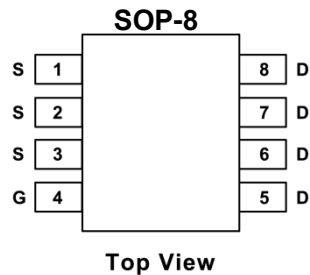
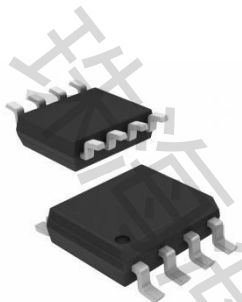


TPC8107-HX P-Channel 30-V (D-S) MOSFET

PRODUCT SUMMARY			
V _{DS} (V)	R _{DS(on)} (Ω)	Q _g (Typ.)	I _D (A)
-30	0.011 at V _{GS} = - 10 V	29.5nC	-13.5
	0.015 at V _{GS} = - 4.5 V		-11.6

**FEATURES**

- TrenchFET® Power MOSFET
- 100 % R_g Tested
- 100 % UIS Tested

APPLICATIONS

- Load Switch
- Notebook Adaptor Switch

Absolute Maximum Ratings (Ta = 25°C)				
Characteristics		Symbol	Rating	Unit
Drain-source voltage		V _{DSS}	-30	V
Drain-gate voltage (R _{GS} = 20 kΩ)		V _{DGR}	-30	V
Gate-source voltage		V _{GSS}	±20	V
Drain current	DC	I _D	-13	A
	Pulse	I _{DP}	-52	
Drain power dissipation (t = 10 s)		P _D	1.9	W
Drain power dissipation (t = 10 s)		P _D	1.0	W
Single pulse avalanche energy		E _{AS}	219	mJ
Avalanche current		I _{AR}	-13	A
Repetitive avalanche energy		E _{AR}	0.19	mJ
Channel temperature		T _{ch}	150	°C
Storage temperature range		T _{stg}	-55 to 150	°C

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current	IGSS	VGS = ±16 V, VDS = 0 V			±10	μA
Drain cut-OFF current	IDSS	VDS = -30 V, VGS = 0 V			-10	μA
Drain-source breakdown voltage	V (BR) DSS	ID = -10 mA, VGS = 0 V	-30			V
	V (BR) DSX	ID = -10 mA, VGS = 20 V	-15			
Gate threshold voltage	Vth	VDS = -10 V, ID = -1 mA	-0.8		-2.0	V
Drain-source ON resistance	RDS (ON)	VGS = -4 V, ID = -6.5 A		10	15	mΩ
		VGS = -10 V, ID = -6.5 A		5.5	7.0	
Forward transfer admittance	Yfs	VDS = -10 V, ID = -6.5 A	15.5	31		S
Input capacitance	Ciss	VDS = -10 V, VGS = 0 V, f = 1 MHz		5880		pF
Reverse transfer capacitance	Crss			1000		
Output capacitance	Coss			1050		
Rise time	tr			11		
Switching time						ns
	Turn-ON time	ton		22		
	Fall time	tf		110		
	Turn-OFF time	toff		395		
Total gate charge (gate-source plus gate-drain)	Qg	VDD = -24 V, VGS = -10 V, ID = -13 A		130		nC
Gate-source charge 1	Qgs1			10		
Gate-drain ("miller") charge	Qgd			30		

Source-Drain Ratings and Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Drain reverse current	Pulse	IDRP				-52	A
Forward voltage (diode)		VDSF	IDR = -13 A, VGS = 0 V			1.2	V

