NK40ZT4	4		12
450	4.5	STD2NC45T4	1.5		7
500	0.8	STD5NM50T4	7.5		13
	1.5	STD5NK50ZT4	4.4		20
	2.5	STD3NM50T4	3		5.5
	2.7	STD4NK50ZT4	3		12
600	0.7	STD9NM60T4*	9		25
	1	STD5NM60T4	5		13
	1.5	STD3NM60T4	3		10
	1.6	STD5NK60ZT4	5		25
	2	STD4NK60ZT4	4		19
	3.2	STD2NM60T4	2		6
	3.6	STD3NK60ZT4	3		12.5
	4.8	STD2HNK60ZT4*	1.3		11.3
8.5	STD1NK60T4	1		7	
800	3.5	STD4NK80ZT4	3		22.5
	4.5	STD3NK80Z-1*	2.5		18
	20	STD1NB80T4	1		10
900	4.8	STD3NK90ZT4	2.8		25

D²PAK

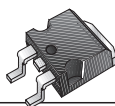


V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]	
-75	0.12	STB20PF75T4*	20		38	
-55	0.018	STB80PF55T4	-80		190	
20	0.0032	STB210NF02T4	120		125	
24	0.0044	STB130NH02LT4	90	0.008	69	
	0.006	STB100NH02LT4	80	0.011	47.5	
	0.0105	STB60NH02LT4*	60	0.02	24	
	0.0135	STB50NH02LT4	50	0.017	18	
	0.0032	STB100NF03L-03T4	100	0.0045	160	
30	0.0033	STB160NF3LLT4	160	0.0048	150	
	0.0036	STB200NF03T4	120		113	
	0.004	STB80NF03L-04T4	80	0.0055	150	
	0.0055	STB90NF3LLT4	80	0.009	39 @ 4.5V	
	0.006	STB120NH03LT4*	80	0.009	65	
	0.007	STB95NF03T4	80		60	
	0.008	STB85NF3LLT4	85	0.0095	28 @ 4.5V	
	0.009	STB70NH03LT4*	60	0.012	35	
	0.0095	STB70NF03LT4	70	0.018	33	
	0.0095	STB70NF3LLT4	70	0.012	24 @ 4.5V	
	0.0095	STB70NFS03LT4	70	0.018	33	
	0.013	STB55NF03LT4	55	0.021	35	
	0.018	STB45NF3LLT4	45	0.02	11 @ 4.5V	
	40	0.0042	STB100NF04LT4	100	0.0065	160
		0.0043	STB190NF04T4	120		130
0.0046		STB100NF04T4	120		110	
55	0.006	STB150NF55T4	120		140	
	0.0065	STB80NF55-06T4	80		140	
	0.008	STB80NF55-08T4	80		115	
	0.008	STB80NF55L-08T4	80	0.01	110	
	0.008	STB85NF55LT4 [◇]	80	0.01	150	
	0.008	STB85NF55T4 [◇]	80		120	
60	0.014	STB60NF06LT4	60	0.016	65	
	0.016	STB60NF06T4	60		49	
	0.018	STB55NF06LT4	55	0.02	50	
	0.018	STB55NF06T4	55		45	
	0.028	STB45NF06LT4	38	0.03	42	
	0.04	STB36NF06LT4	36	0.053	23	
75	0.008	STB140NF75T4	140		150	
	0.011	STB75NF75LT4	75	0.013	150	
	0.011	STB75NF75T4	75		117	
100	0.0105	STB120NF10T4	120		172	
	0.015	STB80NF10T4	80		140	
	0.028	STB40NF10LT4	40	0.03	60	
	0.028	STB40NF10T4	40		60	
	0.035	STB35NF10T4	40		55	
	0.045	STB30NF10T4	35		40	
	0.085	STB22NE10LT4	22	0.1	45	
0.13	STB14NF10T4	15		15		
120	0.018	STB80NF12T4	80		140	
150	0.052	STB40NS15T4	40		100	
200	0.18	STB19NB20T4	19		29	
	0.4	STB10NB20T4	10		17	
250	0.15	STB22NS25ZT4	20		120	
	0.28	STB16NS25T4	16		59	

LL = 4.5V Drive Optimization ◇Automotive Application Specific

* Coming soon

D²PAK



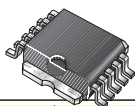
Cont'd.

