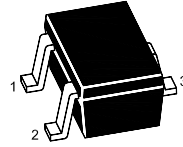
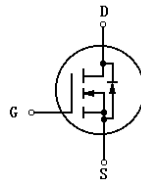


MMBT7002W-HAF

N-Channel Enhancement Mode Field Effect Transistor



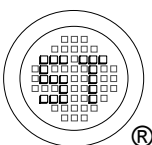
1. Gate 2. Source 3. Drain
SOT-323 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Drain Source Voltage	V_{DSS}	60	V
Drain Gate Voltage ($R_{GS} \leq 1\text{ M}\Omega$)	V_{DGR}	60	V
Gate Source Voltage	V_{GSS}	Continuous	± 20
		Pulsed	± 40
Drain Current	I_D	Continuous	115
		Pulsed	800
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

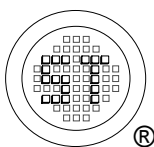
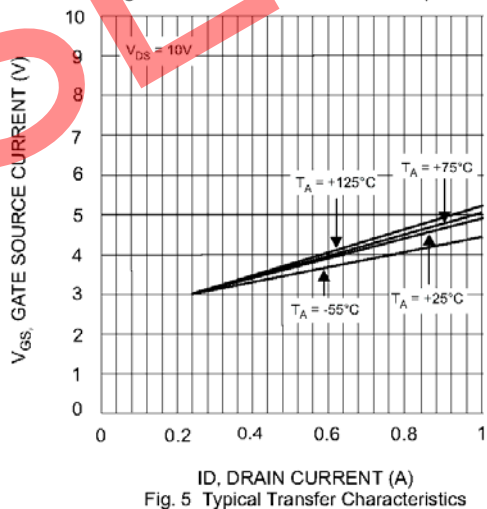
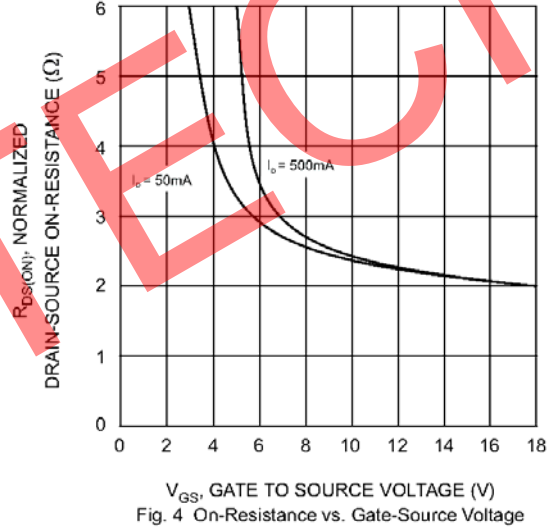
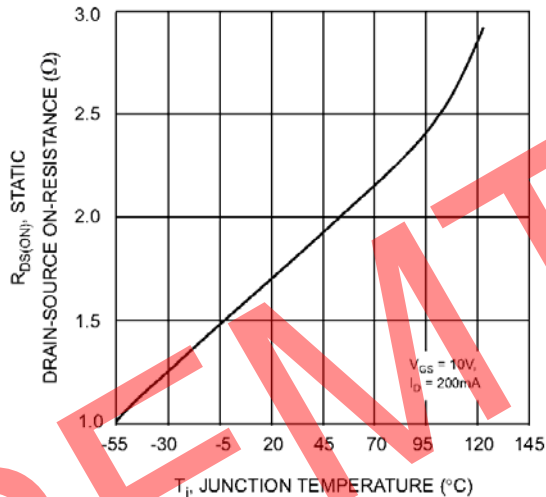
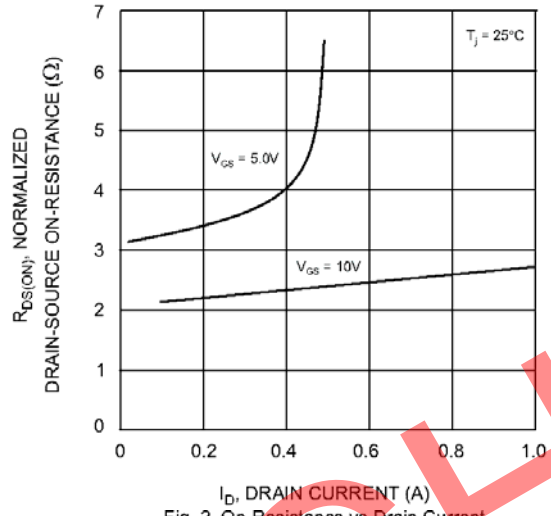
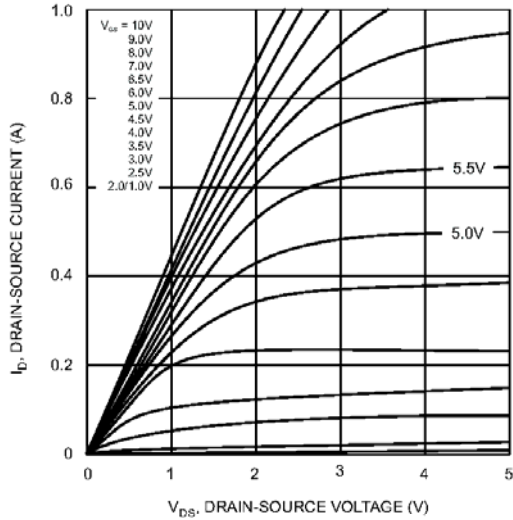
Parameter	Symbol	Min.	Max.	Unit
Drain Source Breakdown Voltage at $I_D = 10\ \mu\text{A}$	BV_{DSS}	60	-	V
Zero Gate Voltage Drain Current at $V_{DS} = 60\text{ V}$	I_{DSS}	-	1	μA
Gate Source Leakage Current at $\pm V_{GS} = 20\text{ V}$	$\pm I_{GSS}$	-	100	nA
