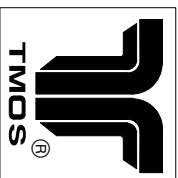




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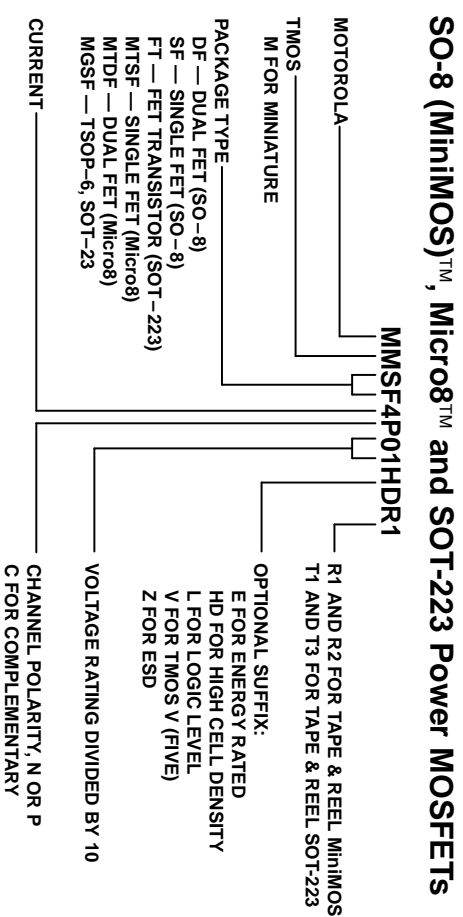
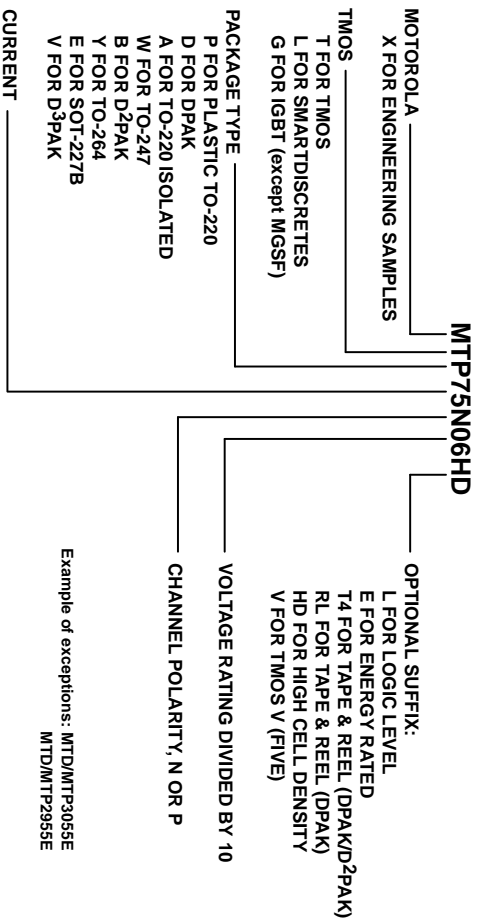
POWER



MOSFETS

TMOS Power MOSFETs Numbering System

Wherever possible, Motorola has used the following numbering systems for TMOS power MOSFET products.



