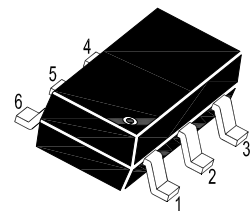
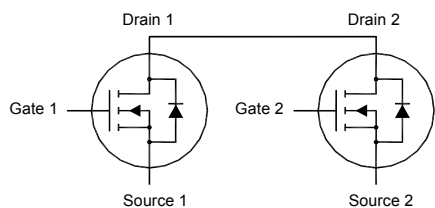


MMFTN2007D-HAF

N-Channel Logic Level Enhancement Mode Field Effect Transistor



1. Source 1 2. Drain 1,2 3. Source 2
4. Gate 2 5. Drain 1,2 6. Gate 1
Marking Code: 7N
SOT-26 Plastic package

Features

- Halogen and Antimony Free(HAF),
RoHS compliant

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	20	V
Drain-Gate Voltage	V_{GS}	± 12	V
Drain Current	I_D	6.5	A
Drain Current - Pulsed ¹⁾	I_{DM}	25	A
Total Power Dissipation ²⁾	P_D	1.5	W
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^{\circ}\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient ²⁾	$R_{\theta JA}$	83	$^{\circ}\text{C/W}$

¹⁾ Surface Mounted on FR4 Board, $t \leq 10$ sec.

²⁾ Pulse width limited by Max. junction temperature.

TOP DYNAMIC



ISO14001 : 2004
Certificate No. 121505007

ISO 9001 : 2008
Certificate No. 5014012

OHSAS 18001 : 2007
Certificate No. 05131508008

IECQ QC 080000
Certificate No. E201400014002

MMFTN2007D-HAF

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at $I_D = 250\ \mu\text{A}$	$V_{(BR)DSS}$	20	-	-	V
Drain-Source Leakage Current at $V_{DS} = 20\ \text{V}$	I_{DSS}	-	-	1	μA
Gate-Source Leakage Current at $V_{GS} = \pm 12\ \text{V}$	I_{GSS}	-	-	± 0.1	μA
Gate-Source Threshold Voltage at $V_{GS} = V_{DS}$, $I_D = 250\ \mu\text{A}$	$V_{GS(th)}$	0.5	-	1.2	V
Drain-Source On-State Resistance at $V_{GS} = 4.5\ \text{V}$, $I_D = 6\ \text{A}$ at $V_{GS} = 2.5\ \text{V}$, $I_D = 5.5\ \text{A}$	$R_{DS(on)}$	- -	- -	22 27	$\text{m}\Omega$
Forward Transconductance at $V_{DS} = 5\ \text{V}$, $I_D = 6\ \text{A}$	g_{FS}	-	10	-	S
Diode Forward Voltage at $I_S = 6\ \text{A}$, $V_{GS} = 0\ \text{V}$	V_{SD}	-	-	1.2	V
Input Capacitance at $V_{DS} = 10\ \text{V}$, $f = 1\ \text{MHz}$	C_{iss}	-	900	-	pF
Output Capacitance at $V_{DS} = 10\ \text{V}$, $f = 1\ \text{MHz}$	C_{oss}	-	220	-	pF
Reverse Transfer Capacitance at $V_{DS} = 10\ \text{V}$, $f = 1\ \text{MHz}$	C_{rss}	-	100	-	pF
Turn-On Delay Time at $V_{DD} = 10\ \text{V}$, $I_D = 6\ \text{A}$, $V_{GS} = 4.5\ \text{V}$, $R_{GEN} = 6\ \Omega$	$t_{d(on)}$	-	-	20	ns
Turn-On Rise Time at $V_{DD} = 10\ \text{V}$, $I_D = 6\ \text{A}$, $V_{GS} = 4.5\ \text{V}$, $R_{GEN} = 6\ \Omega$	t_r	-	-	25	ns
Turn-Off Delay Time at $V_{DD} = 10\ \text{V}$, $I_D = 6\ \text{A}$, $V_{GS} = 4.5\ \text{V}$, $R_{GEN} = 6\ \Omega$	$t_{d(off)}$	-	-	70	ns
Turn-Off Fall Time at $V_{DD} = 10\ \text{V}$, $I_D = 6\ \text{A}$, $V_{GS} = 4.5\ \text{V}$, $R_{GEN} = 6\ \Omega$	t_f	-	-	60	ns

