

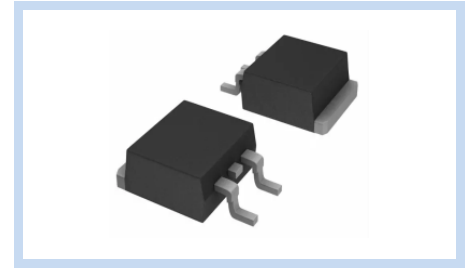
# MOSFET TO252 Package

MFT-T252 series

MERITEK

## FEATURE

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



## PART NUMBERING SYSTEM

**MFT** **20** **N** **20** **T252S**  
 (1) (2) (3) (4) (5)

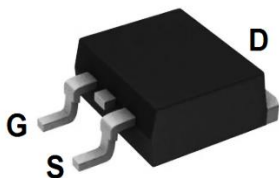


No	Item	Code	Part Description	Series Reference
(1)	Meritek Series	MFT	Meritek MOSFET Series	Surface Mount Type
(2)	Voltage Rating	2	2: 20V	Drain-Source Voltage, 10: 100V
(3)	FET Type	N	N: Single N Channel	P-Channel MOSFET
(4)	Current Rating	20	20: 20A	Continuous Drain Current, T <sub>C</sub> =25°C
(5)	Internal Code	T252S	Internal Control Reference	Package or Project Reference

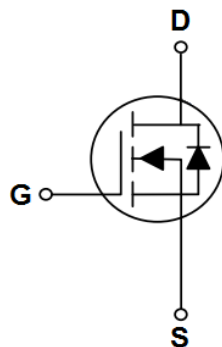
## SURFACE MOUNT MOSFET PACKAGE REFERENCE TABLE

Series	FET Type	Channel/ Feature	Continuous Drain Current (I <sub>D</sub> ) @ 25°C	R <sub>DS(ON)</sub> Max. @ 4.5 V <sub>GS</sub>	Power Dissipation (P <sub>D</sub> ) @25°C	Drain to Source Voltage (V <sub>DS</sub> )
MFT(N)-T252	N	Single	1 ~ 95A	3.4 ~ 200mΩ	20.8 ~ 132W	20V, 30V, 40V, 60V, 65V, 80V, 100V, 150V, 200V, 250V, 500V, 650V, 700V, 800V
MFT(N)-T252E	N	Single/ESD	50 ~ 70A	9 ~ 14mΩ	40 ~ 54W	30V
MFT(P)-T252	P	Single	-85 ~ -7A	7 ~ 230mΩ	15.6 ~ 104W	-30V, -40V, -60V, -100V

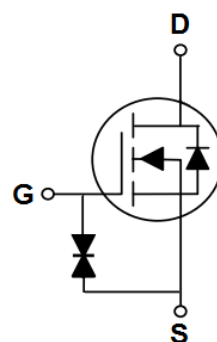
## PIN CONFIGURATION



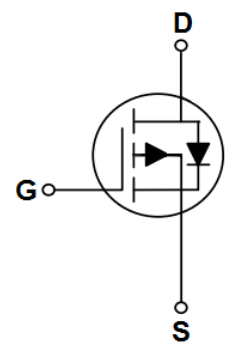
TO-252



Single N Type



Single N Type ESD



Single P Type

# MOSFET TO252 Package

MFT-T252 series

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## ELECTRICAL CHARACTERISTICS

