

P-Channel 20-V (D-S) MOSFET

Features

- ON-resistance $R_{DS(on)1}$: 20m Ω (typ.)
- 1.8V drive
- Protection diode in
- Input Capacitance C_{iss} =1100pF(typ.)
- Halogen free compliance

Specifications

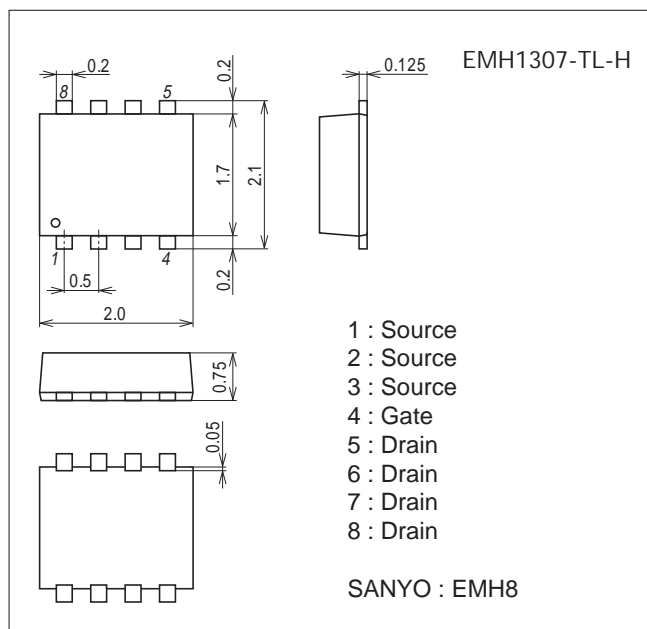
Absolute Maximum Ratings at $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-20	V
Gate-to-Source Voltage	V_{GSS}		± 10	V
Drain Current (DC)	I_D		-6.5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-26	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (1200mm ² ×0.8mm)	1.5	W
Channel Temperature	T_{ch}		150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^{\circ}\text{C}$

Package Dimensions

unit : mm (typ)

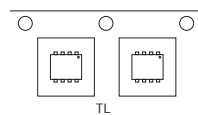
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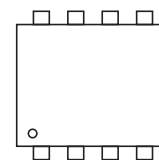
Product & Package Information