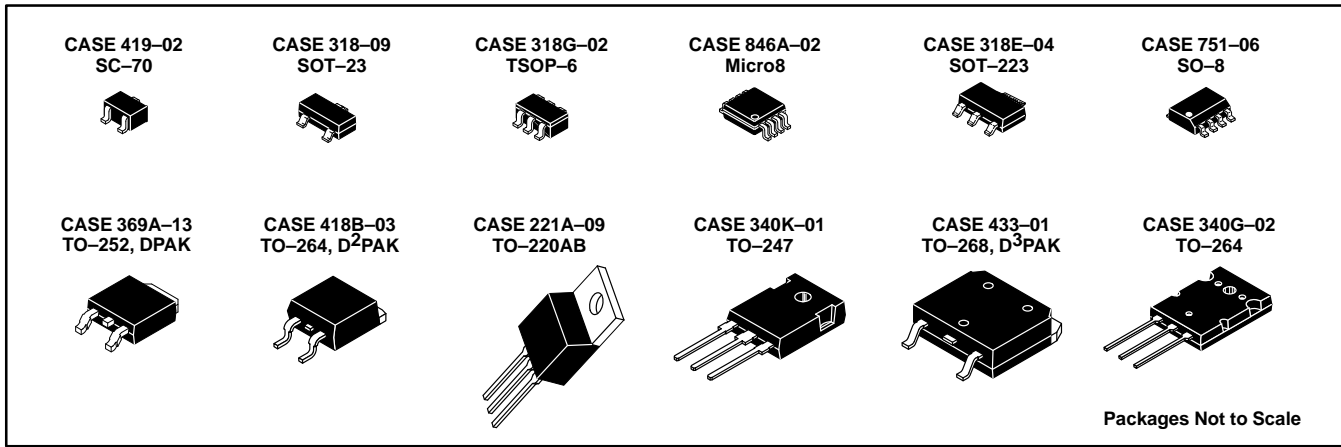


Table 1. SO-8 (MiniMOS™) — Case 751-06

V(BR)DSS (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device ⁽³⁾	P _D (1,2) (Watts) Max	Configuration
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)				
60	100	200	—	3.3	MMDF3N06HD	2	Dual N-Channel
50	300	500	—	1.5	MMDF1N05E	2	Dual N-Channel
40	80	100	—	3.4	MMDF3N04HD		
30	12.5	20	—	12	MMSF3300	2.5	Single N-Channel
	25	—	—	7.3	MMDF3304	2	Dual N-Channel
	28	40	—	8	MMSF7N03HD		
	40	50	—	5	MMSF5N03HD		
	70	75	—	2.8	MMDF3N03HD	2	Dual N-Channel
	70/200 ⁽⁴⁾	75/300	—	2	MMDF2C03HD		Complementary
	37	55	—	6	MMDF6N03HD		Dual N-Channel
	100	110	—	3	MMSF3P03HD	1.5	Single P-Channel
20	200	300	—	2	MMDF2P03HD		Dual P-Channel
	47	—	—	6	MMDF6N02HD	2.5	Dual P-Channel
	—	30	45	8.2	MMSF5N02HD		Single N-Channel
	90	100	—	3	MMDF3N02HD	2	Dual N-Channel
	100	200	—	2	MMDF2N02E		
	90/160 ⁽⁴⁾	100/180 ⁽⁴⁾	—		MMDF2C02HD		Complementary
	100/250 ⁽⁴⁾	200/400 ⁽⁴⁾	—		MMDF2C02E		
	—	30	45	6.4	MMSF5P02HD	2.5	Single P-Channel
	—	33	50	7.8	MMDF3207	2	Dual P-Channel
	75	95	—	3	MMSF3P02HD	1.5	
	160	180	—	2	MMDF2P02HD		
250	400	—	—		MMDF2P02E		
					MMSF2P02E		Single P-Channel
					MMSF3205	2.5	Single P-Channel
12	—	25	35	11	MMSF3205	2.5	Single P-Channel
	—	45	55	4	MMDF4N01HD	2	Dual N-Channel
	—	45/180	55/220 ⁽⁴⁾	2	MMDF2C01HD		Complementary
	—	80	90	4	MMSF4P01HD	1.5	Single P-Channel
—	180	220	2	MMDF2P01HD		Dual P-Channel	

(1) T_C = 25°C

(2) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

(3) Available in tape and reel only — R1 suffix = 500/reel, R2 suffix = 2500/reel.

(4) N-Channel/P-Channel R_{DS(on)} with the minimum recommended footprint.

Devices listed in **bold, italic** are Motorola preferred devices.

