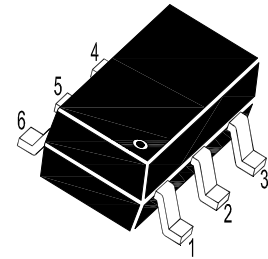
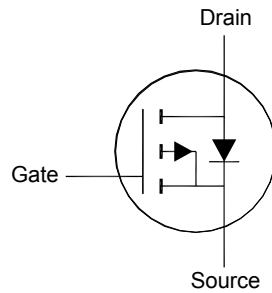


MMFTP2305D

P-Channel Enhancement Mode MOSFET



1. Drain 2. Drain 3. Gate
4. Source 5. Drain 6. Drain
SOT-26 Plastic Package

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$-V_{DS}$	20	V
Gate-Source Voltage	V_{GS}	± 8	V
Drain Current at $-V_{GS} = 4.5$ V at $-V_{GS} = 4.5$ V($T_A = 70^\circ\text{C}$) at $-V_{GS} = 2.5$ V at $-V_{GS} = 2.5$ V($T_A = 70^\circ\text{C}$)	$-I_D$	4.23 2.98 3.49 2.79	A
Peak Drain Current ¹⁾	$-I_{DM}$	16	A
Power Dissipation	P_D	1.25 ²⁾ 1.64 ³⁾	W
Operating and Storage Temperature Rang	T_J, T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ 10 μs pulse, duty cycle = 1%.

²⁾ Device mounted on FR4 substrate PC board, 2 OZ copper, with minimum recommended pad layout.

³⁾ Device mounted on FR4 substrate PC board, 2 OZ copper, with 1inch square copper plate.

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Maximum Thermal Resistance from Juntion to Ambient	$R_{\theta JA}$	100 ²⁾ 76 ³⁾	$^\circ\text{C/W}$

²⁾ Device mounted on FR4 substrate PC board, 2 OZ copper, with minimum recommended pad layout.

³⁾ Device mounted on FR4 substrate PC board, 2 OZ copper, with 1inch square copper plate.