V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
400	0.55	STB11NK40ZT4	9		30
	0.215	STB22NM50T4*	22		50
500	0.25	STB20NM50FDT4	20		38
	0.25	STB20NM50T4	20		40
	0.35	STB12NM50T4	12		28
	0.4	STB12NM50FDT4	12		27.5
600	0.25	STB22NM60T4*	22		50
	0.29	STB20NM60T4	20		39
	0.45	STB11NM60T4	11		30
	0.5	STB14NK60ZT4	13.5		75
	0.95	STB9NK60ZDT4*	6.4		41
	0.95	STB9NK60ZT4	9		40
700	1.2	STB6NK60ZT4	6		33
	1.2	STB9NK70ZT4	7.5		48
800	0.4	STB11NM80T4*	11		40
	0.75	STB12NK80ZT4	10.5		87

* Coming soon

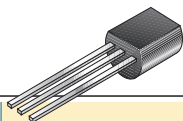
Fast Diode version in blue characters

PowerSO-10



V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
20	0.0025	STV160NF02LT4	160	0.006	115
	0.0027	STV160NF02LAT4	160	0.0064	130
30	0.0028	STV160NF03LT4	160	0.0067	103
	0.003	STV160NF03LAT4	160	0.007	123

TO-92

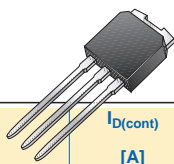


V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
60	0.12	STQ2NF06L	2	0.14	11
100	0.4	STQ1NE10L	1	0.45	16
450	4.5	STQ1NC45R-AP*	0.5		7
600	8.5	STQ1HNK60R-AP*	0.4		7
	15	STQ1NK60ZR	0.3		5

* Coming soon

Note: Add the suffix "-AP" for lead-forming and AMMOPAK

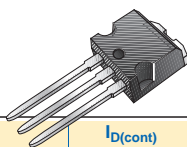
IPAK



V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
-250	2.8	STD3PS25-1*	2.5		16
-30	0.028	STD30PF03L-1	-24	0.04	35
24	0.0038	STD150NH02L-1*	150	0.007	69
	0.0048	STD100NH02L-1	60	0.009	62
	0.006	STD90NH02L-1	60	0.011	47.5
	0.0105	STD50NH02L-1*	50	0.02	24
	0.0135	STD38NH02L-1	38	0.017	18
30	0.05	STD17NF03L-1	17	0.06	12
55	0.015	STD60NF55L-1	60	0.017	72
60	0.1	STD12NF06-1	12		10
	0.1	STD12NF06L-1	12	0.12	12
100	0.4	STD5NE10-1	5		14
	0.4	STD7NS20-1	7		31
200	1.5	STD4N20-1	4		11
	1	STD7NK40Z-1	6		20
400	1.8	STD5NK40Z-1	4		12
	4.5	STD2NC45-1	1.5		7
500	2.7	STD4NK50Z-1	3		12
600	1	STD5NM60-1	5		13
	3.6	STD3NK60Z-1	3		12.5
	4.8	STD2HNK60Z-1*	1.3		11.3
	8.5	STD1NK60-1	1		7
	15	STD1LNK60Z-1	0.7		5
700	4.7	STD2NC70Z-1	2.3		17
	8.5	STD1NC70Z-1	1.4		8
800	20	STD1NB80-1	1		10

* Coming soon

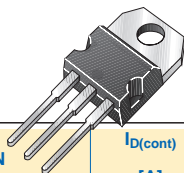
I²PAK



V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
30	0.0032	STB100NF03L-03-1	100	0.0045	160
	0.0036	STB200NF03-1	120		113
	0.004	STB80NF03L-04-1	80	0.0055	150
40	0.0042	STB100NF04L-1	100	0.0065	160
	0.0046	STB100NF04-1	120		110
75	0.008	STB140NF75-1	140		150
500	0.38	STB14NK50Z-1	14		69
	0.4	STB12NM50FD-1	12		27.5
600	0.29	STB20NM60-1	20		39
	0.45	STB11NM60-1	11		30
	0.55	STB13NK60Z-1	13		66
	0.75	STB10NK60Z-1	10		50
	0.95	STB9NK60Z-1	9		40
	2	STB4NK60Z-1	4		19

