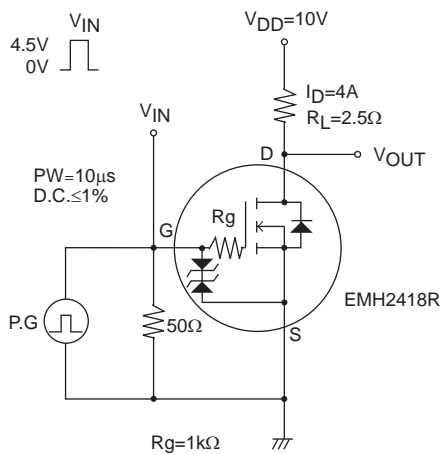


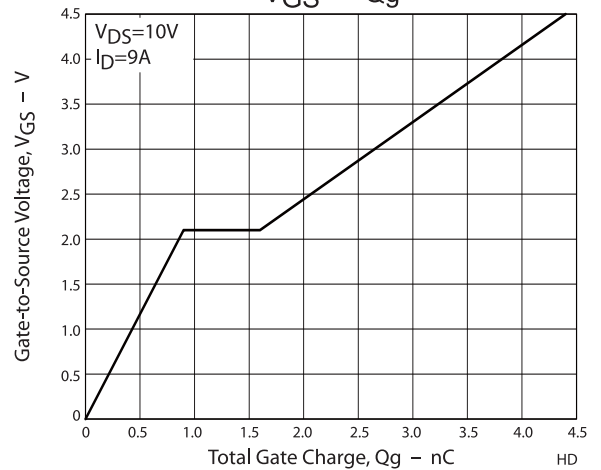
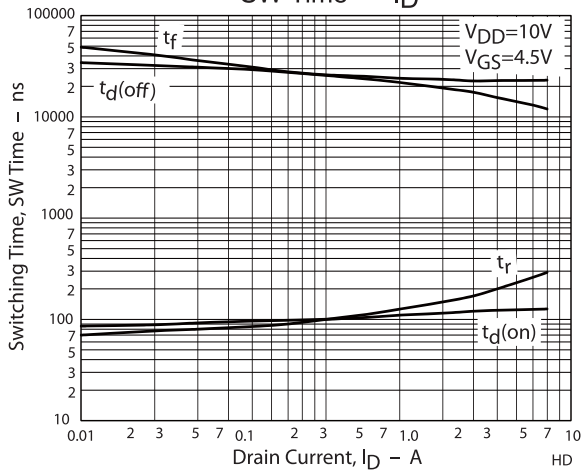
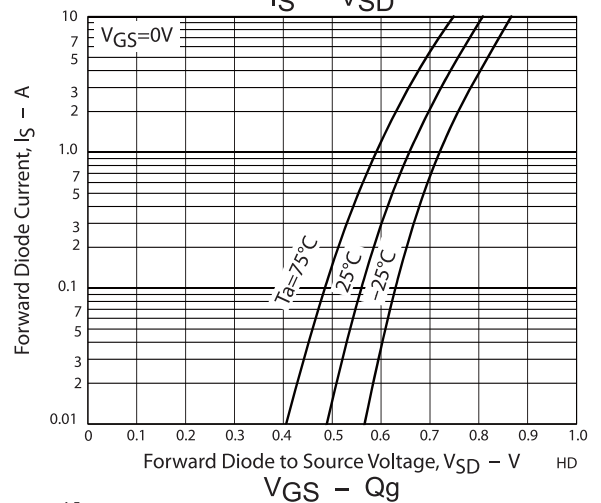
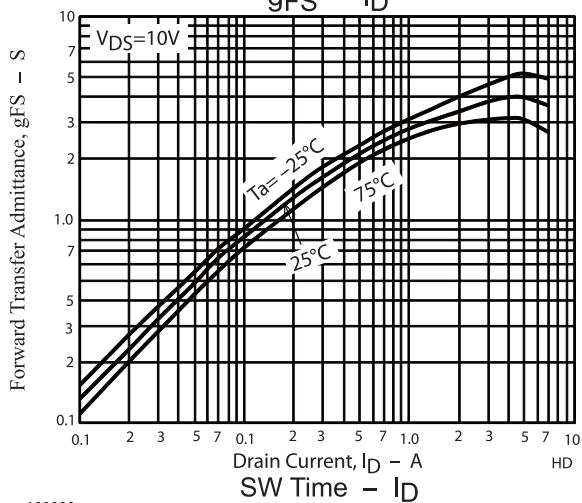