TOP DYNAMIC



Dated: 10/03/2014 Rev: 01

MMFTP2305D

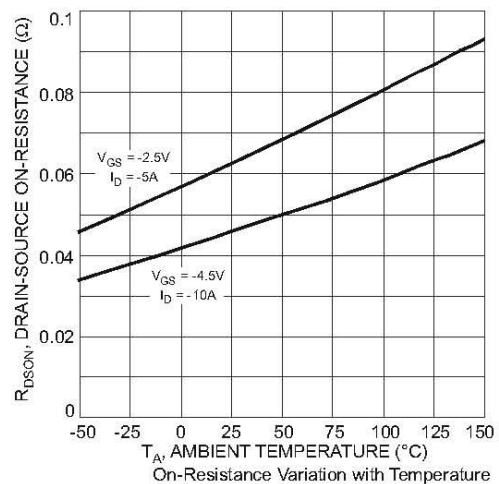
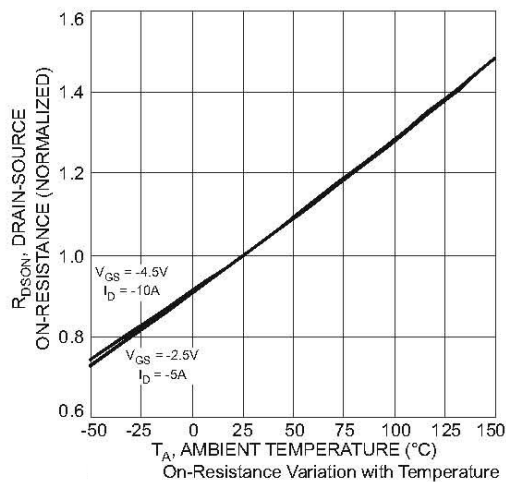
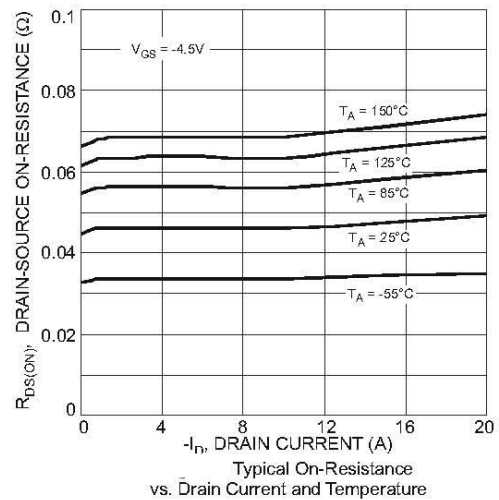
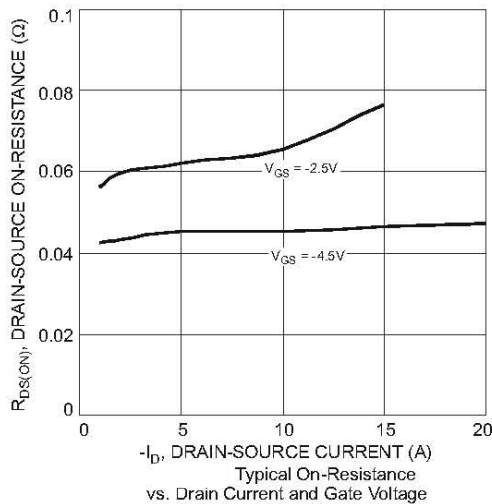
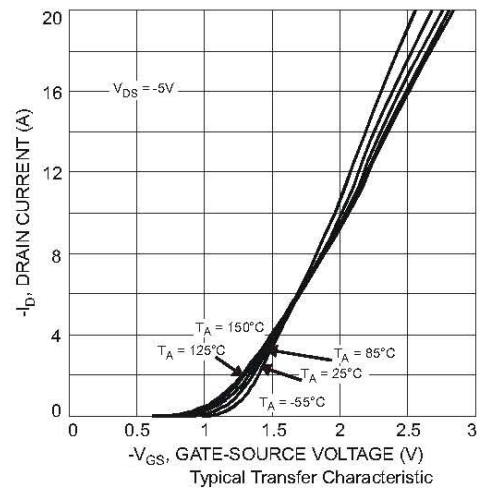
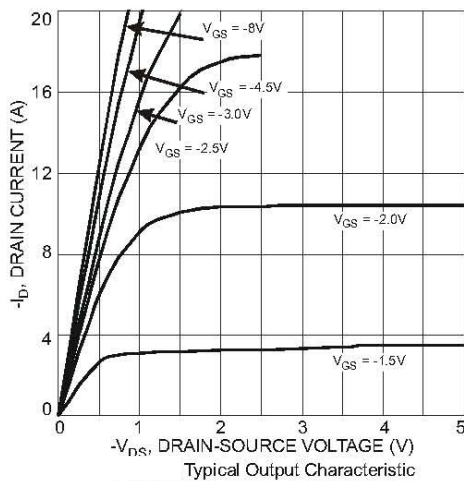
Characteristics at $T_j = 25^\circ\text{C}$ unless otherwise specified