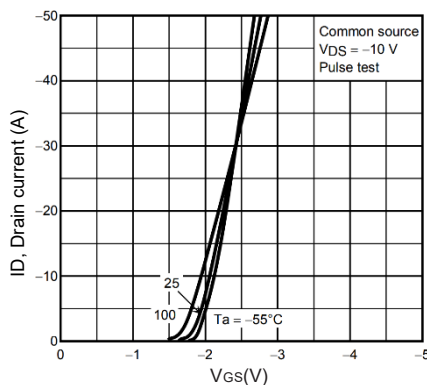


Fig 1. Gate-source voltage

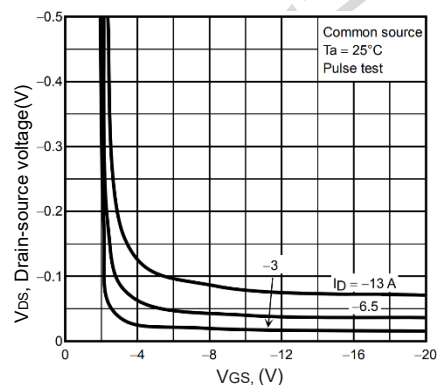


Fig 2. Gate-source voltage

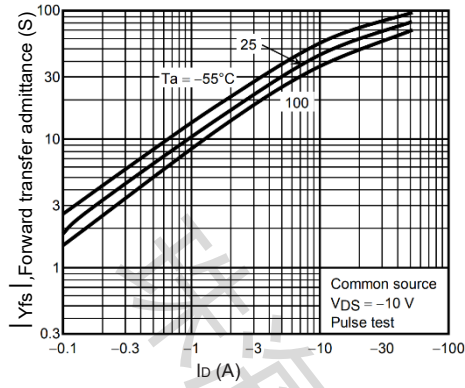


Fig 3. Drain current

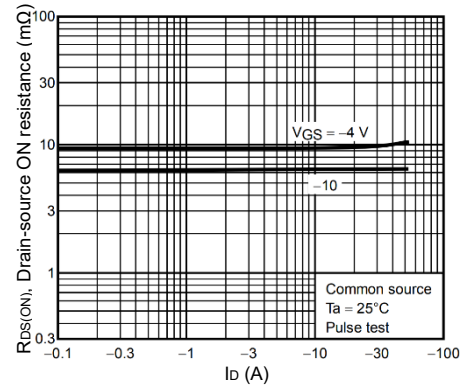


Fig 4. Drain current

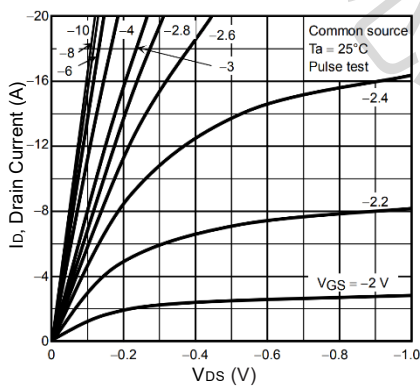


Fig 5. Drain-source voltage

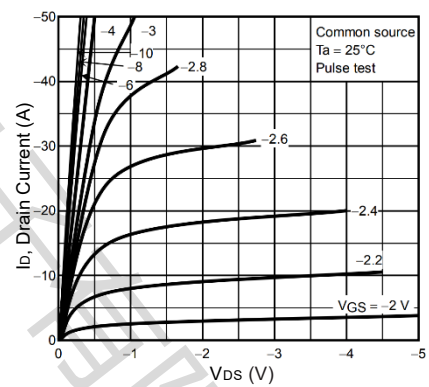


Fig 6. Drain-source voltage

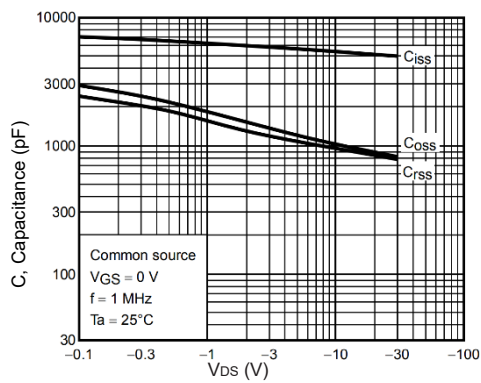


Fig 7. Drain-source voltage