Gate Source Threshold Voltage at $V_{DS} = V_{GS} = 10\text{ V}$, $I_D = 250\ \mu\text{A}$	$V_{GS(th)}$	1	2.5	V
Static Drain Source On Resistance at $V_{GS} = 5\text{ V}$, $I_D = 50\text{ mA}$ at $V_{GS} = 10\text{ V}$, $I_D = 500\text{ mA}$	$R_{DS(ON)}$	-	7.5	Ω
		-	7.5	
Drain Source On Voltage at $V_{GS} = 5\text{ V}$, $I_D = 50\text{ mA}$ at $V_{GS} = 10\text{ V}$, $I_D = 500\text{ mA}$	$V_{DS(ON)}$	-	1.5	V
		-	3.75	
Forward Transconductance at $V_{DS} = 10\text{ V}$, $I_D = 200\text{ mA}$	g_{FS}	80	-	mS
Input Capacitance at $V_{DS} = 25\text{ V}$, $f = 1\text{ MHz}$	C_{iss}	-	50	pF
Output Capacitance at $V_{DS} = 25\text{ V}$, $f = 1\text{ MHz}$	C_{oss}	-	25	pF
Reverse Transfer Capacitance at $V_{DS} = 25\text{ V}$, $f = 1\text{ MHz}$	C_{rss}	-	5	pF
Turn On Time at $V_{DD} = 30\text{ V}$, $R_L = 150\ \Omega$, $I_D = 0.2\text{ A}$, $V_{GS} = 10\text{ V}$, $R_{GEN} = 25\ \Omega$	t_{on}	-	20	ns
Turn Off Time at $V_{DD} = 30\text{ V}$, $R_L = 150\ \Omega$, $I_D = 0.2\text{ A}$, $V_{GS} = 10\text{ V}$, $R_{GEN} = 25\ \Omega$	t_{off}	-	20	ns



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