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Ordering number : ENA1214

SANYO Semiconductors
DATA SHEET

P-Channel Silicon MOSFET

3LP04SS — General-Purpose Switching Device Applications

Features

- 1.5V drive.
- Halogen Free compliance.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		−30	V
Gate-to-Source Voltage	V_{GSS}		±10	V
Drain Current (DC)	I_D		−200	mA
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	−800	mA
Allowable Power Dissipation	P_D	When mounted on glass epoxy substrate (145mmX80mmX1.6mm)	0.15	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C

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	−30			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=−30V, 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=−100μA	−0.4		−1.4	V
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=−10V, I_D=−100mA	190	320		mS
Static Drain-to-Source On-State Resistance	$R_{DS}(on)1$	I_D=−100mA, V_{GS}=−4V		1.8	2.4	Ω
	$R_{DS}(on)2$	I_D=−50mA, V_{GS}=−2.5V		2.4	3.4	Ω
	$R_{DS}(on)3$	I_D=−10mA, V_{GS}=−1.5V		4.5	9.0	Ω
Input Capacitance	Ciss	V_{DS}=−10V, f=1MHz		35		pF
Output Capacitance	Coss	V_{DS}=−10V, f=1MHz		7.2		pF
Reverse Transfer Capacitance	Crss	V_{DS}=−10V, f=1MHz		2.1		pF

Marking : XW

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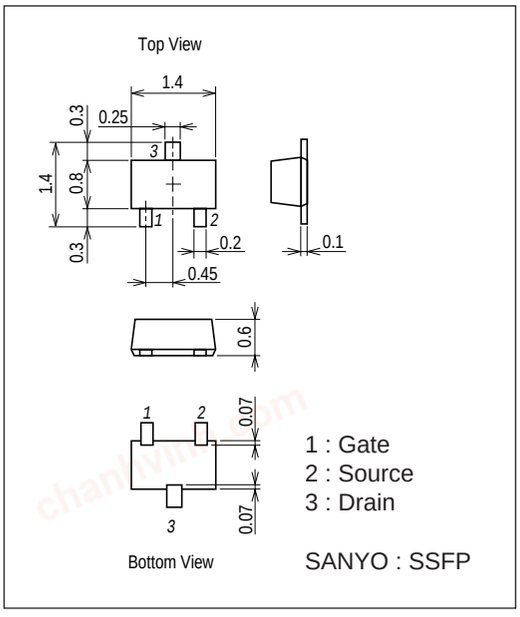
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	t_{d}(on)	See specified Test Circuit.		75		ns
Rise Time	t_{r}	See specified Test Circuit.		170		ns
Turn-OFF Delay Time	t_{d}(off)	See specified Test Circuit.		550		ns
Fall Time	t_{f}	See specified Test Circuit.		350		ns
Total Gate Charge	Qg	V_{DS}=–10V, V_{GS}=–4V, I_{D}=–200mA		0.58		nC
Gate-to-Source Charge	Qgs	V_{DS}=–10V, V_{GS}=–4V, I_{D}=–200mA		0.17		nC
Gate-to-Drain “Miller” Charge	Qgd	V_{DS}=–10V, V_{GS}=–4V, I_{D}=–200mA		0.12		nC
Diode Forward Voltage	V_{SD}	I_{S}=–200mA, V_{GS}=0V		–0.89	–1.2	V