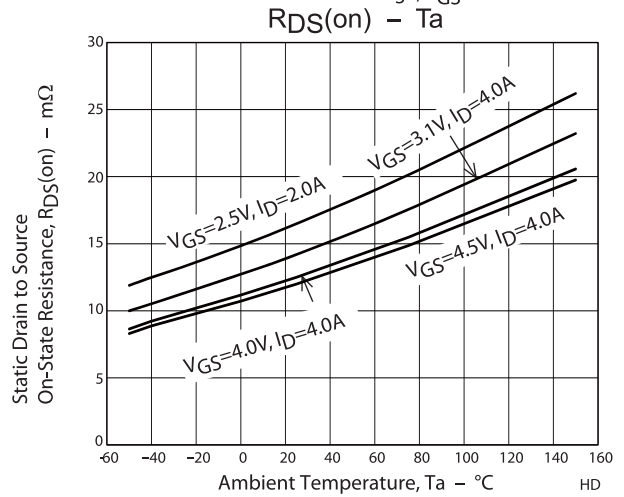
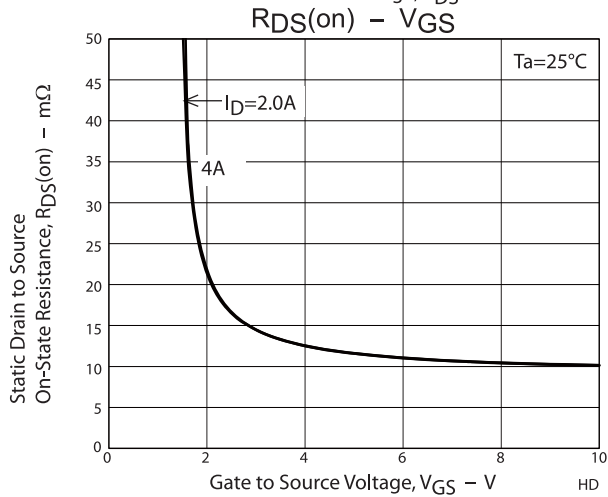
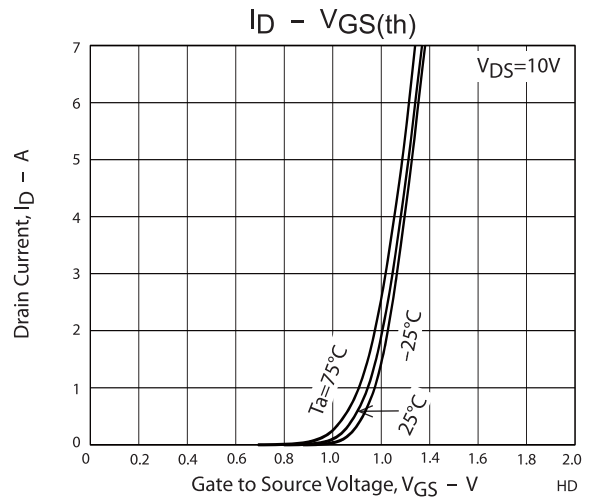
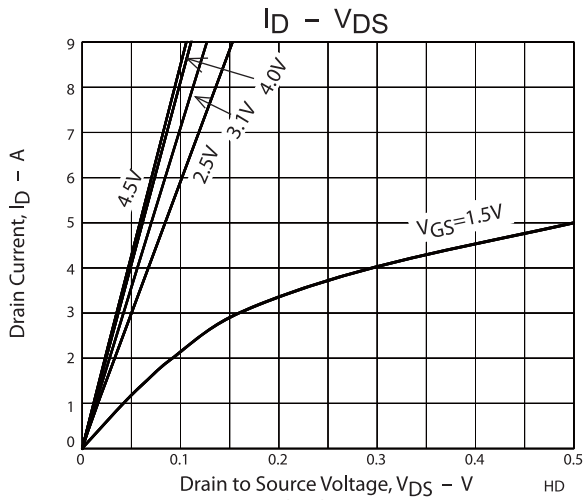
# EMH2418R

