

MOSFET PPAK5X6 Package

MFT-P56 series

MERITEK

FEATURE

- Operating and Storage Temperature: -50°C ~ +150°C
- Fast Switching Characteristics
- Improved dv/dt Capability



PART NUMBERING SYSTEM

MFT **10** **N** **54** **P56S**
 (1) (2) (3) (4) (5)

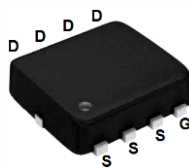


No	Item	Code	Part Description	Series Reference
(1)	Meritek Series	MFT	Meritek MOSFET Series	Surface Mount Type
(2)	Voltage Rating	10	10: 100V	Drain-Source Voltage, 3:30V
(3)	FET Type	N	N: Single N Channel	P-Channel, Dual N-Channel, Dual N+P-Channel MOSFET
(4)	Current Rating	54	54: 54A	Continuous Drain Current, T _C =25°C
(5)	Internal Code	P56S	Internal Control Reference	Package or Project Reference

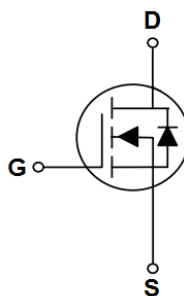
SURFACE MOUNT MOSFET PACKAGE REFERENCE TABLE

Series	FET Type	Channel/ Feature	Continuous Drain Current (I _b) @ 25°C	R _{DS(ON)} Max. @ 4.5 V _{GS}	Power Dissipation (P _D) @25°C	Drain to Source Voltage (V _{DS})
MFT(N)-P56	N	Single	15 ~ 210A	1.7 ~ 90mΩ	54 ~ 166W	20V, 30V, 40V, 60V, 65V, 75V, 80V, 100V, 150V
MFT(N)-P56E	N	Single/ESD	60 ~ 80A	8.5 ~ 13mΩ	54 ~ 74W	30V
MFT(P)-P56	P	Single	60 ~ 100A	2.6 ~ 14mΩ	41.6 ~ 142W	-20V, -30V, -40V, -60V
MFT(2N)-P56	N+N	Dual	2 ~ 40A	9 ~ 340mΩ	32.2 ~ 63W	30V, 40V, 100V, 500V, 600V
MFT(2N)-P56A	N+N	Dual Asymmetric	39 ~ 85A	6 ~ 17mΩ	27.2 ~ 54W	30V, 40V
MFT(NP)-P56	N+P	Dual	15.2 ~ 23.3A	18 ~ 46mΩ	17.4W	-30V, 30V

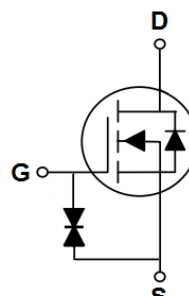
PIN CONFIGURATION



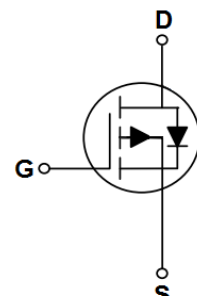
PPAK5X6



Single N Type



Single N Type ESD



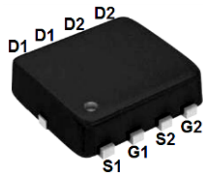
Single P Type

MOSFET PPAK5X6 Package

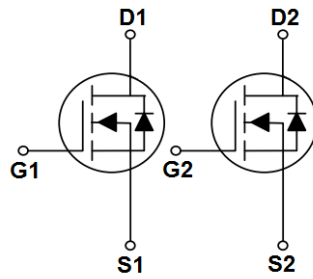
MFT-P56 series

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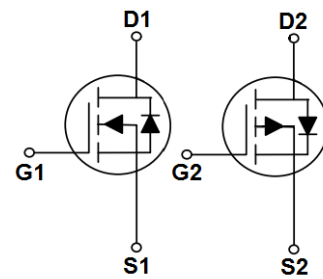
PIN CONFIGURATION CONTINUED