Table 2. EZFET™ — SO-8 Power MOSFETs with Zener Gate Protection — Case 751-06

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device (3)	P _D (1,2) (Watts) Max	V _{GS} (Volts) Max	Configuration
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)					
50	300	500	—	2	<i>MMDF2N05Z</i>	2.0	±15	Dual N-Channel
30	30	40	—	5	<i>MMSF7N03Z</i>	2.5		Single N-Channel
20	—	22	27	6	<i>MMSF10N02Z</i>	2.5	±10	
	—	27	35	5	<i>MMDF7N02Z</i>	2.0	±12	Dual N-Channel
	—	20	30	11.5	<i>MMDF3200Z</i>	2.0	±12	Dual N-Channel

(1) T_C = 25°C

(2) Power rating when mounted on 1" square copper pad on FR-4/G-10 Board (V_{GS} = 4.5 V, @ steady state).

(3) Available in tape and reel only — R1 suffix = 500/reel, R2 suffix = 2500/reel.

Table 3. Micro8™ — Case 751-06

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device (3)	P _D (1,2) (Watts) Max	Configuration
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)				
30	135	222	—	1	<i>MTDF1N03HD</i>	1.25	Dual N-Channel
	90	150	—	2.4	<i>MTSF2P03HD</i>	1.8	Single P-Channel
	40	60	—	3	<i>MTSF3N03HD</i>		Single N-Channel
20	—	120	160	1.7	<i>MTDF1N02HD</i>	1.25	Dual N-Channel
	—	175	280	1.6	<i>MTDF1P02HD</i>		Dual P-Channel
	—	160	190	1.5	<i>MTSF1P02HD</i>	1.8	Single P-Channel
	—	90	120	2.4	<i>MTSF2P02HD</i>	1.8	Single P-Channel
	—	40	50	3.8	<i>MTSF3N02HD</i>	1.8	Single N-Channel
	—	120/175	160/280	1.7	<i>MTDF1C02HD</i>	1.25	Complementary

(1) T_C = 25°C

(2) Power rating when mounted on 1" square copper pad on FR-4/G-10 Board (V_{GS} = 4.5 V, @ steady state).

(3) Available in tape and reel only — R1 suffix = 500/reel, R2 suffix = 2500/reel.

Table 4. SOT-223 — Case 318E-04

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device (4)	P _D (1) (Watts) Max	Polarity
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)				
100	0.30	—	—	1	<i>MMFT1N10E</i>	0.8 ⁽³⁾	N-Channel
60	—	0.14	—	1.5	<i>MMFT3055VL</i> ⁽²⁾		N-Channel
	0.13	—	—	1.7	<i>MMFT3055V</i>		N-Channel
	0.30	—	—	1.2	<i>MMFT2955E</i>		P-Channel
20	—	0.15	—	2	<i>MMFT2N02EL</i> ⁽²⁾		N-Channel
30	0.1	—	—	5.2	<i>MMFT5P03HD</i>	3.1	P-Channel

(1) T_C = 25°C

(3) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

(4) Available in tape and reel only — T1 suffix = 1000/reel, T3 suffix = 4000/reel.

Table 5. TSOP-6 — Case 318G-02

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device	P _D (1,2) (Watts) Max	V _{GS} (Volts) Min	Polarity
	10 V (Ω)	4.5 V (Ω)	2.7 V (Ω)					
30	0.065	0.095	—	4.2	MGSF3454X	0.15	1.0	N-Channel
					MGSF3454V	2.0		N-Channel
	0.1	0.135		3.5	MGSF3455X	0.5		P-Channel
					MGSF3455V	2.0		P-Channel
20	—	0.07	0.095	4.0	MGSF3442X	0.5	0.6	N-Channel
		MGSF3442V			2.0	N-Channel		
	—	0.10	0.19	3.3	MGSF3441X	0.5	0.45	P-Channel
					MGSF3441V	2.0		P-Channel