Fast Diode version in blue characters

TO-220

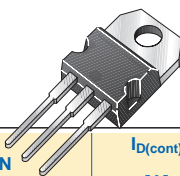


V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
-60	0.2	STP12PF06	-12		16
-55	0.018	STP80PF55	-80		190
20	0.0032	STP210NF02	120		125
24	0.006	STP100NH02L	80	0.011	47.5
30	0.0036	STP200NF03	120		113
	0.004	STP80NF03L-04	80	0.0055	150
	0.0095	STP60NF03L	60	0.012	40
	0.0095	STP70NF03L	70	0.018	33
	0.013	STP55NF03L	55	0.021	35
	0.018	STP45NF3LL	45	0.02	11 @ 4.5V
	0.022	STP40NF03L	40	0.035	31
	0.05	STP22NF03L	22	0.06	12
33	0.009	STP80NS04ZB*	80		78
	0.015	STP60NS04ZB*	80		48
40	0.0043	STP190NF04	120		130
	0.0046	STP100NF04	120		110
55	0.006	STP150NF55	120		140
	0.0065	STP80NF55-06	80		140
	0.0065	STP80NF55L-06	80	0.008	175
	0.008	STP80NF55-08	80		115
	0.008	STP80NF55L-08	80	0.01	110
	0.008	STP85NF55 [◇]	80		120
	0.008	STP85NF55L [◇]	80	0.01	150
60	0.01	STP80NE06-10	80		140
	0.014	STP60NF06L	60	0.016	65
	0.016	STP60NF06	60		49
	0.018	STP55NF06	55		45
	0.018	STP55NF06L	55	0.02	50
	0.028	STP45NF06	38		43
	0.028	STP45NF06L	38	0.03	42
	0.04	STP36NF06	36		23
	0.04	STP36NF06L	36	0.053	23
	0.07	STP20NE06L	20	0.085	26
	0.08	STP20NE06	20		25
0.1	STP16NF06	16		10	
0.1	STP16NF06L	16	0.12	12	
75	0.008	STP140NF75	140		150
	0.011	STP75NF75	75		117
	0.011	STP75NF75L	75	0.013	150
100	0.0105	STP120NF10	120		172
	0.015	STP80NF10	80		140
	0.028	STP40NF10	40		60
	0.028	STP40NF10L	40	0.03	60
	0.035	STP35NF10	40		55
	0.045	STP30NF10	35		40
	0.06	STP24NF10	26		30
	0.085	STP22NE10L	22	0.1	45
	0.13	STP14NF10	15		15
120	0.018	STP80NF12	80		140
	0.18	STP14NF12	14		15
150	0.052	STP40NS15	40		100
200	0.18	IRF640	18		55
	0.18	STP19NB20	19		29
	0.4	IRF630	9		31
	0.4	IRF630M ^Δ	9		31
	0.4	STP10NB20	10		17
250	0.15	STP22NS25Z	20		120
	0.28	STP16NS25	16		59
	0.45	STP8NS25	8		37
300	0.4	STP12NK30Z	12		30
	0.9	STP7NK30Z	5.7		15

LL = 4.5V Drive Optimization [◇]Automotive Application Specific ^ΔMonitor Application Specific * Coming soon

TO-220

Cont'd.