- Package : EMH8
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

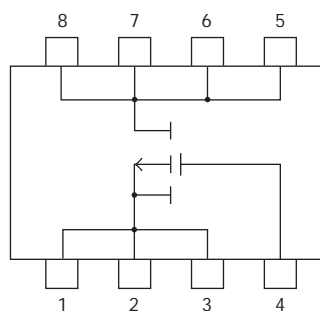
Taping Type : TL



Marking



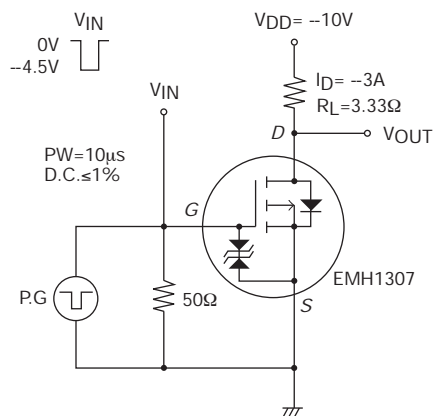
Electrical Connection

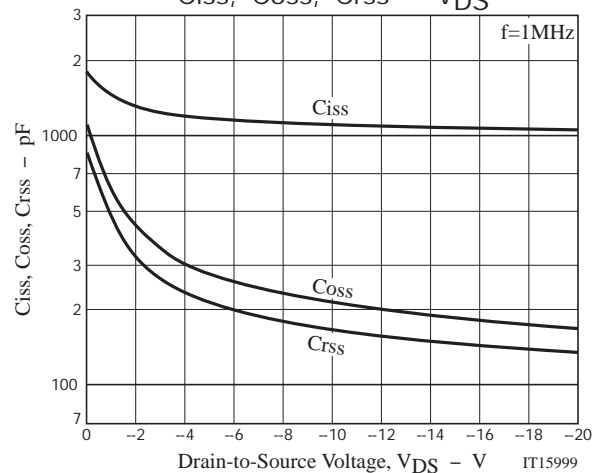
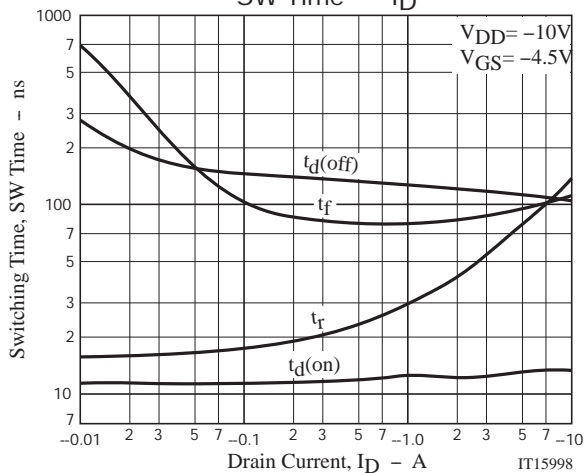
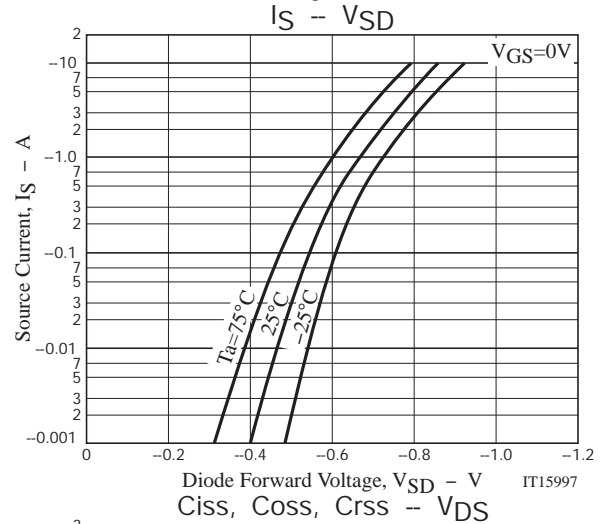
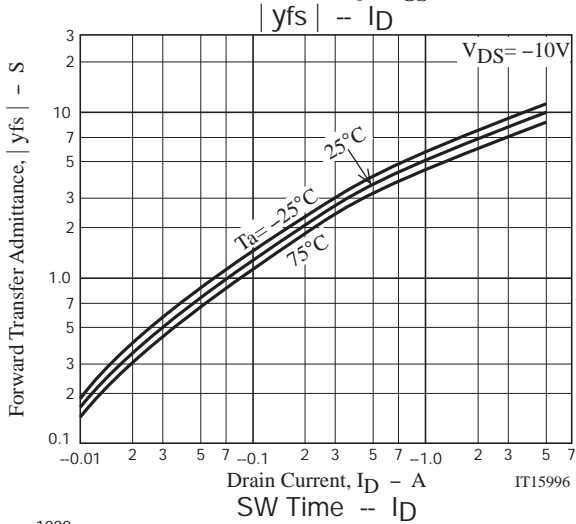
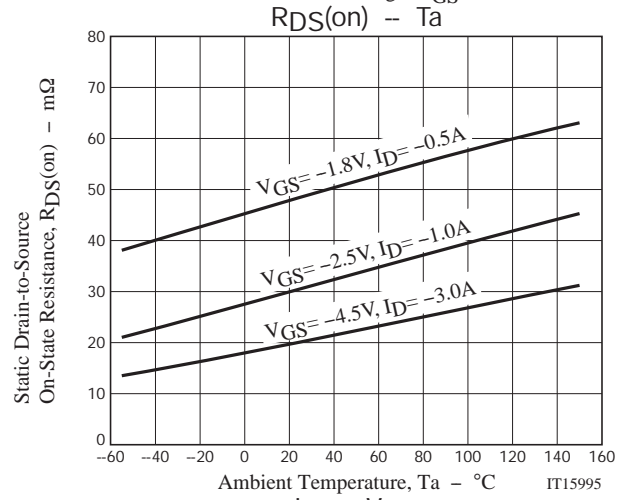
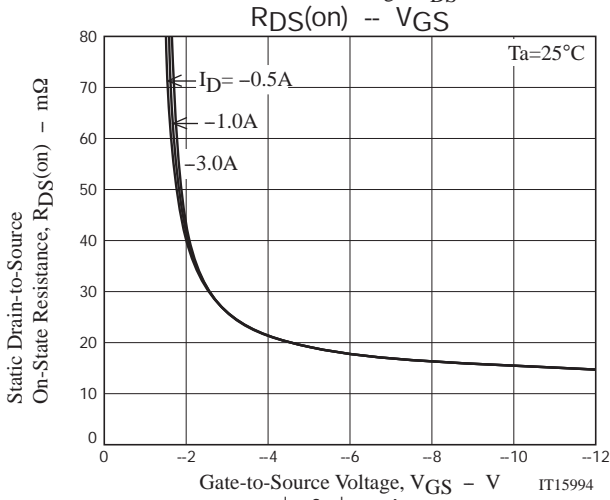
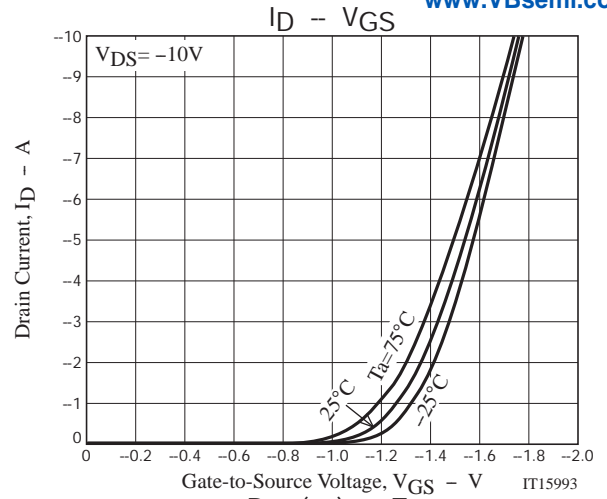
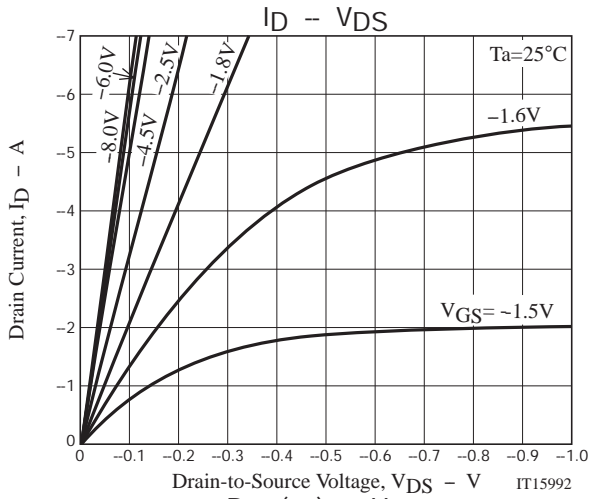