(1) T_C = 25°C

(2) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

Table 6. SOT-23 — Case 318-09

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device	P _D (1,2) (Watts) Max	V _{GS} (Volts) Min	Polarity	
	10 V (Ω)	4.5 V (Ω)	2.7 V (Ω)						
60	5.0	—	—	0.2	MMBF170LT1	0.225	0.8	N-Channel	
	7.5			0.5	2N7002LT1			1.0	N-Channel
50	0.9	6.0		0.1	BSS84				P-Channel
30	0.09	0.135		1.0	MGSF1N03LT1				N-Channel
20	0.075	0.085		0.1	MGSF1N02LT1				N-Channel
					MMBF0201NLT1				N-Channel
	0.75	1.0		0.75	MGSF1P02ELT1			0.7	P-Channel
					MGSF1P02LT1			1.0	P-Channel
	0.235	0.375		0.25	MMBF0202PLT1			1.0	P-Channel
	0.9	2.0							

(1) T_C = 25°C

(2) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

Table 7. SC-70 / SOT-323 — Case 419-02

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device	P _D (1,2) (Watts) Max	V _{GS} (Volts) Min	Polarity
	10 V (Ω)	4.5 V (Ω)	2.7 V (Ω)					
20	0.75	1.0	—	0.3	MMBF2201NT1	0.15	1.0	N-Channel
	1.5	2.0	—		MMBF2202PT1			P-Channel

(1) T_C = 25°C

(2) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

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TMOS is a registered trademark of Motorola, Inc.

Micro8 is a trademark of International Rectifier

Table 8. DPAK — Case 369A-13 (TO-252)

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device ⁽⁴⁾	P _D ^(1,3) (Watts) Max
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)			
DPAK — N-Channel						
800	12	—	—	1	MTD1N80E	1.75
600	8	—	—	1	MTD1N60E	
500	5	—	—	1	MTD1N50E	
	3.60	—	—	2	MTD2N50E	
400	3.50	—	—	2	MTD2N40E	
250	1.40	—	—	3	MTD3N25E	
	1	—	—	5	MTD5N25E	
200	1.5	—	—	3	MTD3N20E	
	1.20	—	—	4	MTD4N20E	
	0.70	—	—	6	MTD6N20E	
150	0.30	—	—	6	MTD6N15	
100	0.40	—	—	6	MTD6N10E	
	0.25	—	—	9	MTD9N10E	
	—	0.22	—	10	MTD10N10EL	
	0.11	—	—	14	MTD14N10E	
60	—	0.18	—	12	MTD3055VL	
	0.12	—	—	15	MTD15N06V	
	—	0.085	—	15	MTD15N06VL	
	0.18	—	—	12	MTD12N06EZL ⁽⁵⁾	
	0.15	—	—	8	MTD3055V	
	0.045	—	—	20	MTD20N06HD	
	0.045	—	—	20	MTD20N06HDL	
30	0.080	—	—	20	MTD20N06V	
	0.010	—	—	10.8	MTD3302	
	0.035	—	—	20	MTD20N03HDL	
	0.022	—	—	20	MTD1302	
DPAK — P-Channel						
500	15.0	—	—	1	MTD1P50E	1.75
100	0.66	—	—	6	MTD6P10E	
60	0.45	—	—	5	MTD5P06V	
	0.20	—	—	12	MTD2955V	
	0.15	—	—	20	MTD20P06HDL	
30	0.099	—	—	19	MTD20P03HDL	

(1) T_C = 25°C

(3) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

(4) Available in tape and reel — add T4 suffix to part number.

(5) ESD protected to 4 kV.

Table 9. D²PAK — Case 418B-03 (TO-264)