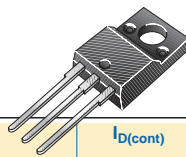
V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
400	0.25	STP17NK40Z	15		69
	0.55	STP11NK40Z	9		30
	1	STP7NK40Z	6		20
	1.8	STP5NK40Z	4		12
500	0.215	STP22NM50*	22		50
	0.25	STP20NM50	20		40
	0.25	STP20NM50FD	20		38
	0.27	STP20NK50Z*	18		95
	0.34	STP15NK50Z	14		76
	0.35	STP12NM50	12		28
	0.38	STP14NK50Z	14		69
	0.4	STP12NM50FD	12		27.5
	0.52	STP11NK50Z	10		49
	0.8	STP8NM50	7.5		13
	0.85	STP9NK50Z	9		35
	1.5	STP5NK50Z	4.4		20
2.7	STP4NK50Z	3		12	
600	0.25	STP22NM60*	22		50
	0.29	STP20NM60	20		39
	0.29	STP20NM60FD	20		40
	0.45	STP11NM60	11		30
	0.45	STP11NM60FD	11		28
	0.5	STP14NK60Z	13.5		75
	0.55	STP13NK60Z	13		66
	0.75	STP10NK60Z	10		50
	0.95	STP9NK60ZFD*	6.4		41
	0.95	STP9NK60Z	9		40
	1	STP8NM60	8		13
	1.2	STP6NK60Z	6		33
	1.6	STP5NK60Z	5		25
	2	STP4NK60Z	4		19
3.6	STP3NK60Z	3		12.5	
5	STP2HNC60	2.2		11.3	
650	1.2	STP9NK65Z	7		41
	1.8	STP5NK65Z	5		31
700	0.85	STP10NK70Z	8		60
	1.2	STP9NK70Z	7.5		48
	2	STP5NC70Z	4.6		27
800	0.4	STP11NM80*	11		40
	0.75	STP12NK80Z*	10.5		87
	0.9	STP10NK80Z	9		72
	1.5	STP8NK80Z	6.2		50
	1.8	STP7NK80Z	5.2		40
	2.4	STP5NK80Z	4.3		32.4
	3.5	STP4NK80Z	3		22.5
4.5	STP3NK80Z*	2.5		18	
900	1.3	STP9NK90Z	8		72
	2	STP6NK90Z	6		50
	4.8	STP3NK90Z	2.8		25
1000	2.7	STP5NB100	5		39
	4.4	STP4NB100	3.8		32
	6	STP3NB100	3		22

LL = 4.5V Drive Optimization

Fast Diode version in blue characters

* Coming soon

TO-220FP



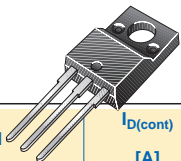
V _{DSS} [V]	R _{DS(on)} (max) @ 10V [Ω]	P / N	I _{D(cont)} [A]	R _{DS(on)} (max) @ 4.5V or 5V [Ω]	Q _g (typ) @ 10V [nC]
55	0.0065	STP80NF55-06FP	60		140
	0.014	STP60NF06LFP	40	0.016	65
60	0.016	STP60NF06FP	37		49
	0.018	STP55NF06FP	32		45
	0.018	STP55NF06LFP	35	0.02	50
	0.04	STP36NF06FP*	20		23
	0.07	STP20NE06LFP	20	0.085	26
	0.08	STP20NE06FP	20		25
	0.1	STP16NF06FP	16		10
	0.1	STP16NF06LFP	16	0.12	12
75	0.011	STP75NF75FP	40		117
100	0.015	STP80NF10FP	80		140
	0.13	STP14NF10FP	10		15
120	0.018	STP80NF12FP	80		140
	0.077	STF24NF12*	24		
	0.18	STP14NF12FP	14		15
200	0.18	IRF640FP	18		55
	0.18	STP19NB20FP	19		29
	0.4	IRF630FP	9		31
	0.4	IRF630MFP ^Δ	9		31
	0.4	STP10NB20FP	10		17
250	1.1	STP6NB25FP	3.7		12
300	0.9	STF7NK30Z*	5.7		15
400	0.25	STP17NK40ZFP	15		69
	0.55	STP11NK40ZFP	9		30
	1	STP7NK40ZFP	6		20
	1.8	STP5NK40ZFP	4		12
500	0.215	STF22NM50*	22		50
	0.25	STP20NM50FP	20		40
	0.34	STP15NK50ZFP	14		76
	0.35	STP12NM50FP	12		28
	0.38	STP14NK50ZFP	14		69
	0.4	STP12NM50FDFF	12		27.5
	0.52	STP11NK50ZFP	10		49
	0.85	STP9NK50ZFP	9		35
	1.5	STP5NK50ZFP	4.4		20
	2.7	STP4NK50ZFP	3		12
600	0.25	STF22NM60*	22		50
	0.29	STF20NM60D	20		40
	0.29	STP20NM60FP	20		39
	0.45	STP11NM60FDFF	11		28
	0.45	STP11NM60FP	11		30
	0.5	STP14NK60ZFP	13.5		75
	0.55	STP13NK60ZFP	13		66
	0.75	STP10NK60ZFP	10		50
	0.95	STP9NK60ZFP	9		40
	1.2	STP6NK60ZFP	6		33
	1.6	STP5NK60ZFP	5		25
2	STP4NK60ZFP	4		19	
3.6	STP3NK60ZFP	3		12.5	
4.8	STF2HNK60Z*	2.2		11.3	
650	0.9	STP9NC65FP	8		44
	1.2	STP9NK65ZFP	7		41
700	0.85	STP10NK70ZFP	8		60
	1.2	STP9NK70ZFP	7.5		48
	2	STP5NC70ZFP	4.6		27
800	0.9	STP10NK80ZFP	9		72
	1.5	STP8NK80ZFP	6.2		50
	1.8	STP7NK80ZFP	5.2		40
	2.4	STP5NK80ZFP	4.3		32.4
	3.5	STP4NK80ZFP	3		22.5
	4.5	STF3NK80Z*	2.5		18