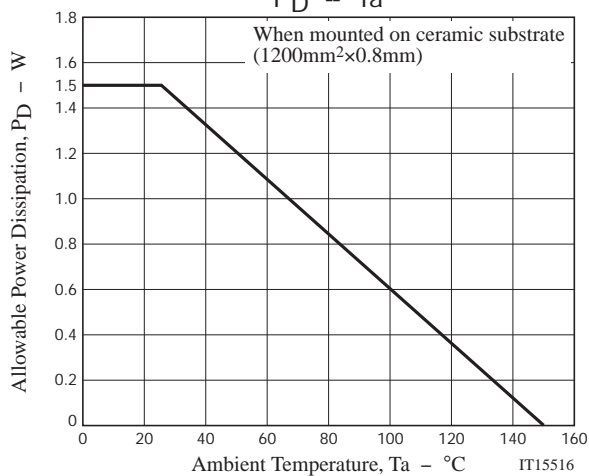
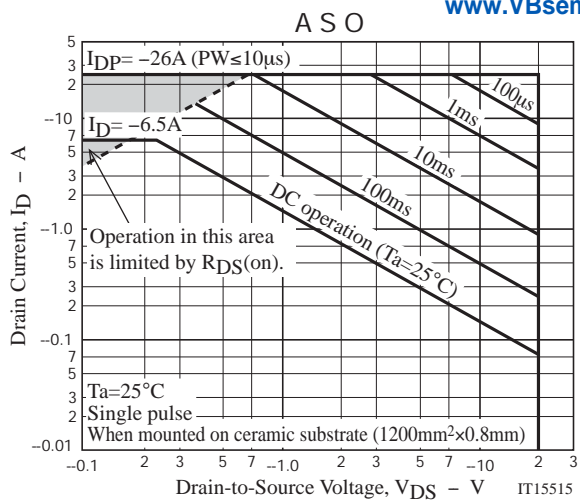
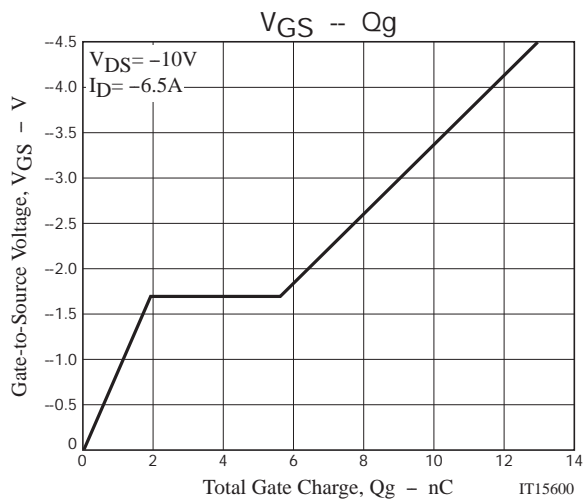
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =-1mA, V _{GS} =0V	-20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-20V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-0.4		-1.3	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-3A		8.2		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-3A, V _{GS} =-4.5V		20	26	mΩ
	R _{DS(on)2}	I _D =-1.5A, V _{GS} =-2.5V		31	44	mΩ
	R _{DS(on)3}	I _D =-0.5A, V _{GS} =-1.8V		49	78	mΩ
Input Capacitance	C _{iss}	V _{DS} =-10V, f=1MHz		1100		pF
Output Capacitance	C _{oss}			210		pF
Reverse Transfer Capacitance	C _{rss}			160		pF
Turn-ON Delay Time	t _{d(on)}			12.8		ns
Rise Time	t _r	See specified Test Circuit.		55		ns
Turn-OFF Delay Time	t _{d(off)}			120		ns
Fall Time	t _f			88		ns
Total Gate Charge	Q _g			13		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-10V, V _{GS} =-4.5V, I _D =-6.5A		1.9		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			3.7		nC
Diode Forward Voltage	V _{SD}		I _S =-6.5A, V _{GS} =0V		-0.8	-1.2