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device ⁽⁴⁾	P _D ^(1,3) (Watts) Max
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)			
D²PAK — N-Channel						
1200	5.0	—	—	3	MTB3N120E	2.5
1000	9	—	—	1	MTB1N100E	
	4	—	—	3	MTB3N100E	
800	3	—	—	4	MTB4N80E	
600	1.20	—	—	6	MTB6N60E	
	2.2	—	—	3	MTB3N60E	
	4.16	—	—	2	MTB2N60E	
500	0.80	—	—	8	MTB8N50E	
400	3.5	—	—	2	MTB2N40E	
	0.55	—	—	10	MTB10N40E	
250	0.50	—	—	9	MTB9N25E	
	0.25	—	—	16	MTB16N25E	
200	0.16	—	—	20	MTB20N20E	
150	0.07	—	—	29	MTB29N15E	
100	0.060	—	—	33	MTB33N10E	
100	0.04	—	—	40	MTB40N10E	
60	0.12	—	—	15	MTB15N06V	
	—	0.05	—	30	MTB30N06VL	
	—	0.026	—	35	MTB35N06ZL	
	0.04	—	—	32	MTB36N06V	
	—	0.032	—	42	MTB50N06VL	
	0.028	—	—	42	MTB50N06V	
	—	0.025	—	52	MTB52N06VL	
	0.022	—	—	52	MTB52N06V	
	0.018	—	—	55	MTB55N06Z	
	0.014	—	—	60	MTB60N06HD	
50	0.01	—	—	75	MTB75N06HD	
	0.0095	—	—	75	MTB75N05HD	
30	—	0.014	—	60	MTB60N05HDL	
	0.008	—	—	75	MTB1306	
25	—	0.009	—	75	MTB75N03HDL	
D²PAK — P-Channel						
500	6	—	—	2	MTB2P50E	2.5
60	0.12	—	—	23	MTB23P06V	
	0.08	—	—	30	MTB30P06V	
30	—	0.025	—	50	MTB50P03HDL	

(1) T_C = 25°C

(3) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

(4) Available in tape and reel — add T4 suffix to part number.

Table 10. D³PAK — Case 433–01 (TO–268)

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device ⁽²⁾	P _D ⁽¹⁾ (Watts) Max
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)			
D³PAK — N-Channel						
1000	1.50	—	—	6	MTV6N100E	178
	1.30	—	—	10	MTV10N100E	250
500	0.320	—	—	16	MTV16N50E	250
	0.240	—	—	20	MTV20N50E	250
	0.200	—	—	25	MTV25N50E	250
250	0.080	—	—	32	MTV32N25E	250
200	1.50	—	—	32	MTV32N20E	180

⁽¹⁾ T_C = 25°C

⁽²⁾ Available in tape and reel — add T4 suffix to part number.

Table 11. TO-220AB — Case 221A–09

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device	P _D ⁽¹⁾ (Watts) Max
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)			
TO-220AB — N-Channel						
1200	5.0	—	—	3	MTP3N120E	125
1000	9	—	—	1	MTP1N100E	75
	4.0	—	—	3	MTP3N100E	125
800	3	—	—	4	MTP4N80E	50
600	8	—	—	1	MTP1N60E	50
	3.80	—	—	2	MTP2N60E	75
	2.20	—	—	3	MTP3N60E	125
	1.20	—	—	6	MTP6N60E	125
500	5	—	—	1	MTP1N50E	50
	3.60	—	—	2	MTP2N50E	75
	3	—	—	3	MTP3N50E	50
	1.50	—	—	4	MTP4N50E	75
	0.80	—	—	8	MTP8N50E	125
400	3.50	—	—	2	MTP2N40E	50
	1.80	—	—	4	MTP4N40E	50
	1	—	—	5	MTP5N40E	75
	0.55	—	—	10	MTP10N40E	125
250	1.4	—	—	3	MTP3N25E	40
	0.5	—	—	9	MTP9N25E	75
	0.25	—	—	16	MTP16N25E	125
200	0.70	—	—	7	MTP7N20E	75
	0.16	—	—	20	MTP20N20E	125
150	0.07	—	—	29	MTP29N15E	125
100	0.25	—	—	10	MTP10N10E	75
	—	0.22	—	10	MTP10N10EL	40
	0.11	—	—	14	IRF530	78
	0.16	—	—	12	MTP12N10E	75
	0.06	—	—	27	IRF540	145
	0.070	—	—	27	MTP27N10E	125
	0.060	—	—	33	MTP33N10E	150
	0.04	—	—	40	MTP40N10E	169

⁽¹⁾ T_C = 25°C

Table 11. TO-220AB — Case 221A-09 (continued)