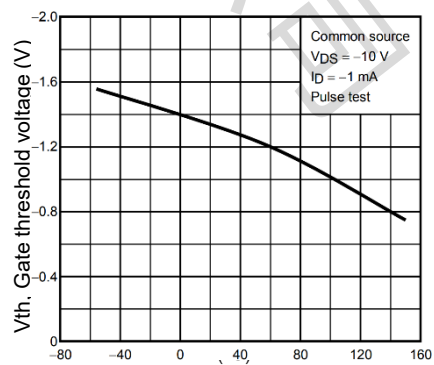


Fig 8. Ambient temperature

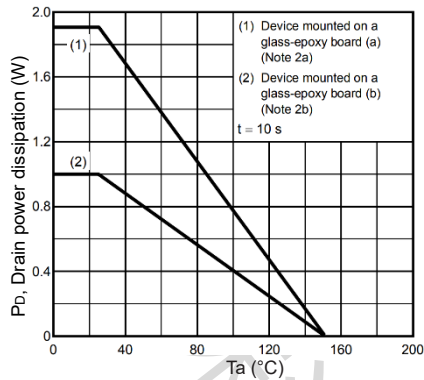


Fig 9. Ambient temperature

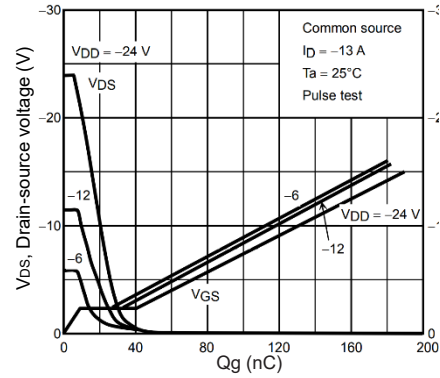


Fig 10. Total gate charge

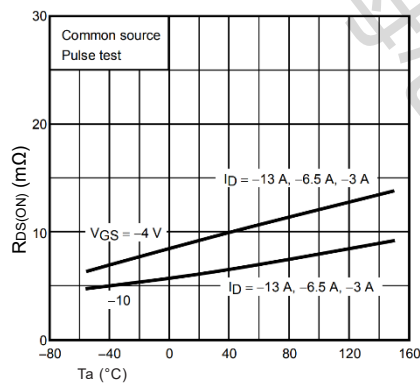


Fig 11. Ambient temperature

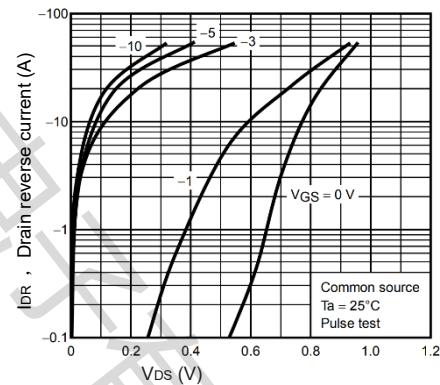


Fig 12. Drain-source voltage

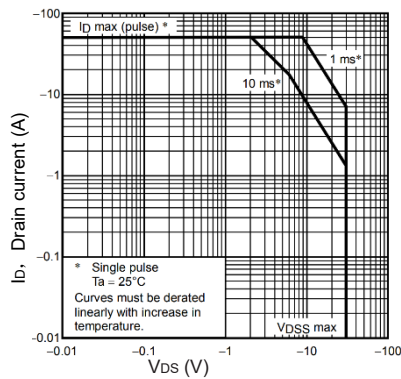


Fig 13. Drain-source voltage

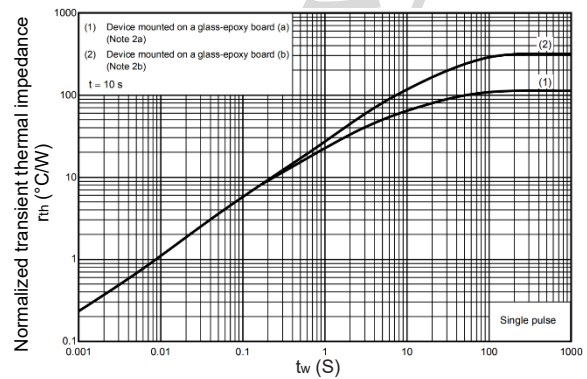
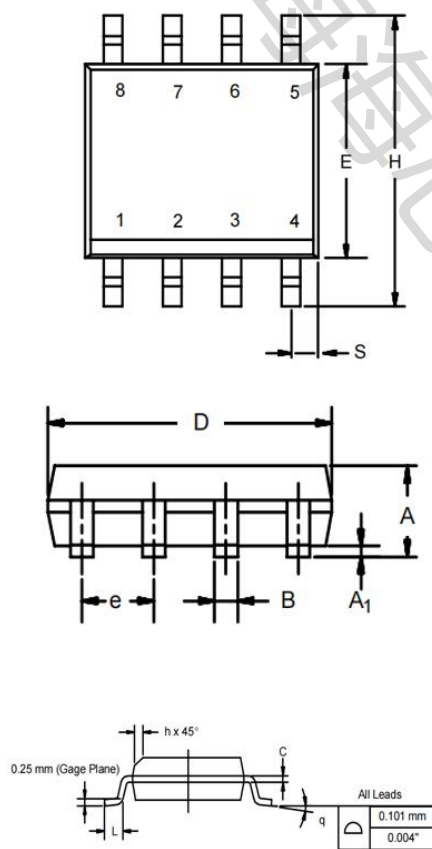