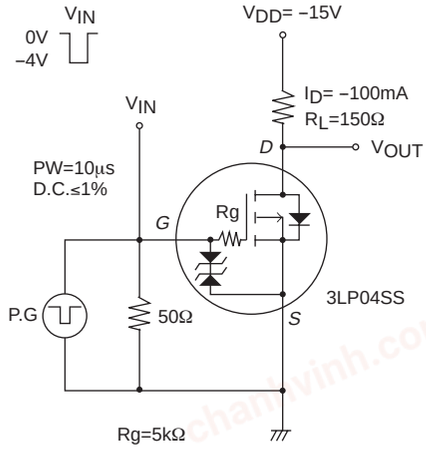
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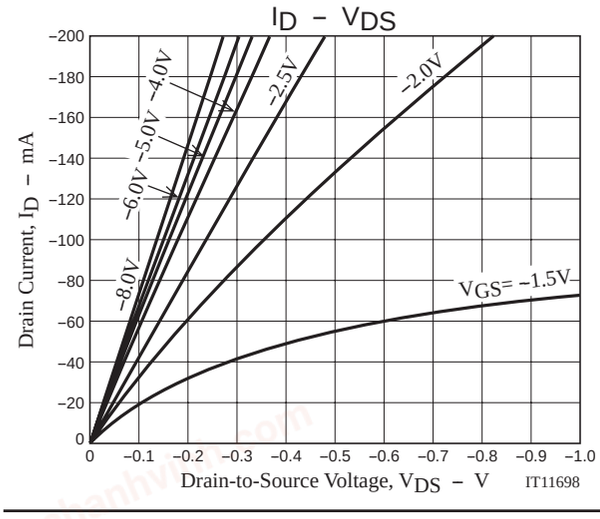
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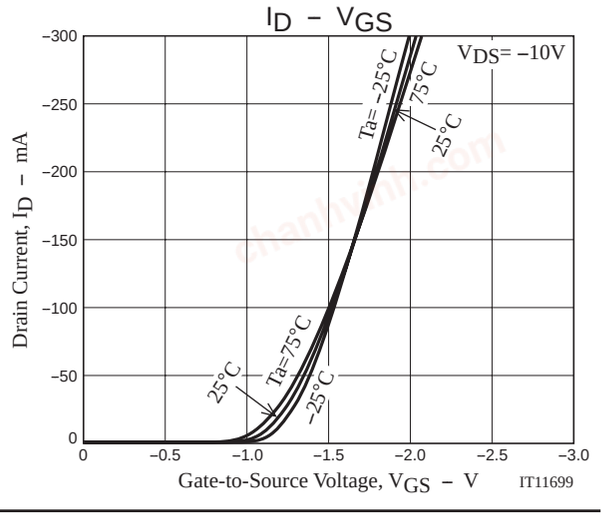
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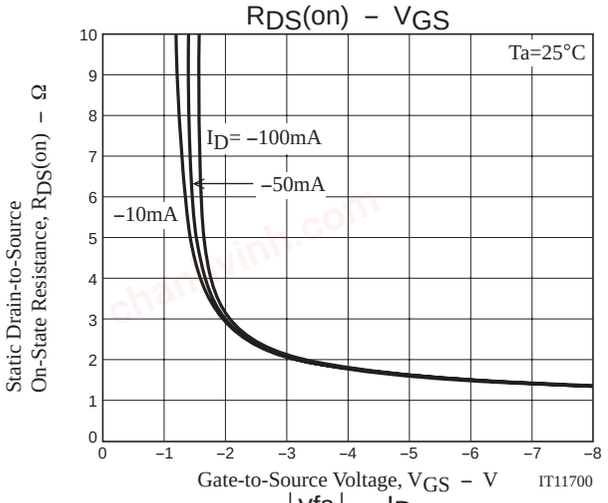
Switching Time Test Circuit