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device	P _D ⁽¹⁾ (Watts) Max
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)			
TO-220AB — N-Channel (continued)						
60	—	0.18	—	12	MTP3055VL	48
	0.15	—	—	12	MTP3055V	
	0.12	—	—	15	MTP15N06V	
	—	0.085	—	15	MTP15N06VL	
	—	—	—	20	MTP20N06V	90
	—	0.05	—	30	MTP30N06VL	
	0.04	—	—	32	MTP36N06V	
	—	0.032	—	42	MTP50N06VL	150
	0.028	—	—	42	MTP50N06V	
	0.022	—	—	52	MTP52N06V	
	—	0.025	—	52	MTP52N06VL	186
	—	—	—	60	MTP60N06HD	188
	—	0.014	—	60	MTP60N06HD	150
—	0.01	—	75	MTP75N06HD	150	
50	—	0.10	—	15	MTP15N05EL	75
	0.0095	—	—	75	MTP75N05HD	150
40	0.006	—	—	75	MTP3402	150
30	0.008	—	—	75	MTP1306	150
	0.015	—	—	52	MTP1304	120
	0.022	—	—	42	MTP1302	75
25	—	0.009	—	75	MTP75N03HDL	150

TO-220AB — P-Channel

500	6	—	—	2	MTP2P50E	75
200	1	—	—	6	MTP6P20E	
100	0.30	—	—	12	MTP12P10	88
60	0.45	—	—	5	MTP5P06V	40
	0.20	—	—	12	MTP2955V	60
	0.12	—	—	23	MTP23P06V	125
	0.08	—	—	30	MTP30P06V	125
30	—	0.025	—	50	MTP50P03HDL	150

⁽¹⁾ T_C = 25°C

Table 12. TO-247 (Isolated Mounting Hole) — Case 340K-01

V _{(BR)DSS} (Volts) Min	R _{DS(on)} @ V _{GS}			I _D (cont) Amps	Device	P _D ⁽¹⁾ (Watts) Max
	10 V (mΩ)	4.5 V (mΩ)	2.7 V (mΩ)			
TO-247 — N-Channel						
1000	1.50	—	—	6	MTW6N100E	180
	1.30	—	—	10	MTW10N100E	250
800	1	—	—	7	MTW7N80E	180
600	0.50	—	—	8	MTW8N60E	180
500	0.40	—	—	14	MTW14N50E	180
	0.24	—	—	20	MTW20N50E	250
400	0.24	—	—	16	MTW16N40E	180
	0.16	—	—	24	MTW24N40E	250
250	0.10	—	—	32	MTW32N25E	250
200	0.075	—	—	32	MTW32N20E	180
150	0.065	—	—	35	MTW35N15E	180
100	0.035	—	—	45	MTW45N10E	180

⁽¹⁾ T_C = 25°C

Table 13. TO-264 — Case 340G-02

$V_{(BR)DSS}$ (Volts) Min	$R_{DS(on)}$ @ $V_{GS}^{(2)}$			I_D (cont) Amps	Device	$P_D^{(1)}$ (Watts) Max
	10 V (m Ω)	4.5 V (m Ω)	2.7 V (m Ω)			
1000	0.80	—	—	14	<i>MTY14N100E</i>	300
800	0.50	—	—	16	<i>MTY16N80E</i>	
600	0.21	—	—	25	<i>MTY25N60E</i>	
500	0.24	—	—	20	<i>MTY20N50E</i>	
	0.14	—	—	30	<i>MTY30N50E</i>	
200	0.028	—	—	55	<i>MTY55N20E</i>	
100	0.01	—	—	100	<i>MTY100N10E</i>	

(1) $T_C = 25^\circ\text{C}$

(2) $V_{GS} = 10\text{ V}$ unless otherwise noted.