Fig 13. Pulse width

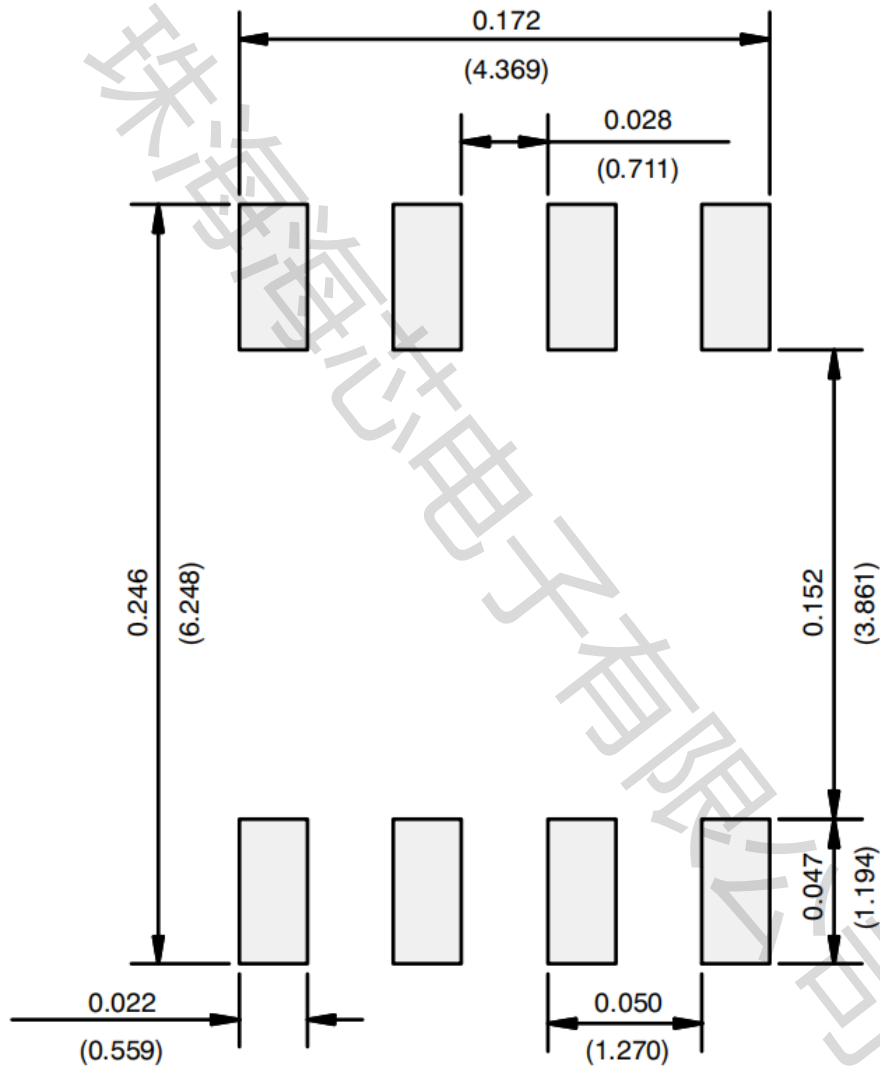
SOP-8 Package Outline

Dimensions are shown in millimeters (inches)