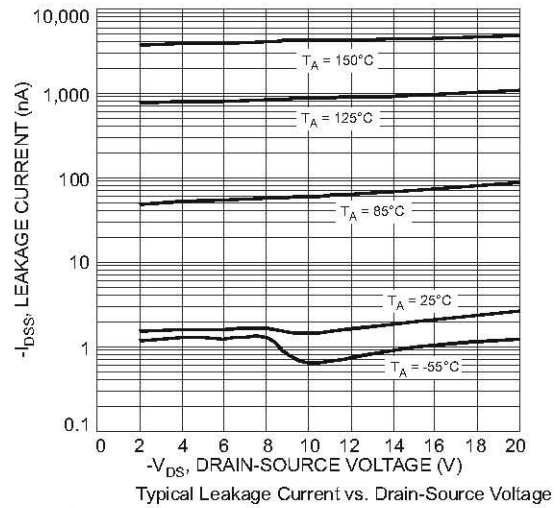
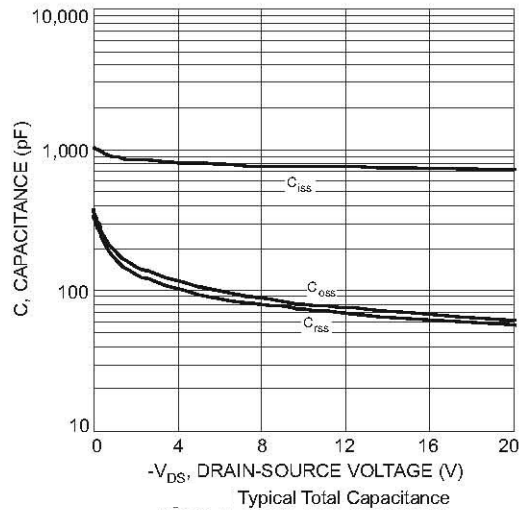
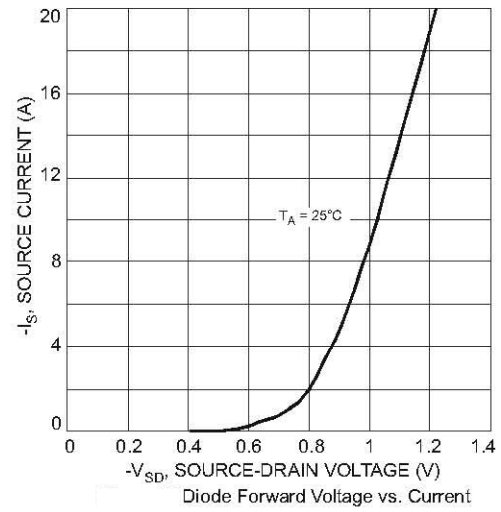
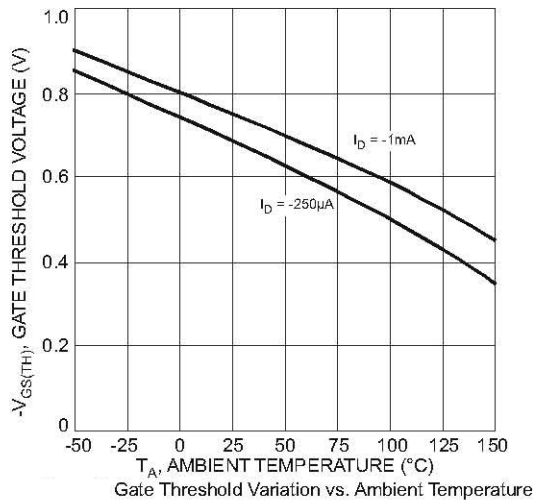
Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at $-I_D = 250 \mu\text{A}$	$-BV_{DS}$	20	-	-	V
Gate-Source Threshold Voltage at $V_{DS} = V_{GS}$, $-I_D = 250 \mu\text{A}$	$-V_{GSth}$	0.5	-	0.9	V
Drain-Source Leakage Current at $-V_{DS} = 20 \text{ V}$	$-I_{DSS}$	-	-	1	μA
Gate Leakage Current at $V_{GS} = \pm 8 \text{ V}$	I_{GSS}	-	-	± 100	nA
On state drain current at $-V_{GS} = 10 \text{ V}$, $V_{DS} = 5 \text{ V}$	$-I_{D(ON)}$	27	-	-	A
Drain-Source On-State Resistance at $-V_{GS} = 4.5 \text{ V}$, $-I_D = 4.2 \text{ A}$ at $-V_{GS} = 2.5 \text{ V}$, $-I_D = 3.4 \text{ A}$ at $-V_{GS} = 1.8 \text{ V}$, $-I_D = 2 \text{ A}$	$R_{DS(on)}$	- - -	- - -	60 90 113	m Ω
Forward Transconductance at $-V_{DS} = 5 \text{ V}$, $-I_D = 4 \text{ A}$	$ g_{FS} $	-	9	-	S
Maximun Body-Diode Continuous Current	$-I_S$	-	-	4.23	A
Input Capacitance at $V_{GS} = 0 \text{ V}$, $-V_{DS} = 20 \text{ V}$, $f = 1 \text{ MHz}$	C_{iss}	-	727	-	pF
Output Capacitance at $V_{GS} = 0 \text{ V}$, $-V_{DS} = 20 \text{ V}$, $f = 1 \text{ MHz}$	C_{oss}	-	69	-	pF
Reverse Transfer Capacitance at $V_{GS} = 0 \text{ V}$, $-V_{DS} = 20 \text{ V}$, $f = 1 \text{ MHz}$	C_{rss}	-	64	-	pF
Turn-On Delay Time at $-V_{GS} = 4.5 \text{ V}$, $-V_{DS} = 4 \text{ V}$, $-I_D = 1 \text{ A}$, $R_L = 4 \Omega$, $R_G = 6 \Omega$	t_{on}	-	14	-	ns
Turn-On Rise Time at $-V_{GS} = 4.5 \text{ V}$, $-V_{DS} = 4 \text{ V}$, $-I_D = 1 \text{ A}$, $R_L = 4 \Omega$, $R_G = 6 \Omega$	t_r	-	13	-	ns
Turn-Off Delay Time at $-V_{GS} = 4.5 \text{ V}$, $-V_{DS} = 4 \text{ V}$, $-I_D = 1 \text{ A}$, $R_L = 4 \Omega$, $R_G = 6 \Omega$	t_{off}	-	53.8	-	ns
Turn-Off Fall Time at $-V_{GS} = 4.5 \text{ V}$, $-V_{DS} = 4 \text{ V}$, $-I_D = 1 \text{ A}$, $R_L = 4 \Omega$, $R_G = 6 \Omega$	t_f	-	23.2	-	ns

