

MOSFET PPAK3X3 Package

MFT-P33 series

MERITEK

FEATURE

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



PART NUMBERING SYSTEM

MFT **10** **N** **10** **P33S**
 (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 P-Channel, Dual N+P-Channel MOSFET
(4)	Current Rating	10	10: 10A	Continuous Drain Current, T _C =25°C
(5)	Internal Code	P33S	Internal Control Reference	Package or Project Reference

SURFACE MOUNT MOSFET PACKAGE REFERENCE TABLE

Series	FET Type	Channel/ Feature	Continuous Drain Current (I _D) @ 25°C	R _{DS(ON)} Max @ 4.5 V _{GS}	Power Dissipation (P _D) @25°C	Drain to Source Voltage (V _{DS})
MFT(N)-P33	N	Single	10 ~ 80A	3.5 ~ 120mΩ	21 ~ 66W	20V, 30V, 40V, 60V, 65V, 100V
MFT(N)-P33E	N	Single/ESD	30 ~ 48A	10 ~ 13mΩ	26 ~ 35W	20V, 30V
MFT(P)-P33	P	Single	26 ~ 60A	8 ~ 35mΩ	23 ~ 62.5W	-20V, -30V
MFT(P)-P33E	P	Single/ESD	30A	35mΩ	27W	-30V
MFT(2N)-P33	N+N	Dual	5.1 ~ 42A	16 ~ 360mΩ	20 ~ 35W	30V, 100V
MFT(2N)-P33E	N+N	Dual/ESD	30A	12mΩ	26W	20V
MFT(2N)-P33DE	N+N	Dual/ESD Common Drain	8.6A	14mΩ	1.67W	20V
MFT(2P)-P33	P+P	Dual	7.5A	33mΩ	25W	-20V
MFT(2P)-P33DE	P+P	Dual/ESD Common Drain	5.6A	33mΩ	1.67W	-20V
MFT(NP)-P33	N+P	Dual	8 ~ 16A	30 ~ 75mΩ	20W	-30V, 30V

MOSFET PPAK3X3 Package

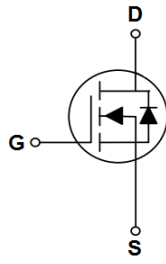
MFT-P33 series

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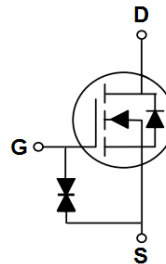
PIN CONFIGURATION



