



SANYO Semiconductors

DATA SHEET

P-Channel Silicon MOSFET

2SJ629 — General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 1.8V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-12	V
Gate-to-Source Voltage	V _{GSS}		±8	V
Drain Current (DC)	I _D		-4.5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-18	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (600mm ² ×0.8mm)	1.3	W
		Tc=25°C	3.5	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	-12			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-12V, V _{GS} =0V			-10	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±6.4V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-6V, I _D =-1mA	-0.3		-1.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-6V, I _D =-2.2A	3.4	5.7		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-2.2A, V _{GS} =-4.5V		75	98	mΩ
	R _{DS(on)2}	I _D =-1.1A, V _{GS} =-2.5V		110	155	mΩ
	R _{DS(on)3}	I _D =-0.5A, V _{GS} =-1.8V		150	225	mΩ
Input Capacitance	C _{iss}	V _{DS} =-6V, f=1MHz		450		pF
Output Capacitance	C _{oss}	V _{DS} =-6V, f=1MHz		100		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-6V, f=1MHz		85		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		15		ns
Rise Time	t _r	See specified Test Circuit.		140		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		58		ns
Fall Time	t _f	See specified Test Circuit.		52		ns

Marking : MC

Continued on next page.

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2SJ629

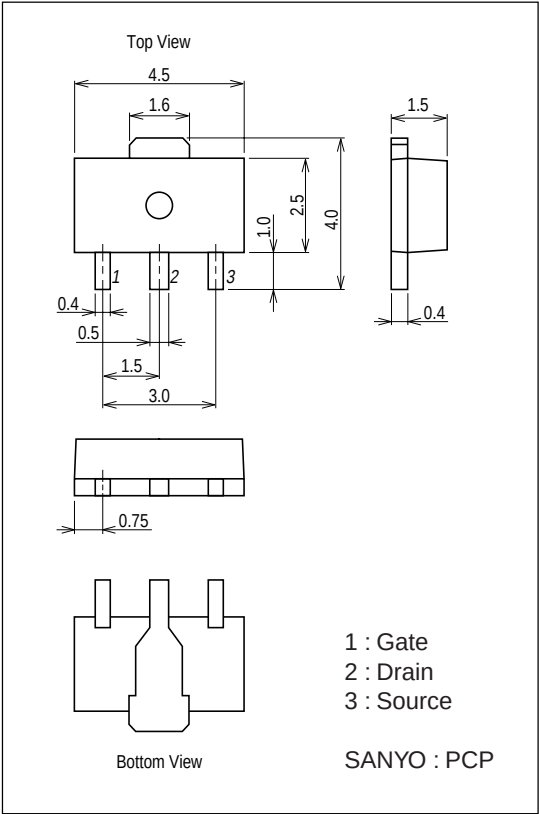
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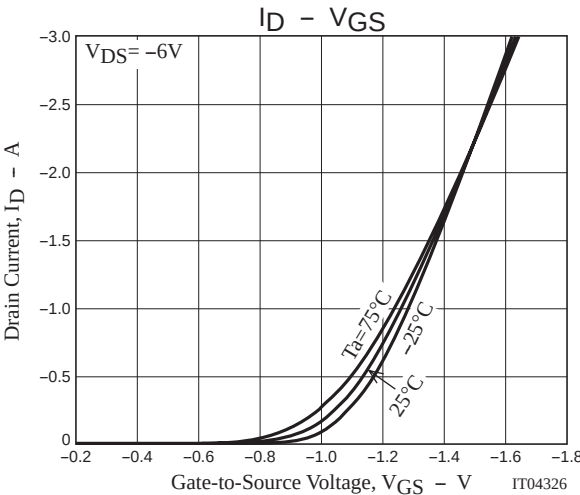
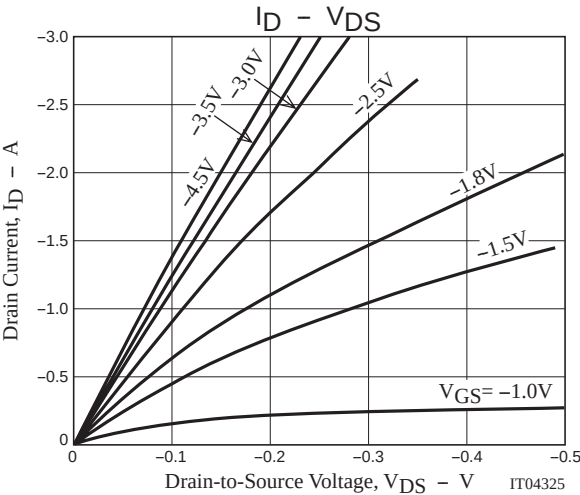
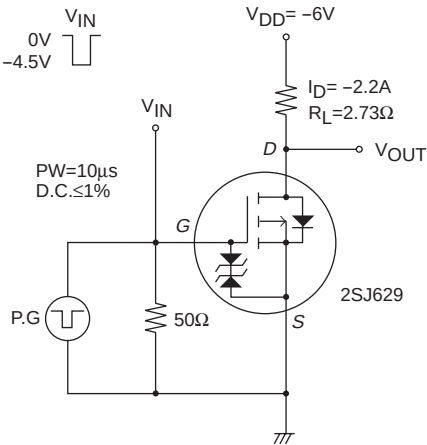
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V _{DS} =-6V, V _{GS} =-4.5V, I _D =-4.5A		6.5		nC
Gate-to-Source Charge	Qgs	V _{DS} =-6V, V _{GS} =-4.5V, I _D =-4.5A		0.8		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =-6V, V _{GS} =-4.5V, I _D =-4.5A		2.0		nC
Diode Forward Voltage	V _{SD}	I _S =-4.5A, V _{GS} =0V		-0.95	-1.5	V