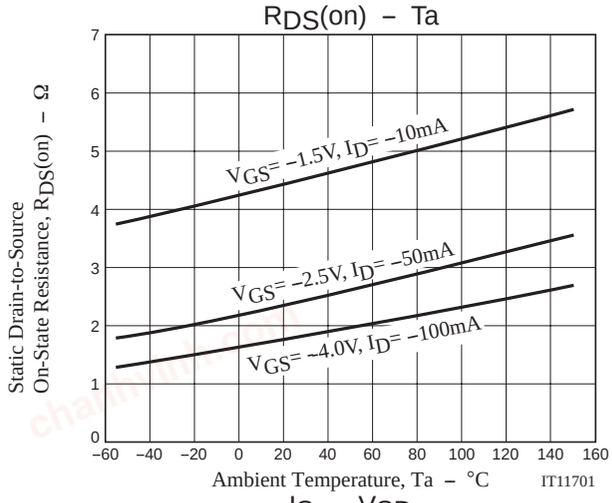


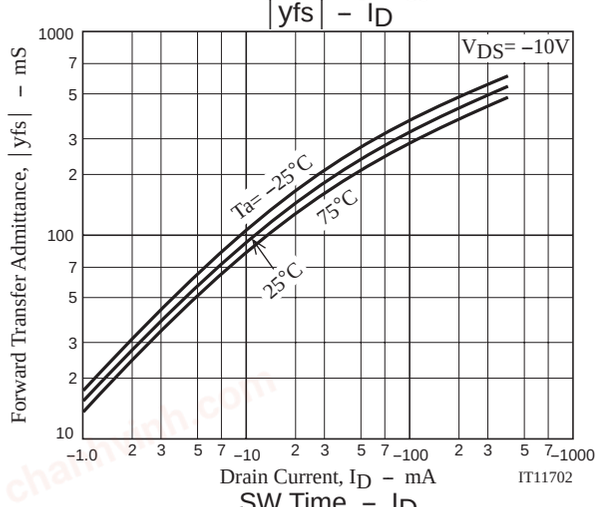


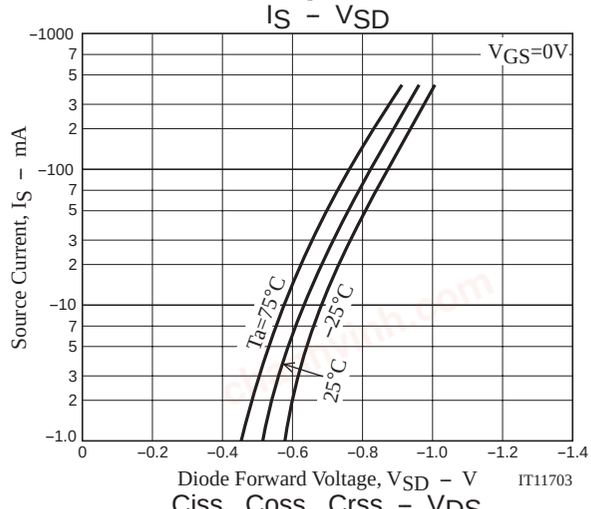


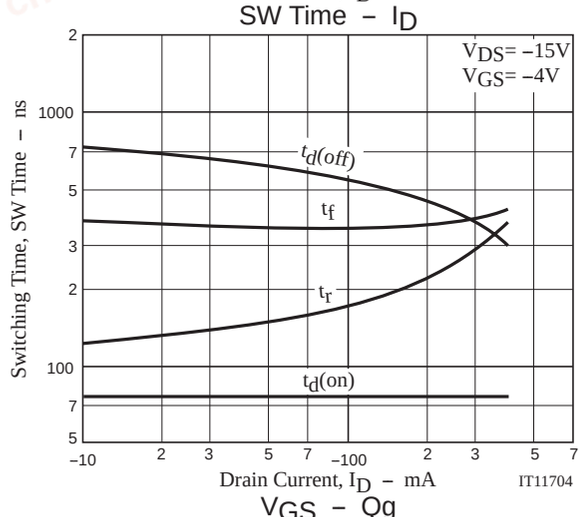
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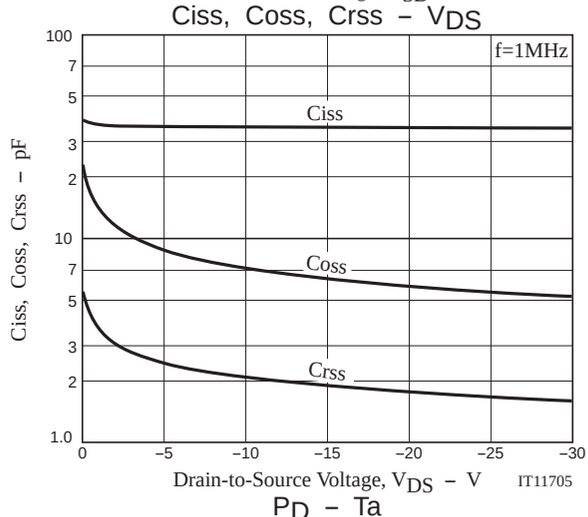


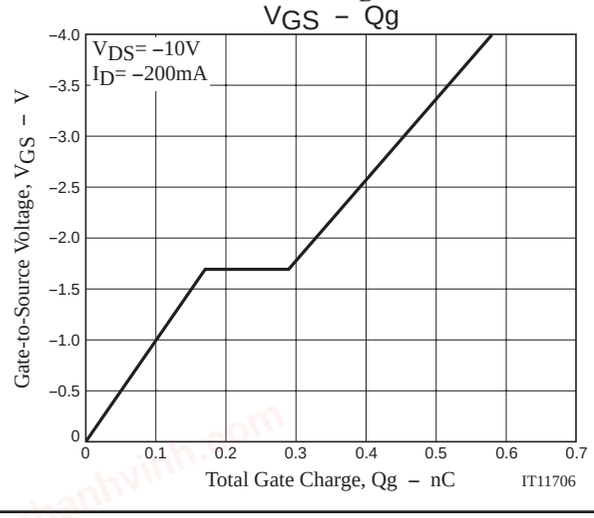


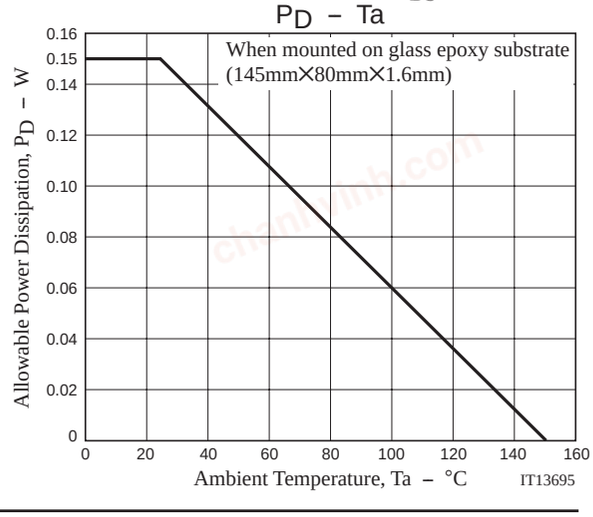












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Note on usage : Since the 3LP04SS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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