### MFT(N)-T252 Series – Single N Channel Type

Part Number	V <sub>DS</sub> (V)	I <sub>D</sub> (A)		V <sub>GS</sub> (V)	R <sub>DS(ON)</sub> (mΩ) max. at V <sub>GS</sub>		Q <sub>g</sub> (nC)		CISS (pF)	P <sub>D</sub> (W) @25°C	T <sub>s</sub> , T <sub>J</sub> (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT2N20T252S	20	20	12	±10	-	21/25	-	7.7	535	20.8	-55 ~ +150
MFT2N30T252S	20	30	19	±16	-	14/17	-	5.9	775	24.9	-55 ~ +175
MFT3N90T2521S	30	90	57	±20	1.9/2.6	2.5/3.4	-	40	4800	100	-55 ~ +150
MFT3N90T2522S	30	90	57	±20	3.1/4	4.5/6	-	24	2200	88	-55 ~ +175
MFT3N80T252S	30	80	51	±20	4.8/6	6.5/9	-	11.1	1160	54	-55 ~ +150
MFT3N55T252S	30	55	35	±20	7.5/9	10/13	-	7.5	750	40	-55 ~ +150
MFT3N45T252S	30	45	28	±20	9.4/12	13/18	-	7.4	620	33	-55 ~ +150
MFT3N28T252S	30	28	17.7	±20	14/18	18/24	5.2	-	370	24.9	-55 ~ +150
MFT4N90T252S	40	90	57	±20	3.1/3.8	4.0/5.0	-	44.4	4940	101	-55 ~ +150
MFT4N80T252S	40	80	50	±20	4.2/5.5	5.3/7	-	25	2410	88	-55 ~ +150
MFT4N60T252S	40	60	38	±20	5.7/6.7	7.0/8.8	-	16.2	1540	62	-55 ~ +150
MFT4N50T252S	40	50	31.6	±20	6.5/8.5	9/12	-	12.2	1220	54	-55 ~ +150
MFT4N23T252S	40	23	14.5	±20	23/28	32/38	-	4.5	420	25	-50 ~ +150
MFT6N90T252S	60	90	60	±20	3.8/4.5	4.2/5.5	-	58.2	6805	132	-50 ~ +150
MFT6N75T252S	60	75	47	±20	5.1/6	5.9/7.5	32.8	-	4740	101	-55 ~ +150
MFT6N45T252S	60	45	28	±20	10/12	12/15	39.2	-	2100	63	-55 ~ +150
MFT6N38T252S	60	38	24	±20	17/21	20/24	28	-	1680	63	-50 ~ +150
MFT6N25T252S	60	25	16	±20	28/34	33/40	16.6	-	1180	40	-50 ~ +150
MFT6N16T252S	60	16	10	±20	43/50	50/60	14	-	800	31	-50 ~ +150
MFT6N11T252S	60	11	7	±20	60/75	70/90	9.3	-	500	25	-50 ~ +150
MFT6N55T252S	60	55	34.8	±25	7.5/8.8	-	26.9	-	1690	102	-50 ~ +150
MFT6V5N95T252S	65	95	60	20/-12	2.7/3.3	4/5.3	59	-	4780	130	-50 ~ +150
MFT6V5N80T252S	65	80	50.6	20/-12	3.7/4.5	5.7/7.5	54	-	2976	94	-50 ~ +150
MFT8N12T252S	80	12	7.6	±20	77/100	80/115	19.2	-	1070	35	-50 ~ +150
MFT8N60T252S	80	60	38	±25	9.8/12	-	31.2	-	1810	102	-50 ~ +150
MFT10N70T252S	100	70	44.3	20/-12	6.5/7.8	9/11.6	53.5	-	3250	104	-50 ~ +150
MFT10N60T252S	100	60	38	20/-12	7.4/9.2	10.6/14	37.8	-	2250	94	-50 ~ +150
MFT10N48T252S	100	48	30.4	±20	13.5/17	14.5/20	66.7	-	4812	101	-50 ~ +150
MFT10N45T2521S	100	45	28	±20	15/18	25/38	36.8	-	1820	102	-50 ~ +150
MFT10N45T2522S	100	45	28	±20	15/18	-	37.6	-	1850	102	-50 ~ +150
MFT10N25T252S	100	25	15	±20	45/55	50/60	46	-	2860	73.5	-50 ~ +150

# MOSFET TO252 Package

MFT-T252 series

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## ELECTRICAL CHARACTERISTICS CONTINUED

### MFT(N)-T252 Series – Single N Channel Type

Part Number	V <sub>DS</sub> (V)	I <sub>D</sub> (A)		V <sub>GS</sub> (V)	R <sub>DS(ON)</sub> (mΩ) max. at V <sub>GS</sub>		Q <sub>g</sub> (nC)		CISS (pF)	P <sub>D</sub> (W) @25°C	T <sub>s</sub> , T <sub>J</sub> (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT10N15T2521S	100	15	9.5	±20	65/85	-	10.5	-	615	40	-50 ~ +150
MFT10N15T2522S	100	15	9.5	±20	72/90	75/100	9.3	-	1480	50	-50 ~ +150
MFT10N12T2521S	100	12	7.6	±20	95/115	100/125	20	-	1400	34.7	-50 ~ +150
MFT10N12T2522S	100	12	7.6	±20	95/115	100/125	20	-	1400	34.7	-50 ~ +150
MFT10N8T252S	100	8	4.8	±20	160/200	170/210	13.4	-	820	32	-50 ~ +150
MFT15N25T252S	150	25	16	±25	52/65	65/90	30	-	1790	102	-55 ~ +150
MFT20N20T252S	200	20	13	±30	100/130	-	30	-	1330	60	-55 ~ +150
MFT20N7A5T252S	200	7.5	4.7	±30	400/460	-	9.4	-	337	59.5	-55 ~ +150
MFT20N3T252S	200	3	1.9	±30	700/850	-	4.8	-	266	46	-55 ~ +150
MFT25N16T252S	250	16	10.5	±30	165/200	-	28	-	1370	60	-55 ~ +150
MFT50N7T252S	500	7	4.4	±30	700/850	-	27	-	1420	60	-55 ~ +150
MFT50N5T2521S	500	5	3.1	±30	1100/ 1500	-	17	-	570	52	-55 ~ +150
MFT50N5T2522S	500	5	3.2	±30	1400/ 1800	-	16.2	-	740	52	-55 ~ +150
MFT50N4T252S	500	4	2.5	±30	2600/ 3200	-	10	-	435	42	-55 ~ +150
MFT50N3T252S	500	3	1.9	±30	4800/ 6000	-	6.8	-	265	34	-55 ~ +150
MFT50N2T252S	500	2	1.3	±30	6500/ 8000	-	5.4	-	180	30	-55 ~ +150
MFT50N1T252S	500	1	0.6	±30	13000/ 16000	-	4.5	-	110	25	-55 ~ +150
MFT60N4T252S	600	4	2.5	±30	1850/ 2200	-	16.5	-	760	50	-55 ~ +150
MFT60N2T2521S	600	2	1.3	±30	-/4400	-	5.5	-	238	22.7	-55 ~ +150
MFT60N3T252S	600	3	1.9	±30	3800/ 4500	-	9.9	-	425	42	-55 ~ +150
MFT60N2T2522S	600	2	1.3	±30	6700/ 8000	-	7.8	-	255	34	-55 ~ +150
MFT60N1T252S	600	1	0.6	±30	8500/ 10500	-	5.9	-	185	30	-55 ~ +150
MFT65N4T2521S	650	4	2.5	±30	2200/ 2600	-	15.4	-	518	42	-55 ~ +150
MFT65N4T2522S	650	4	2.5	±30	2200/ 2600	-	16	-	750	50	-55 ~ +150
MFT65N3T252S	650	3	1.9	±30	4000/ 5200	-	10.2	-	430	39	-55 ~ +150
MFT65N2T252S	650	2	1.3	±30	7500/ 9000	-	7.5	-	230	32	-55 ~ +150
MFT65N1T252S	650	1	0.6	±30	95000/ 12000	-	6	-	180	29	-55 ~ +150
MFT70N4T252S	700	4	2.5	±30	2900/ 3500	-	18.7	-	700	50	-55 ~ +150
MFT80N3T252S	800	3	1.9	±30	3360/ 4200	-	19	-	696	94	-55 ~ +150