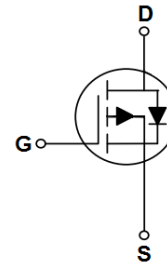
PPAK3X3



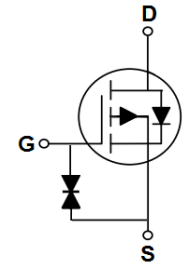
Single N Type



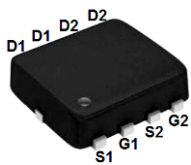
Single N Type ESD



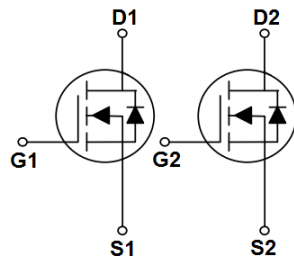
Single P Type



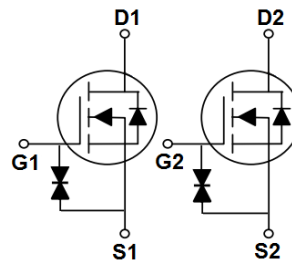
Single P Type ESD



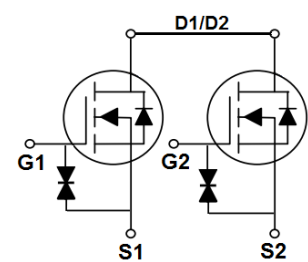
PPAK3X3



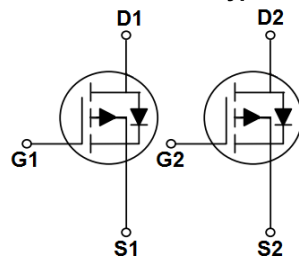
Dual N Type



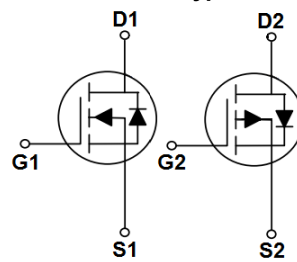
Dual N Type ESD



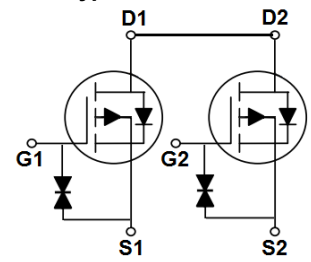
Dual N Type Common Drain ESD



Dual P Type



Dual N+P Type



Dual P Type Common Drain ESD

ELECTRICAL CHARACTERISTICS

MFT(N)-P33 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			
MFT2N80P33S	20	80	51	±12	-	2.8/3.5	-	52	3870	66	-55 ~ +175
MFT2N65P33S	20	65	41	±10	-	4.5/5.4	-	29.8	1920	44.6	-55 ~ +150
MFT3N80P33S	30	80	51	±20	2.9/3.8	4.3/5.5	-	24	2200	66	-55 ~ +150
MFT3N60P33S	30	60	38	±20	4.8/6	6.7/9	-	11.1	1160	45	-55 ~ +150
MFT3N48PA33S	30	48	30	±20	6.2/8.5	9/13	-	7.5	750	35	-55 ~ +150
MFT3N35P33S	30	35	22	±20	9.4/12	13/18	-	7.4	620	27	-55 ~ +150
MFT3N25P33S	30	25	16	±20	14/18	20/28	-	4.1	345	21	-55 ~ +150
MFT4N70P33S	40	70	44.3	±20	4.2/5.5	5.3/7	-	25	2410	52	-55 ~ +150
MFT4N54P33S	40	54	34.1	±20	5.5/6.5	6.9/8.5	36	-	1540	52	-55 ~ +150
MFT4N35P33S	40	35	22.1	±20	7.4/9	10.6/13.5	19.7	-	1220	44	-55 ~ +150
MFT6N42P33S	60	42	26	±20	10/12	12/15	39.2	-	2100	52	-55 ~ +150

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ELECTRICAL CHARACTERISTICS CONTINUED

MFT(N)-P33 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			
MFT6N35P33S	60	35	22	±20	13/15	16/19	27	-	1515	46	-55 ~ +150
MFT6N32P33S	60	32	20.2	±20	14.5/17.5	17.5/23	19.5	-	1310	46	-55 ~ +150
MFT6N33P33S	60	33	20	±20	17/21	20/24	28	-	1680	44.6	-55 ~ +150
MFT6V5N40P33S	65	40	25.3	±20	12/14	15/18.5	39.2	-	2100	52	-55 ~ +150
MFT6V5N35P33S	65	35	22	+20/-12	12.6/16	19/24	10.9	-	653	33.8	-55 ~ +150
MFT10N10P33S	100	10	6.3	±20	90/115	95/120	20	-	1400	29.8	-50 ~ +150

MFT(N)-PA33E 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			
MFT2N30P33ES	20	30	19	±10	-	8/10	-	16.9	1020	26	-55 ~ +150
MFT3N48P33ES	30	48	30	±20	6.2/8.5	9/13	-	7.5	750	35	-55 ~ +150

MFT(P)-PA33 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			
MFT2P60P33S	-20	60	38	±12	-	6/8	-	44.4	4060	62.5	-55 ~ +150
MFT2P26P33S	-20	26	15	±10	-	12/15	-	27	2320	44	-55 ~ +150
MFT3P50P33S	-30	50	32	±20	7.1/8.5	11.5/14	-	35	3300	59	-55 ~ +150
MFT3P30P331S	-30	30	19	±20	13/15	22/25	-	14.6	1730	23	-55 ~ +150
MFT3P30P332S	-30	30	19	±20	16/20	26/35	-	11	1250	27	-55 ~ +150

MFT(P)-P33E Series – Single P 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			
MFT3P30P33ES	-30	30	19	±20	16/20	26/35	-	11	1250	27	-55 ~ +150

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ELECTRICAL CHARACTERISTICS CONTINUED

MFT(2N)-P33 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			
MFT32N42P33S	30	42	27	±20	9/10.5	13/16	-	7.5	680	35	-55 ~ +150
MFT32N35P33S	30	35	22	±20	10/13	14/18	-	7.4	620	27	-55 ~ +150
MFT32N20P33S	30	20	13	±20	17/20	23/30	-	4.1	345	20	-55 ~ +150
MFT102N7A8P33S	100	7.8	4.9	±20	160/200	170/210	13.4	-	820	27.1	-55 ~ +150
MFT102N5A1P33S	100	5.1	3.2	±20	290/350	300/360	9	-	492	20.1	-55 ~ +150

MFT(2N)-PA33E Series – Dual 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			
MFT22N30P33ES	20	30	19	±10	-	10/12	-	16.9	1020	26	-55 ~ +150

MFT(2N)-PA33ED Series – Dual N Channel Common Drain 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			
MFT22N8A6P33DES	20	8.6	-	±10	-	11/14	-	16.9	1020	1.76	-55 ~ +150

MFT(2P)-PA33 Series – Dual 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			
MFT22P7A5P33S	-20	7.5	4.5	±10	-	28/33	-	16.1	1440	25	-55 ~ +150

MFT(2P)-PA33E Series – Dual P Channel Common Drain 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			
MFT22P5A6P33DES	-20	5.6	-	±10	-	28/33	-	16.1	1440	1.67	-55 ~ +150

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ELECTRICAL CHARACTERISTICS CONTINUED

MFT(NP)-PA33 Series Dual N+P Channel

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			
MFT3NP12P331S	30	12	7.6	±20	15/20	21/30	9.1	-	345	20	-55 ~ +150
	-30	16	10.1	±20	14.5/18	23/30	24.4	-	1250	20	-55 ~ +150
MFT3NP12P332S	30	12	7.2	±20	15/20	21/30	-	4.1	345	20	-55 ~ +150
	-30	8	4.8	±20	40/50	60/75	-	5.1	560	20	-55 ~ +150
MFT3NP12P333S	30	12	7.2	±20	15/20	21/30	-	4.1	345	20	-55 ~ +150
	-30	8	4.8	±20	40/50	60/75	-	5.1	560	20	-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.