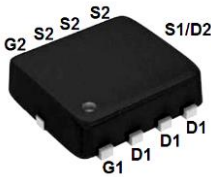
PPAK5X6



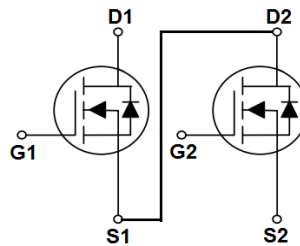
Dual N+N Type



Dual N+P Type



PPAK5X6



Dual N Type Asymmetric

ELECTRICAL CHARACTERISTICS

MFT(N)-P56 Series - Single N Channel Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	RES(ON) (mΩ) max. at V _{GS}		Q _g (nC)		CISS (pF)	P _D (W) @25°C	T _S , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT2N210P56S	20	210	130	±12	1.1/1.4	1.24/1.7	-	173	11950	142	-50 ~ +150
MFT3N130P56S	30	130	82	±20	1.2/1.6	1.8/2.4	-	65	7720	166	-55 ~ +175
MFT3N115P56S	30	115	72	±20	1.9/2.4	2.5/3.3	-	40	4800	135	-55 ~ +175
MFT3N90P56S	30	90	57	±20	2.7/3.6	4.1/5.5	-	24	2200	115	-55 ~ +175
MFT3N80P56S	30	80	51	±20	4.5/6	6.5/9	-	11.1	1160	54	-55 ~ +150
MFT3N60P56S	30	60	38	±20	6.2/8.5	8.9/13	-	7.5	680	54	-55 ~ +150
MFT4N140P56S	40	140	88	±20	1.7/2.2	2.1/3	-	70	8000	142	-50 ~ +150
MFT4N200P56S	40	200	130	±20	1.1/1.4	-	115	-	7500	92.6	-50 ~ +150
MFT4N140P562S	40	140	90	±20	1.6/2.2	-	62	-	4000	73.5	-50 ~ +150
MFT4N100P56S	40	100	63	±20	2.2/2.8	2.6/3.5	-	44.4	4940	135	-55 ~ +150
MFT4N90P56S	40	90	57	±20	4.2/5.5	5.3/7	-	25	2410	83	-55 ~ +150
MFT4N70P561S	40	70	44	±20	5.5/6.5	6.9/8.5	-	16.2	1540	83	-55 ~ +150
MFT4N70P562S	40	70	44	±20	6.5/8.5	9/12	19.7	-	1278	72.3	-55 ~ +150
MFT6N100P56S	60	100	63	±20	3.8/4.6	4.2/5.5	-	58.2	6805	142	-50 ~ +150
MFT6N85P56S	60	85	53.8	±20	4.6/5.6	5.3/7.0	-	32.8	4740	135	-55 ~ +150
MFT6N55P56S	60	55	34.8	±25	6.8/8.2	-	26.9	-	1690	135	-50 ~ +150

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PPAK5X6 Package

MFT-P56 series

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ELECTRICAL CHARACTERISTICS CONTINUED

MFT(N)-P56 Series - Single N Channel Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	R _{DS(ON)} (mΩ) max. at V _{GS}		Q _g (nC)		CISS (pF)	P _D (W) @25°C	T _S , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT6N50P56S	60	50	31	±20	10/12	12/15	39.2	-	2100	96	-55 ~ +150
MFT6N42P56S	60	42	26	±20	13/17	16/20	-	13.2	1515	62.5	-55 ~ +150
MFT6N44P56S	60	44	28	±20	17/21	20/24	28	-	1680	83	-50 ~ +150
MFT6V5N48P56S	65	48	30.4	±20	11.5/13.5	14.5/18	39.2	-	2100	96	-55 ~ +150
MFT6V5N100P56S	65	100	63	20/-12	2.3/2.8	4.2/5.4	59	-	4780	142	-50 ~ +150
MFT6V5N110P56S	65	110	70	20/-12	2.8/3.5	4.3/6	64.7	-	3590	138	-50 ~ +150
MFT6V5N90P56S	65	90	57	20/-12	3.4/4.2	5.4/7.2	54	-	2976	125	-50 ~ +150
MFT7V5N75P56S	75	75	47.5	±25	9.5/12	13/18	34.5	-	2035	135	-50 ~ +150
MFT8N80P56S	80	80	50	20/-12	3.2/3.9	4.6/6.2	88	-	5160	142	-50 ~ +150
MFT10N70P56S	100	70	44	20/-12	5.5/6.5	7/9	58.2	-	4570	142	-50 ~ +150
MFT10N65P56S	100	65	41.1	20/-12	6/7.2	8.8/11.2	53.5	-	3250	139	-50 ~ +150
MFT10N62P56S	100	62	39.2	20/-12	7.2/9.2	10.8/14	39.7	-	2550	125	-50 ~ +150
MFT10N60P56S	100	60	38	±20	11/13	11.5/14	-	47.2	5775	142	-50 ~ +150
MFT10N54P56S	100	54	34	±20	14.3/17	15.8/20	66.7	-	4812	136	-50 ~ +150
MFT10N45P56S	100	45	28	±20	15/18	17/22	36.8	-	1820	135	-50 ~ +150
MFT10N25P56S	100	25	15.8	±20	42/50	46/60	20	-	1290	73.5	-50 ~ +150
MFT15N15P56S	150	15	9.5	±25	52/65	65/90	30	-	1790	135	-55 ~ +150