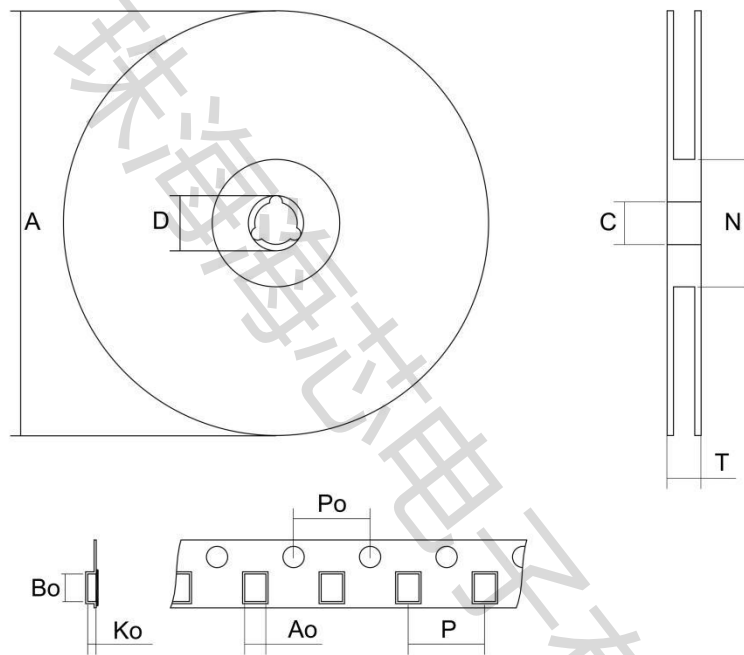
DIM	MILLIMETERS		INCHES	
	Min	Max	Min	Max
A	1.35	1.75	0.053	0.069
A ₁	0.10	0.20	0.004	0.008
B	0.35	0.51	0.014	0.020
C	0.19	0.25	0.007 5	0.010
D	4.80	5.00	0.189	0.196
E	3.80	4.00	0.150	0.157
e	1.27 BSC		0.050 BSC	
H	5.80	6.20	0.228	0.244
h	0.25	0.50	0.010	0.020
L	0.50	0.93	0.020	0.037
q	0°	8°	0°	8°
S	0.44	0.64	0.018	0.026

RECOMMENDED MINIMUM PADS FOR SOP-8

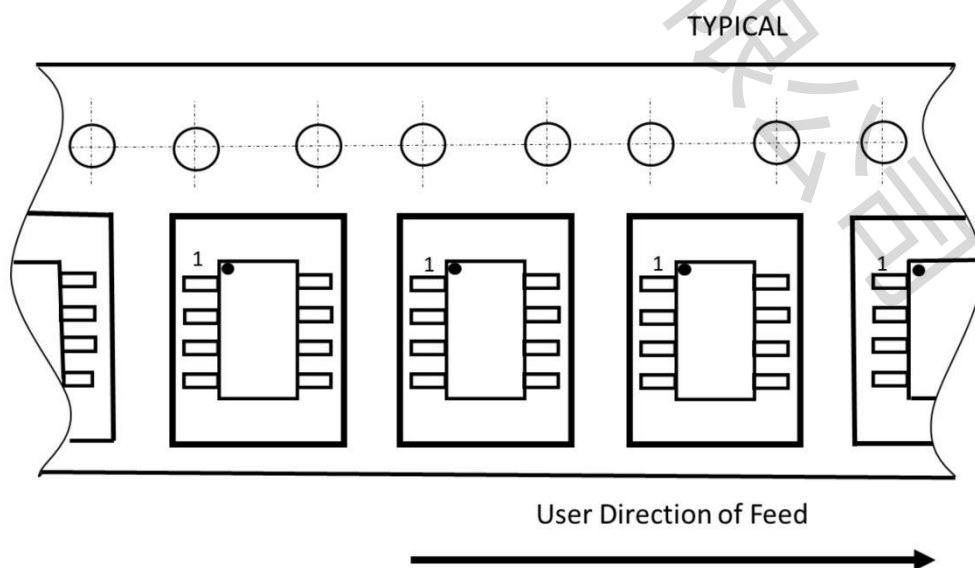


SOP-8 packing information

SOP-8 tape and reel



Tape orientation



Disclaimer

All products due to improve reliability, function or design or for other reasons, product specifications and data are subject to change without notice.

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