Table 14. Current Limit MOSFETs — SMARTDISCRETES™

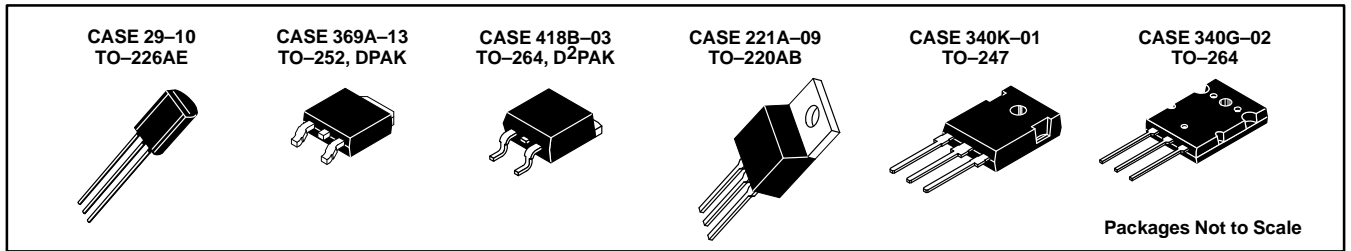
$V_{(BR)DSS}$ (Volts) Min	$R_{DS(on)}$ @ V_{GS}			I_D (cont) Amps	Device	$P_D^{(1)}$ (Watts) Max
	10 V (m Ω)	4.5 V (m Ω)	2.7 V (m Ω)			
60 Clamped Voltage	0.75	—	—	Current Limited	<i>MLP1N06CL</i>	40
62 Clamped Voltage	0.4	—	—	Current Limited	<i>MLP2N06CL</i>	40
62 Clamped Voltage	0.4	—	—	Current Limited	<i>MLD2N06CL</i>	40

(1) $T_C = 25^\circ\text{C}$

(2) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

(3) Available in tape and reel — add T4 suffix to part number.

IGBT's



Packages Not to Scale

Table 15. Ignition IGBTs — SMARTDISCRETES™

BV_{CES} (Volts) Clamped	$V_{CE(on)}$ @ 10 A	Device	$P_D^{(1)}$ (Watts) Max	Package
140 V	1.8	<i>MGP20N14CL</i>	150	TO-220AB
350 V		<i>MGP20N35CL</i>	150	TO-220AB
400 V		<i>MGP20N40CL</i>	150	TO-220AB
		<i>MGB20N40CL</i>	2.5(2,3)	D ² PAK

(1) $T_C = 25^\circ\text{C}$

(2) Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

(3) Available in tape and reel — add T4 suffix to part number.

Table 16. TO-220AB — Short Circuit Capability Rated

$V_{(BR)CES}$ (V)	Device	I_C @ 90°C (A)	$V_{CE(on)}$ @ I_C typ (1)		E_{off} typ (3) ($\mu\text{J/A}$)	t_{sc} min (3) (μs)	$P_D^{(1)}$ (W)
			(V)	(A)			
600	<i>MGP4N60E</i>	4.0	2.0	3.0	60	10	62.5
	<i>MGP4N60ED</i>						
	<i>MGP7N60E</i>	7.0	5.0	70	81		
	<i>MGP7N60ED</i>						
	<i>MGP11N60E</i>	11	8.0	60	96		

(1) $T_C = 25^\circ\text{C}$ unless otherwise specified

(3) $T_C = 125^\circ\text{C}$

Table 16. TO-220AB — Short Circuit Capability Rated (continued)

V _{(BR)CES} (V)	Device	I _C @ 90°C (A)	V _{CE(on)} @ I _C typ ⁽¹⁾		E _{off} typ ⁽³⁾ (μJ/A)	t _{sc} min ⁽³⁾ (μS)	P _D ⁽¹⁾ (W)
			(V)	(A)			
	MGP11N60ED	11	2.0	8.0	60	10	96
	MGP14N60E	14		10	63		112
	MGP21N60E	21	2.1	20	65		142
	MGP15N60U	15	1.7	8.0	63	—	96
	MGP20N60U ⁽⁴⁾	20		10			112

