



SANYO Semiconductors

DATA SHEET

6LP04SS — P-Channel Silicon MOSFET

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}		-60	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-100	mA
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-400	mA
Allowable Power Dissipation	P _D	When mounted on glass epoxy substrate (145mmX80mmX1.6mm)	0.15	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-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	-60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, 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	y _{fs}	V _{DS} =-10V, I _D =-50mA	130	220		mS
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-50mA, V _{GS} =-4V		6.5	8.5	Ω
	R _{DS(on)2}	I _D =-30mA, V _{GS} =-2.5V		7.4	11	Ω
	R _{DS(on)3}	I _D =-10mA, V _{GS} =-1.5V		10	20	Ω

Marking : XS

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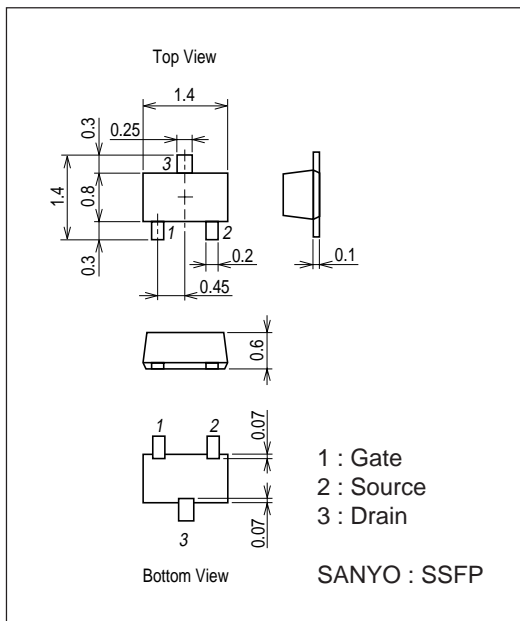
6LP04SS

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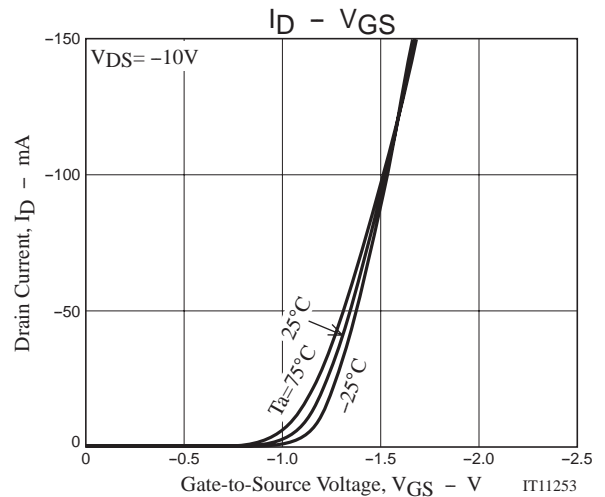
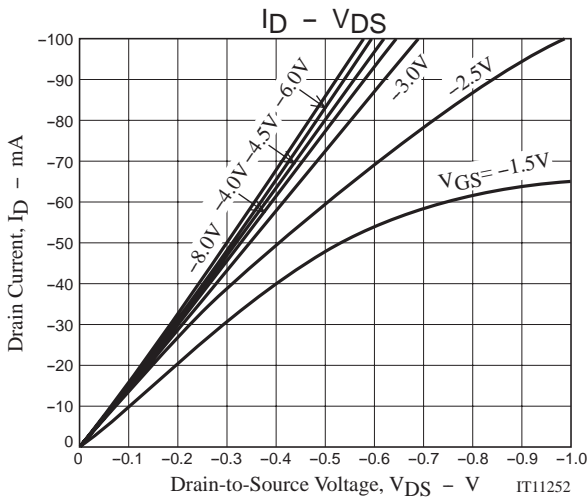
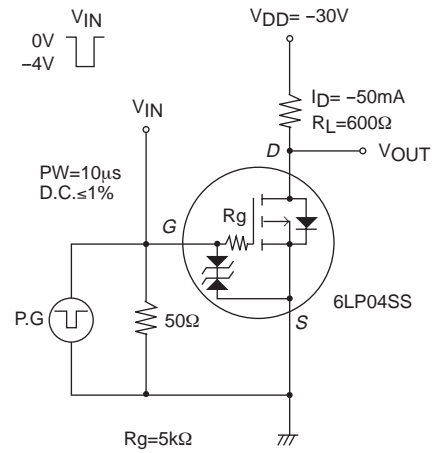
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=-20V, f=1MHz$		15		pF
Output Capacitance	Coss	$V_{DS}=-20V, f=1MHz$		3.5		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-20V, f=1MHz$		1.0		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		75		ns
Rise Time	t_r	See specified Test Circuit.		116		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		665		ns
Fall Time	t_f	See specified Test Circuit.		270		ns
Total Gate Charge	Qg	$V_{DS}=-30V, V_{GS}=-4V, I_D=-100mA$		0.58		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-30V, V_{GS}=-4V, I_D=-100mA$		0.14		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=-30V, V_{GS}=-4V, I_D=-100mA$		0.03		nC
Diode Forward Voltage	V_{SD}	$I_S=-100mA, V_{GS}=0V$		-0.91	-1.5	V