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

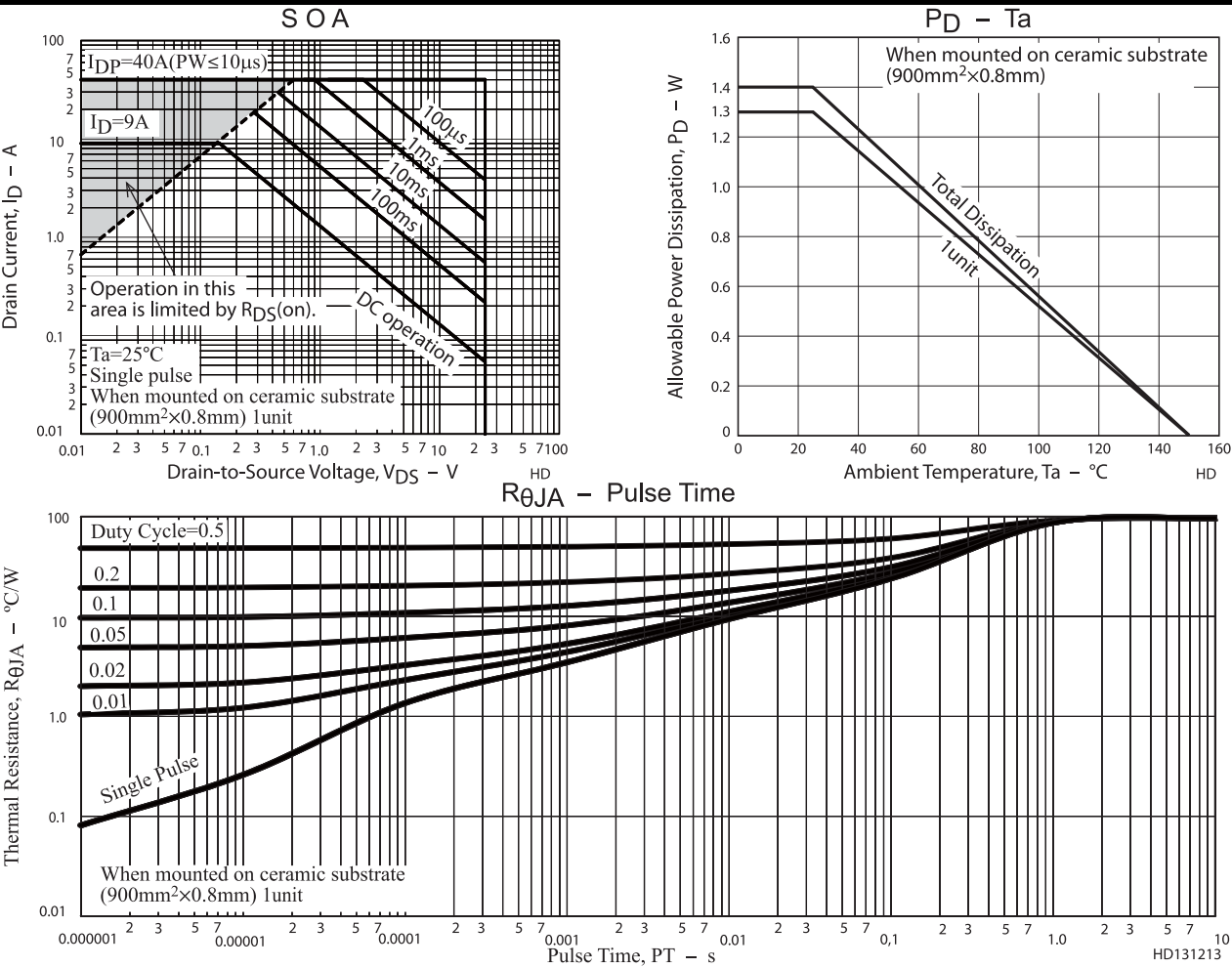
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$ , $V_{GS}=0\text{V}$	24			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=20\text{V}$ , $V_{GS}=0\text{V}$			1	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8\text{V}$ , $V_{DS}=0\text{V}$			$\pm 1$	$\mu\text{A}$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$	0.5		1.3	V
Forward Transconductance	$g_{FS}$	$V_{DS}=10\text{V}$ , $I_D=4\text{A}$		4		S
Static Drain to Source On-State Resistance	$R_{DS(on)1}$	$I_D=4\text{A}$ , $V_{GS}=4.5\text{V}$	9.6	12	15	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=4\text{A}$ , $V_{GS}=4.0\text{V}$	10.0	12.5	16.3	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D=4\text{A}$ , $V_{GS}=3.1\text{V}$	11.3	14.2	20	$\text{m}\Omega$
	$R_{DS(on)4}$	$I_D=2\text{A}$ , $V_{GS}=2.5\text{V}$	13.2	16.5	23.1	$\text{m}\Omega$
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		120		ns
Rise Time	$t_r$			170		ns
Turn-OFF Delay Time	$t_d(off)$			17500		ns
Fall Time	$t_f$			22600		ns
Total Gate Charge	$Q_g$	$V_{DS}=10\text{V}$ , $V_{GS}=4.5\text{V}$ , $I_D=9\text{A}$		4.4		nC
Gate to Source Charge	$Q_{gs}$			0.9		nC
Gate to Drain "Miller" Charge	$Q_{gd}$			0.7		nC
Forward Diode Voltage	$V_{SD}$	$I_S=9\text{A}$ , $V_{GS}=0\text{V}$		0.8	1.2	V