TOP DYNAMIC



Dated: 10/03/2014 Rev: 01

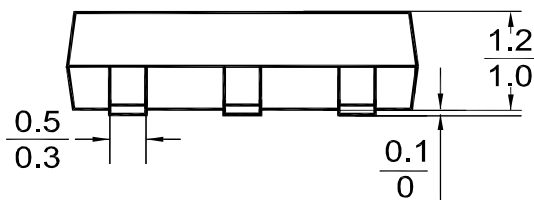
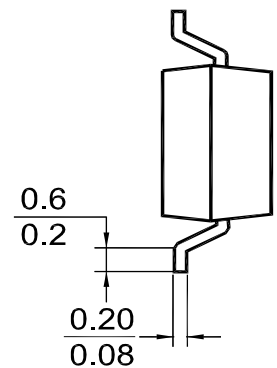
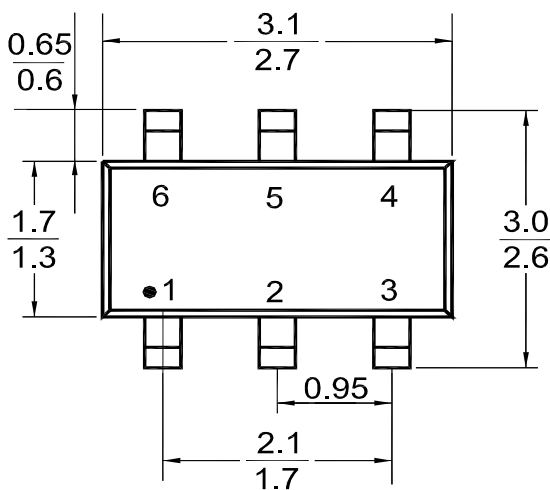




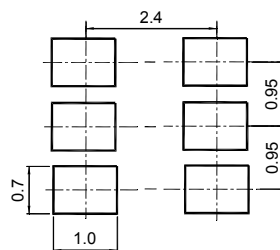
MMFTP2305D

Package Outline Dimensions (Units: mm)

SOT-26



RECOMMENDED SOLDERING FOOTPRINT



SOT-26

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