ΔMonitor Application Specific * Coming soon

Fast Diode version in blue characters

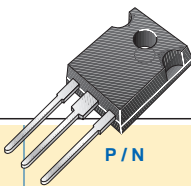
TO-220FP

Cont'd.



V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
900	1.3	STF9NK90Z	8		72
	2	STP6NK90ZFP	6		50
	4.8	STP3NK90ZFP	2.8		25
1000	6	STP3NB100FP	3		22

TO-247

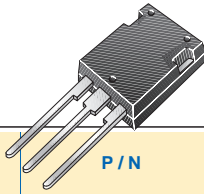


V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
30	0.0028	STW200NF03	120		225
	0.0035	STW240NF55	120		380
55	0.006	STW150NF55	120		140
	0.008	STW80NF55-08	80		115
60	0.01	STW80NE06-10	80		140
75	0.0044	STW220NF75	120		360
100	0.022	STW60NE10	60		142
120	0.018	STW80NF12	80		140
	0.055	STW50NB20	50		84
200	0.085	IRFP250	33		117
	0.085	STW47NM50*	47		90
500	0.1	STW45NM50	45		87
	0.1	STW45NM50FD	45		92
	0.12	STW26NM50	30		76
	0.12	STW26NM50FD*	30		76
	0.25	STW20NM50	20		40
	0.25	STW20NM50FD	20		38
	0.27	STW20NK50Z	18		95
	0.34	STW15NK50Z	14		76
	0.35	STW14NM50	12		28
	0.38	STW14NK50Z	14		69
0.4	STW14NM50FD	14		27.5	
600	0.095	STW47NM60*	47		100
	0.11	STW45NM60	45		96
	0.135	STW26NM60	30		73
	0.135	STW30NM60D*	30		73
	0.29	STW20NM60	20		96
	0.29	STW20NM60FD	20		40
	0.5	STW14NK60Z	13.5		75
0.55	STW13NK60Z	13		66	
0.75	STW10NK60Z	10		50	
700	0.3	STW20NK70Z*	19		220
	1.2	STW9NK70Z	7.5		48
800	0.38	STW18NK80Z*	17		220
	0.4	STW11NM80*	11		40
	0.65	STW13NK80Z*	12		120
	0.75	STW12NK80Z	10.5		87
	0.9	STW10NK80Z	9		72
	1.5	STW8NK80Z	6.2		50
900	0.55	STW15NK90Z*	14.5		220
	0.9	STW12NK90Z*	11		120
	1.3	STW9NK90Z	8		72
	2	STW7NK90Z*	6		50
1000	0.7	STW13NK100Z*	12		220
	1.38	STW11NK100Z*	10.5		120
	4.4	STW5NB100	4.8		32

* Coming soon

Fast Diode version in blue characters

Max247

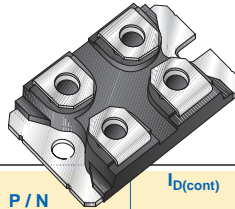


V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
100	0.01	STY140NS10			450
200	0.024	STY100NS20FD	100		360
300	0.045	STY60NK30Z			280
500	0.05	STY60NM50	60		190
	0.05	STY60NM50FD*	60		190
600	0.055	STY60NM60	60		178