TOP DYNAMIC



Dated: 08/09/2015 Rev: 03

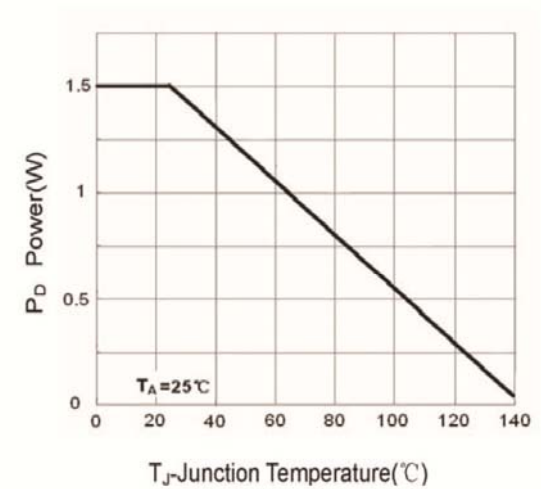


Figure 1 Power Dissipation

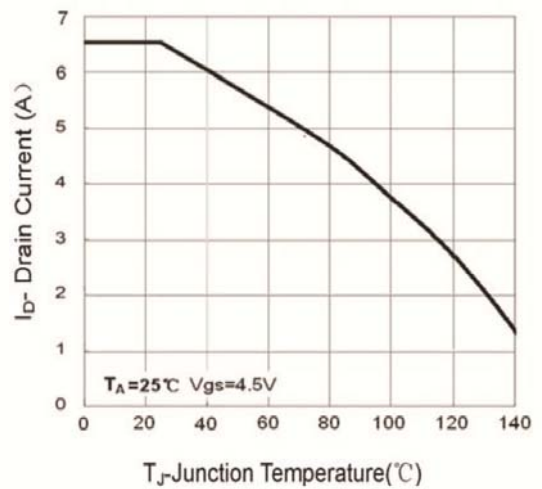


Figure 2 Switching Waveforms

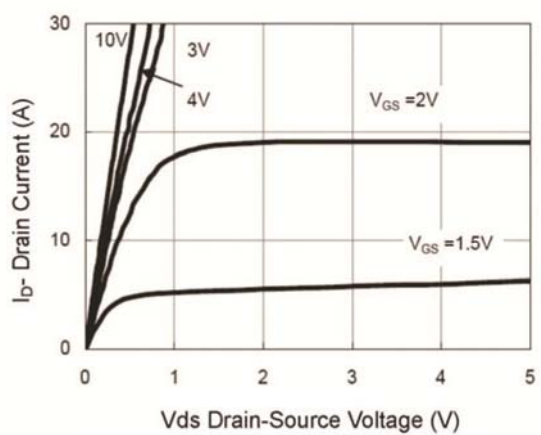


Figure 3 Output Characteristics

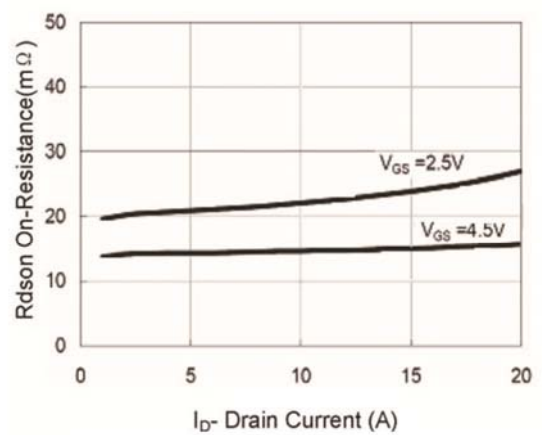


Figure 4 Drain-Source On-Resistance

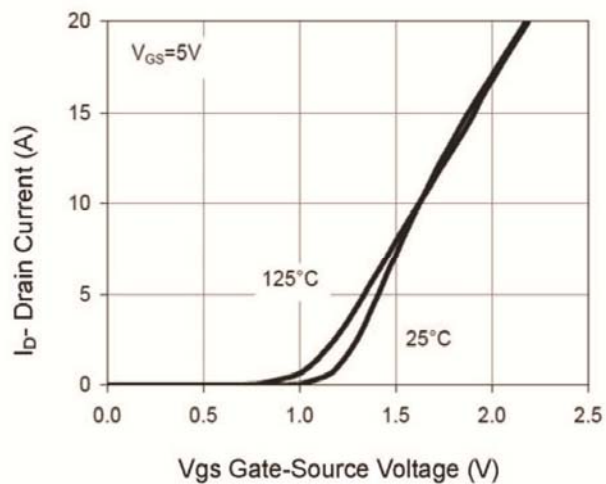


Figure 5 Transfere Characteristics

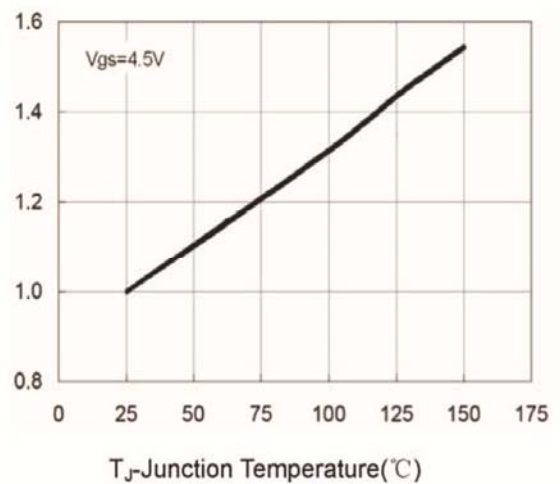


Figure 6 Drain-Source On-Resistance