Package Dimensions

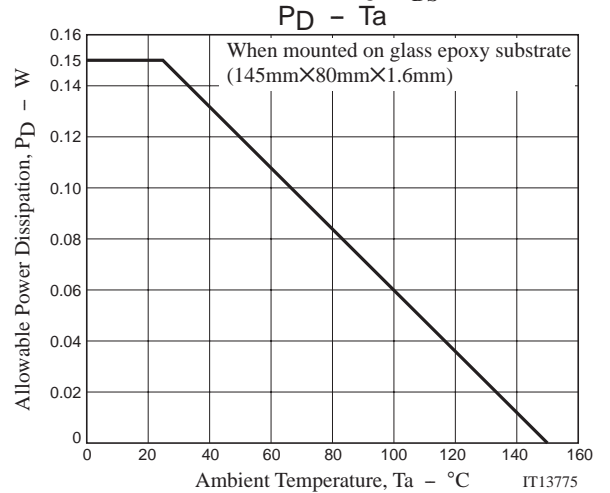
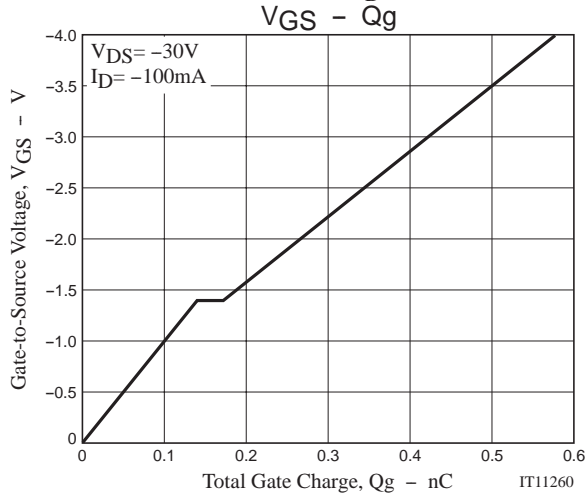
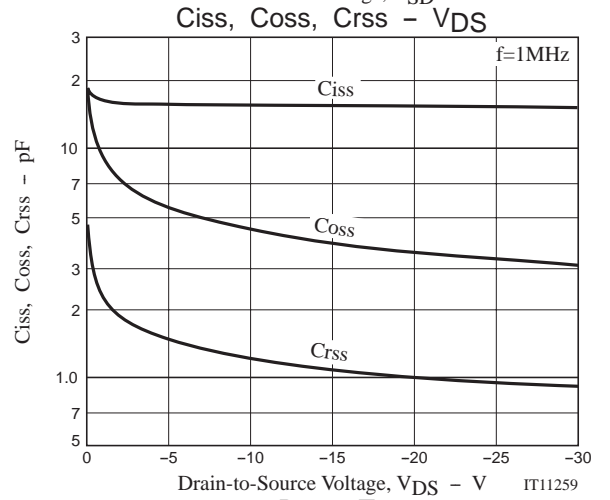
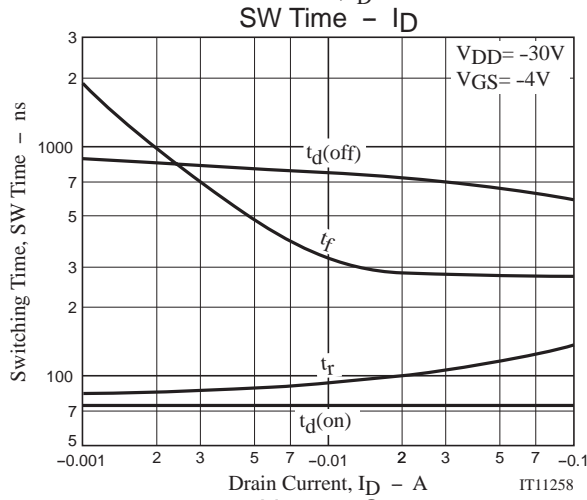
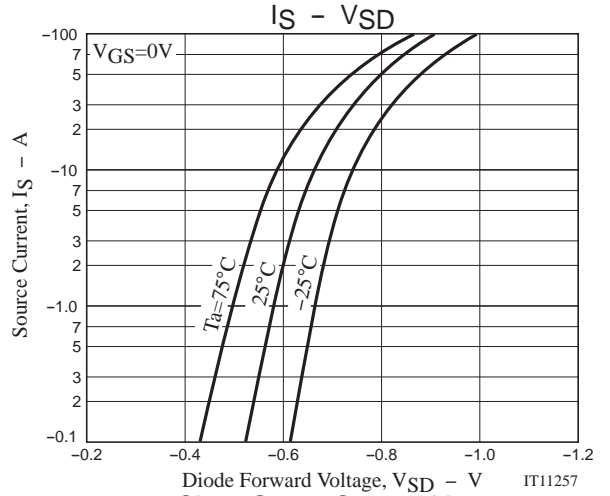
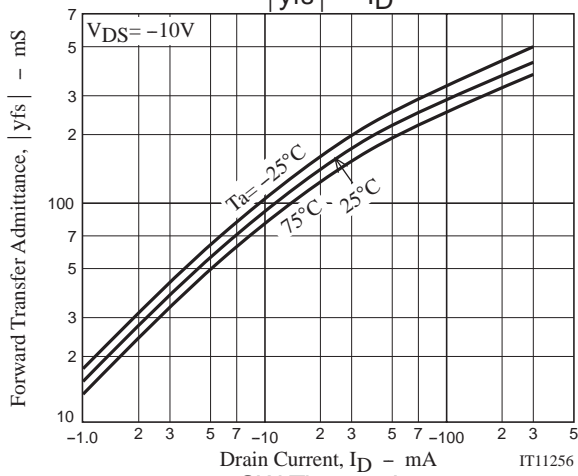