Switching Time Test Circuit

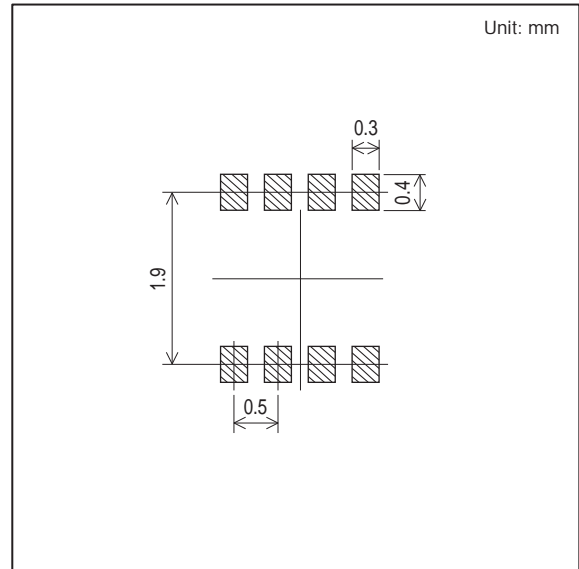
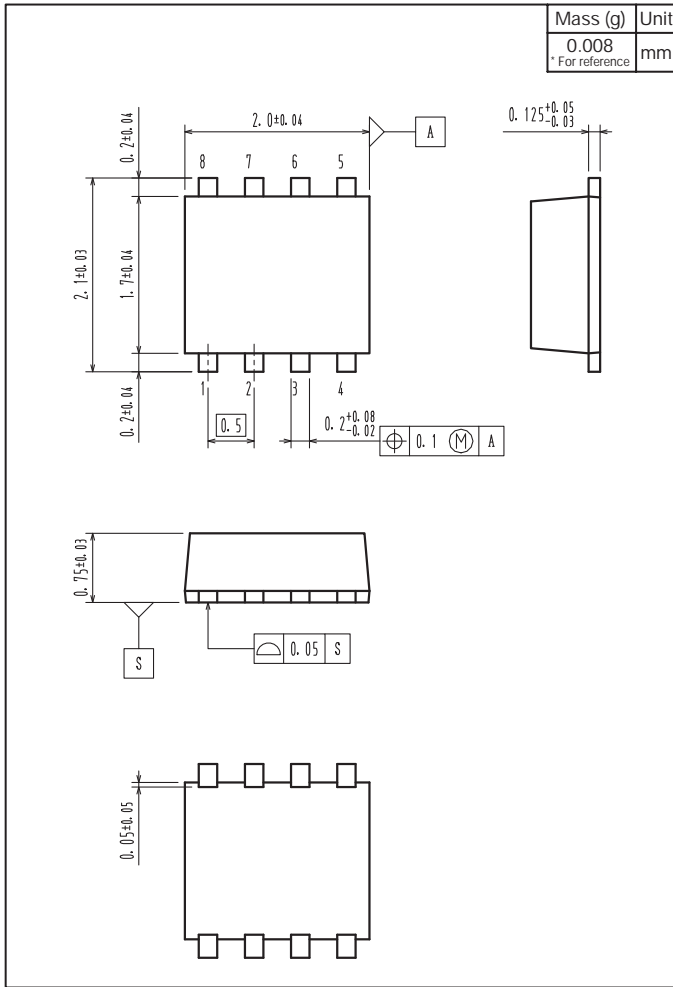






Outline Drawing
EMH1307-TL-H

Land Pattern Example



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