## Switching Time Test Circuit





EMH2418R



# EMH2418R

## Package Dimensions

EMH2418R-TL-H

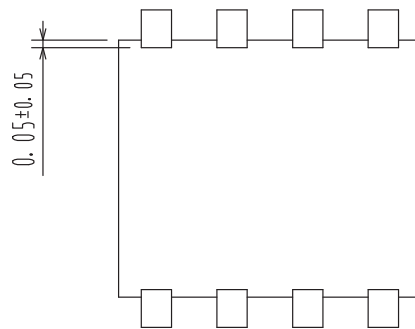
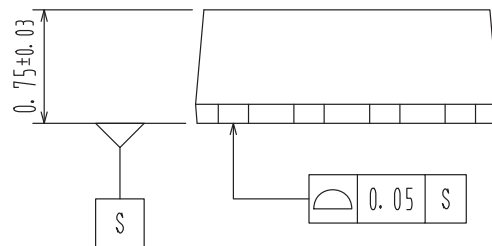
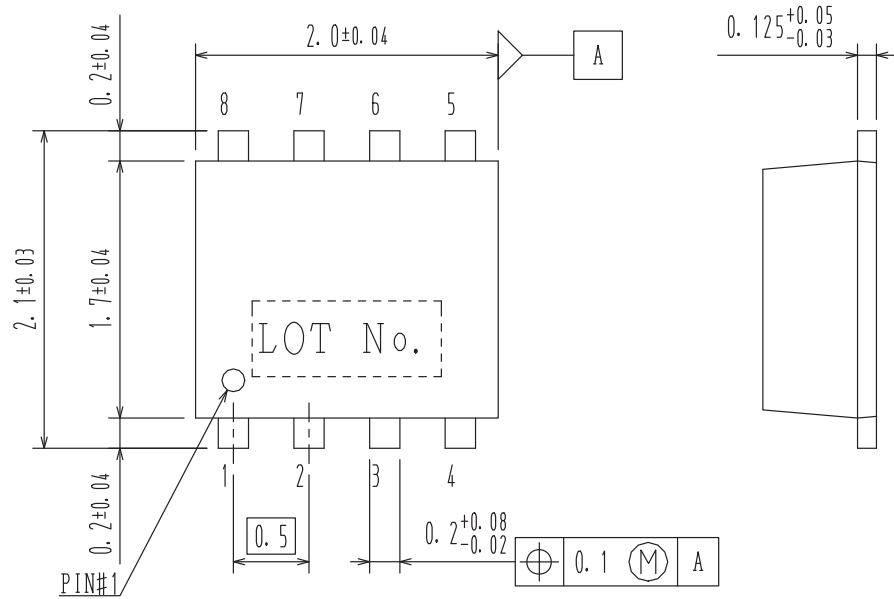
### SOT-383FL/EMH8

CASE419AT

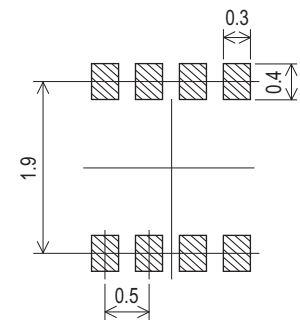
ISSUE O

Unit : mm

- 1: Source1
- 2: Gate1
- 3: Source2
- 4: Gate2
- 5: Drain
- 6: Drain
- 7: Drain
- 8: Drain



## Soldering Footprint



Note on usage : Since the EMH2418R is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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