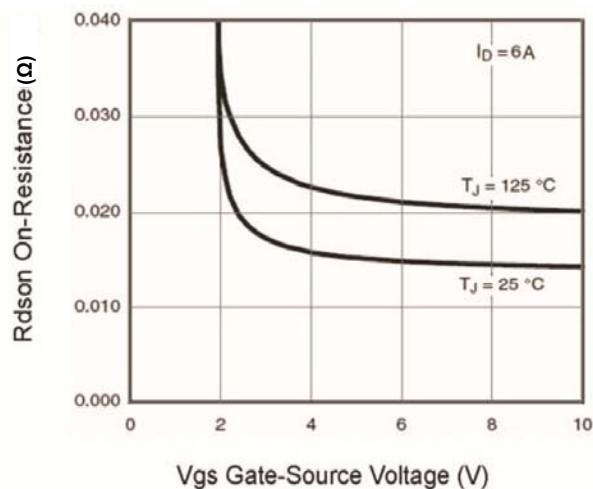


Figure 7 Rdson vs Vgs

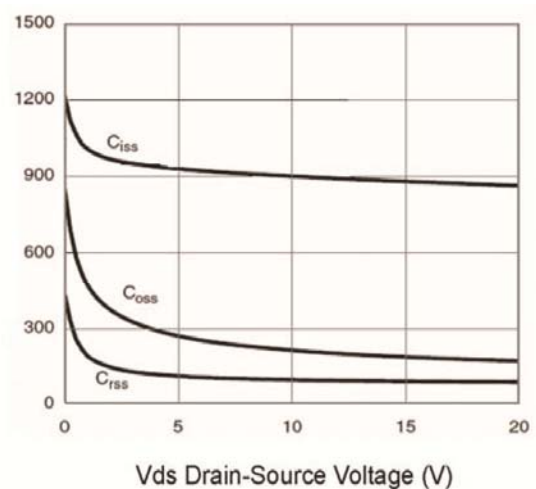
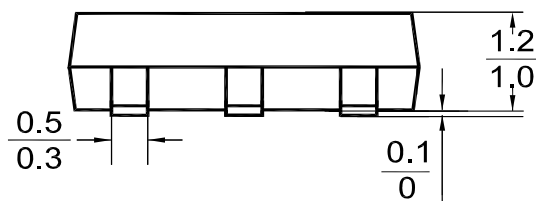
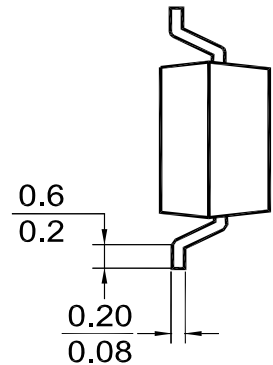
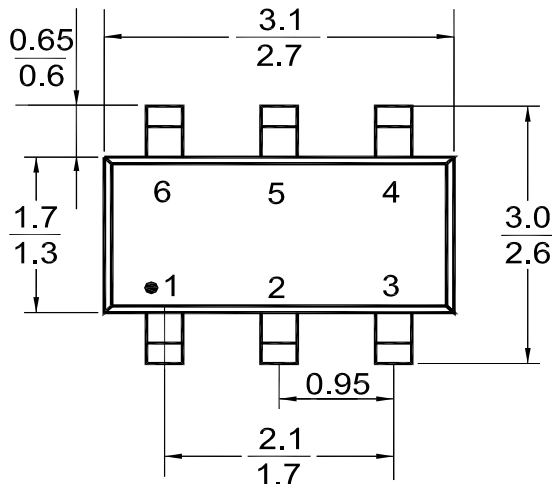


Figure 8 Capacitance vs Vds

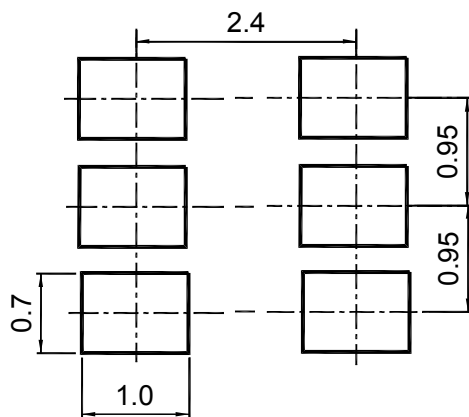
MMFTN2007D-HAF

Package Outline Dimensions (Units: mm)

SOT-26



RECOMMENDED SOLDERING FOOTPRINT



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-26	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

TOP DYNAMIC