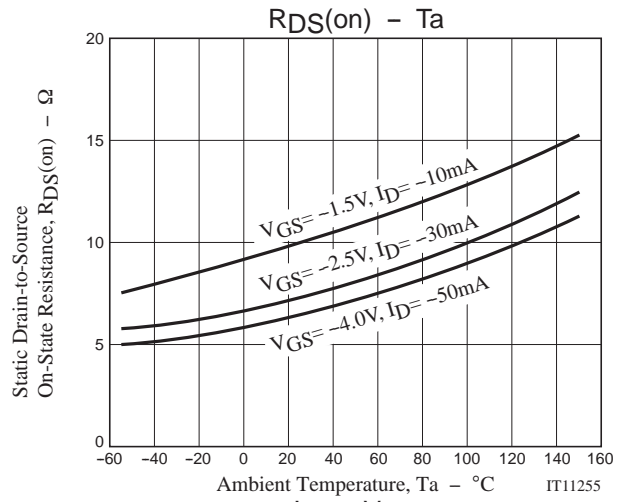
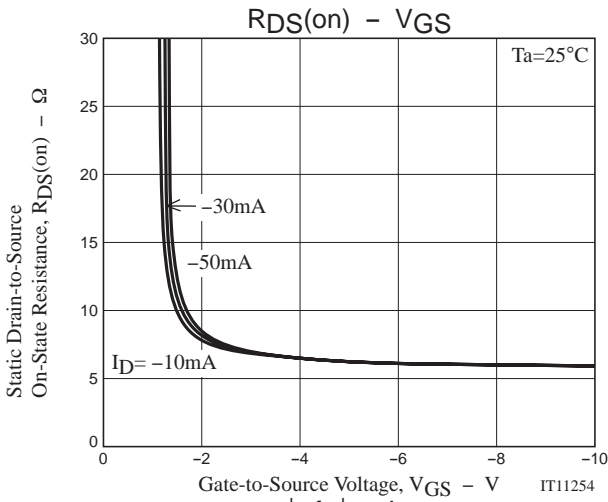
unit : mm (typ)
7029-003



Switching Time Test Circuit



6LP04SS



Note on usage : Since the 6LP04SS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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