# MOSFET TO252 Package

MFT-T252 series

MERITEK

## ELECTRICAL CHARACTERISTICS CONTINUED

### MFT(N)-T252E Series – Single N Channel ESD Type

Part Number	V <sub>DS</sub> (V)	I <sub>D</sub> (A)		V <sub>GS</sub> (V)	R <sub>DS(ON)</sub> (mΩ) max. at V <sub>GS</sub>		Q <sub>g</sub> (nC)		CISS (pF)	P <sub>D</sub> (W) @25°C	T <sub>s</sub> , T <sub>J</sub> (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT3N70T252ES	30	70	44	±20	4.5/6	6.5/9	-	11.1	1210	54	-55 ~ +150
MFT3N50T252ES	30	50	32	±20	6.5/9	9.6/14	-	7.5	680	40	-55 ~ +150

### MFT(P)-T252 Series – Single P Channel Type

Part Number	V <sub>DS</sub> (V)	I <sub>D</sub> (A)		V <sub>GS</sub> (V)	R <sub>DS(ON)</sub> (mΩ) max. at V <sub>GS</sub>		Q <sub>g</sub> (nC)		CISS (pF)	P <sub>D</sub> (W) @25°C	T <sub>s</sub> , T <sub>J</sub> (°C)
		25°C	100°C		10V	4.5V	10V	4.5V			
MFT3P85T252S	-30	85	54	±20	3.5/4.5	5/7	108	-	6220	104	-55 ~ +150
MFT3P35T252S	-30	35	22	±20	16.5/20	25.6/32	-	11	1250	40	-55 ~ +150
MFT4P45T2521S	-40	45	28	±20	11.5/15	16/22	-	22.2	2757	73.5	-55 ~ +150
MFT4P45T2522S	-40	45	28	±20	15/17	22/25	-	19	2260	62	-50 ~ +150
MFT4P22T252S	-40	22	13.9	±20	32/40	50/65	-	7.6	1076	34.7	-50 ~ +150
MFT4P16T252S	-40	16	10	±20	37/45	57/68	17	8.2	825	64	-50 ~ +150
MFT6P50T2521S	-60	50	31	±20	18/22	30/40	37.2	-	2165	102	-55 ~ +150
MFT6P50T2522S	-60	50	31	±20	18/22	30/40	37.5	-	2120	102	-55 ~ +150
MFT6P35T252S	-60	35	22.1	±20	22/28	26/35	43.8	-	2595	72.6	-55 ~ +150
MFT6P16T252S	-60	16	10	±20	39/48	53/65	22.4	-	1250	25	-50 ~ +150
MFT6P13T252S	-60	13	8	±25	54/68	72/85	16.4	-	870	20	-50 ~ +150
MFT6P10T252S	-60	10	6.3	±20	87/105	120/145	10	-	785	32	-50 ~ +150
MFT6P7T252S	-60	7	4.4	±20	153/180	198/220	8.2	-	425	15.6	-50 ~ +150
MFT10P18T2521S	-100	18	11.4	±20	75/95	80/110	40.4	-	2250	73.5	-55 ~ +150
MFT10P18T2522S	-100	18	11.4	±25	75/95	80/110	40.4	-	2250	73.5	-55 ~ +150
MFT10P10T252S	-100	10	6.5	±20	170/210	190/230	20	-	1419	54	-55 ~ +150
MFT10P30T252S	-100	30	19	±20	36/45	40/55	98	-	6315	102	-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.