⁽¹⁾ T_C = 25°C unless otherwise specified

⁽³⁾ T_C = 125°C

⁽⁴⁾ Non short circuit capability

Table 17. TO-247 — Short Circuit Capability Rated

V _{(BR)CES} (V)	Device	I _C @ 90°C (A)	V _{CE(on)} @ I _C typ ⁽¹⁾		E _{off} typ ⁽³⁾ (μJ/A)	t _{sc} min ⁽³⁾ (μS)	P _D ⁽¹⁾ (W)
			(V)	(A)			
600	MGW14N60ED	14	2.0	10	60	10	112
	MGW21N60ED	21	2.1	20	65		142
1200	MGW12N120	12	3.5	10	150		125
	MGW12N120D						
	MGW20N120	20	2.9	20	160	174	

⁽¹⁾ T_C = 25°C unless otherwise specified

⁽³⁾ T_C = 125°C

Table 18. TO-264 — Short Circuit Capability Rated

V _{(BR)CES} (V)	Device	I _C @ 90°C (A)	V _{CE(on)} @ I _C typ ⁽¹⁾		E _{off} typ ⁽³⁾ (μJ/A)	t _{sc} min ⁽³⁾ (μS)	P _D ⁽¹⁾ (W)
			(V)	(A)			
1200	MGY20N120D	20	2.9	20	160	10	174
	MGY25N120	25	3.0	25	216		212
	MGY25N120D						

⁽¹⁾ T_C = 25°C unless otherwise specified

⁽³⁾ T_C = 125°C

Table 19. TO-226AE Powerlux IGBT

V _{(BR)CES} (V)	Device	I _C @ 90°C (A)	V _{CE(on)} @ I _C typ ⁽¹⁾		E _{off} typ ⁽³⁾ (μJ/A)	t _{sc} min ⁽³⁾ (μS)	P _D ⁽¹⁾ (W)
			(V)	(A)			
600	MGS05N60D	0.3	1.6	0.3	16.2	—	1.0
	MGS13002D						

⁽¹⁾ T_C = 25°C unless otherwise specified

⁽³⁾ T_C = 125°C

D suffix on part number indicates free wheeling diode is copackaged with IGBT

DATA SHEET FAX VIA TOUCH-TONE PHONE

Data sheets that, up until now, were only available through TMOS Marketing are now available to you via your touch-tone phone through the Mfax system. With the Touch-Tone Fax System you can use the keypad on your touch-tone telephone to request faxes of over 30,000 Motorola documents. You can even send data sheets directly to your customers by simply entering *their* FAX numbers instead of yours.

Just dial 602-244-6609 and the simple instructions will guide you through the process of obtaining the data you desire. You may find it helpful to read through the process, which is listed below, prior to calling the first time.

INSTRUCTIONS

You will be asked to enter various pieces of information. To enter phone numbers, fax numbers, or hot document numbers simply enter numbers from your touch-tone keypad followed by the pound sign. For example, to enter a fax number, you might enter 6025551212#. (Numeric Input)

To enter combinations of letters and numbers (such as a part number, your first initial, your last name or company name), you must use sequences of two-digit codes to represent all of the letters and numbers. The telephone keypad groups three letters on each key. Numbers are prefixed with a "0". The number "7" would be entered as 07.

Example of Text Input:

The part number MC6530, would be translated as follows:

Text to be entered:	M	C	6	5	3	0
Two-digit codes:	61	23	06	05	03	00

When prompted for a part number, you would enter 61 23 06 05 03 00 #


"Q" is the fourth letter on the "7" key,
 "Z" is the fourth letter on the "9" key,
 and special characters "-", ".", and "/"
 are on the "1" key.

We suggest that you translate and write out the required information before starting your call. Then simply enter the pre-translated information.

NOTE: The system will repeat each letter as you enter two-digit codes. Should you make an error, you can reject the entire entry and start over when asked to verify. Entering an "*" will provide you with verbal instructions on entering letters and numbers. During this help information, you may press any key to skip the remaining message and proceed with ordering your fax.

1 2 3	1 2 3	1 2 3
- . /	A B C	D E F
1	2	3
1 2 3	1 2 3	1 2 3
G H I	J K L	M N O
4	5	6
1 2 3 4	1 2 3	1 2 3 4
P R S Q	T U V	W X Y Z
7	8	9
*	0	#

Should you encounter any problems with this system please contact the system administrator at **602-244-6591**.

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