* Coming soon

Fast Diode version in blue characters

ISOTOP



V_{DSS} [V]	$R_{DS(on)}$ (max) @ 10V [Ω]	P / N	$I_{D(cont)}$ [A]	$R_{DS(on)}$ (max) @ 4.5V or 5V [Ω]	Q_g (typ) @ 10V [nC]
100	0.0055	STE250NS10	200		900
	0.006	STE180NE10	180		142
200	0.024	STE110NS20FD	110		360
	0.05	STE70NM50	70		190
500	0.08	STE53NC50	53		310
	0.1	STE48NM50	48		87
	0.13	STE38NB50	38		159
600	0.055	STE70NM60	70		178
	0.095	STE49NM60*	49		100
	0.11	STE48NM60	48		96
	0.135	STE40NC60	40		

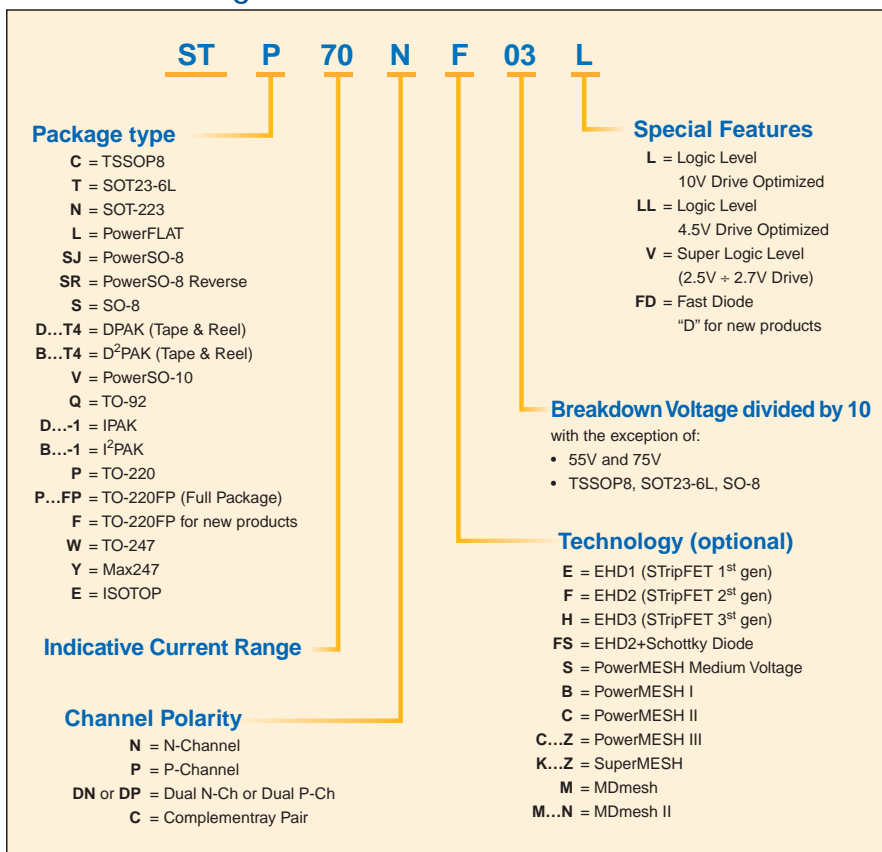
* Coming soon

Product Guidelines

While supporting on-going projects using previous generations, to ensure our customers fully benefit from the innovation that ST provides, we would like to make a few suggestions:

- For the design-in of Low Voltage products:
Use the NF series rather than the NE where similar performance is guaranteed.
- For the design-in of the High Voltage products:
Use the NKZ, NC & NCZ rather than the NB series where similar performance is guaranteed.
- The NM series, or better known as "MDmesh", makes a quantum leap in performance in the High Voltage range for innovative applications.
- For the availability of other MOSFETs refer to your local Sales and Marketing Organization.

Part Numbering for MOSFETs





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