MFT(N)-P56E Series - Single N Channel ESD Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	R _{DS(ON)} (mΩ) max. at V _{GS}		Q _g (nC)		CISS (pF)	P _D (W) @25°C	T _S , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT3N80P56ES	30	80	51	±20	4.5/5.5	6.3/8.5	-	11.1	1210	74	-55 ~ +150
MFT3N60P56ES	30	60	38	±20	6.2/8.5	8.9/13	-	7.5	680	54	-55 ~ +150

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ELECTRICAL CHARACTERISTICS CONTINUED

MFT(P)-P56 Series - Single P Channel Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	R _{DS(ON)} (mΩ) max. at V _{GS}		Q _g (nC)		CISS (pF)	P _D (W) @25°C	T _S , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT2P90P56S	-20	90	54	±12	1.8/2.3	2.1/2.6	-	149	14000	41.6	-55 ~ +150
MFT3P100P56S	-30	100	63.2	±20	2.6/3.3	3.8/5	146	-	7930	138	-55 ~ +150
MFT3P90P56S	-30	90	56	±20	3.5/4.5	5/7	108	-	6220	136	-55 ~ +150
MFT3P60P56S	-30	60	38	±20	7.1/8.5	11.5/14	-	35	3300	96	-55 ~ +150
MFT4P85P56S	-40	85	53.7	±20	4.7/5.8	6.4/8.5	106	-	5720	135	-50 ~ +150
MFT6P72P56S	-60	72	45.5	±20	7.1/8.6	8.8/12	141	-	8620	142	-55 ~ +150

MFT(2N)-P56 Series - Dual N Channel Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	R _{DS(ON)} (mΩ) max. at V _{GS}		Q _g (nC)		CISS (pF)	P _D (W) @25°C	T _S , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT32N40P56S	30	40	25.3	±20	5.5/6.5	7/9	-	11.1	1160	46	-55 ~ +150
MFT42N30P56S	40	30	19	±20	7.2/9	9.5/12	-	12.2	1220	46	-55 ~ +150
MFT102N10P56S	100	10	6.3	±20	145/185	150/195	13.4	-	820	43	-55 ~ +150
MFT102N6A6P56S	100	6.6	4.2	±20	270/330	280/340	9	-	492	32.2	-55 ~ +150
MFT502N3P56S	500	3	1.9	±30	2600/ 3600	-	10	-	440	63	-55 ~ +150
MFT602N2P56S	600	2	1.3	±30	4300/ 5000	-	9.9	-	425	63	-55 ~ +150

MFT(2N)-P56A Series - Dual N Channel Asymmetric Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	R _{DS(ON)} (mΩ) max. at V _{GS}		Q _g (nC)		CISS (pF)	P _D (W) @25°C	T _S , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT32N80P56AS	30	80	51	±20	4.8/6	6.5/9	-	11.1	1160	54	-55 ~ +150
MFT32N55P56AS	30	55	35	±20	7.5/9	10/13	-	7.5	750	40	-55 ~ +150
MFT32N45P56AS	30	43	27.2	±20	7.5/9.5	11/14.5	-	7.5	680	27.2	-55 ~ +150
MFT32N85P56AS	30	85	54	±20	3.3/4.2	4.5/6	-	24	2200	48	-55 ~ +150
MFT42N39P56AS	40	39	24.6	±20	9/13	11.5/17	-	13	1088	34.7	-55 ~ +150
MFT42N60P56AS	40	60	37.9	±20	5.5/6.8	7.2/9.5	-	16.2	1540	41.7	-55 ~ +150

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ELECTRICAL CHARACTERISTICS CONTINUED

MFT(NP)-P56 Series - Dual N+P Channel Type

Part Number	V _{DS} (V)	I _D (A)		V _{GS} (V)	R _{DS(ON)} (mΩ) max. at V _{GS}		Q _g (nC)		C _{ISS} (pF)	P _D (W) @25°C	T _s , T _J (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT3NP23A3P56S	30	23.3	14.7	±20	9.4/12	13/18	-	7.4	620	17.4	-55 ~ +150
	-30	15.2	9.6	±20	24/29	35/46	-	8	757	17.4	-55 ~ +150

Note:

1. TA=25°C unless otherwise specified. 2. PD is Power Dissipation Derate above 25°C.

*Specifications subject to change without notice.