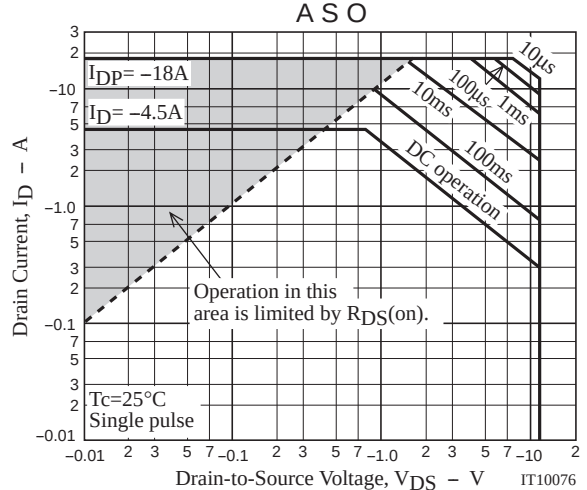
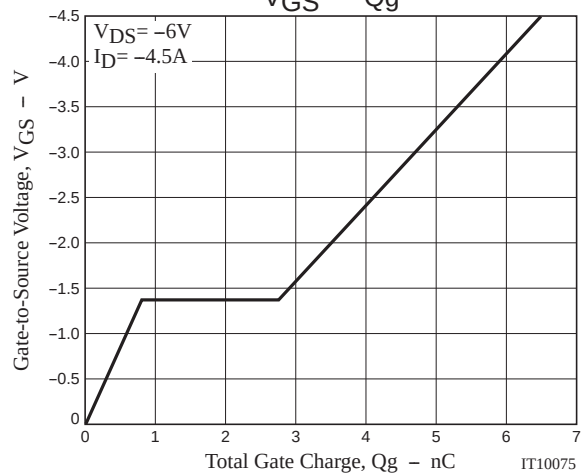
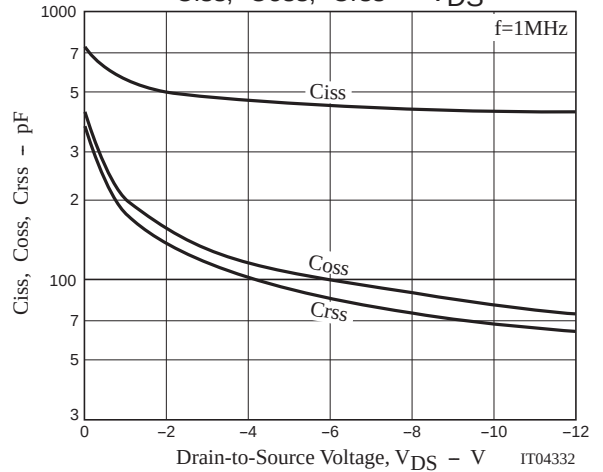
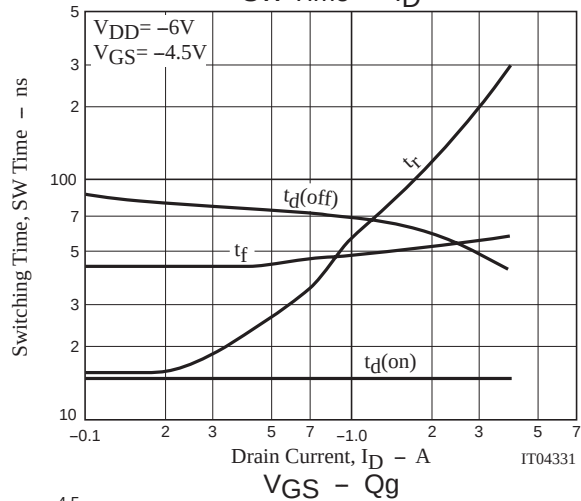
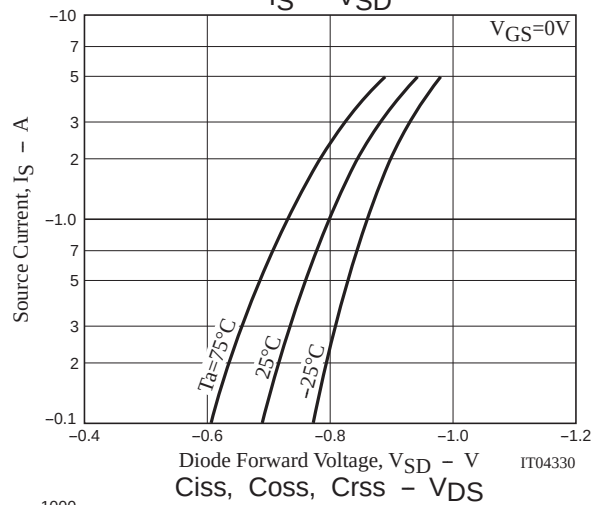
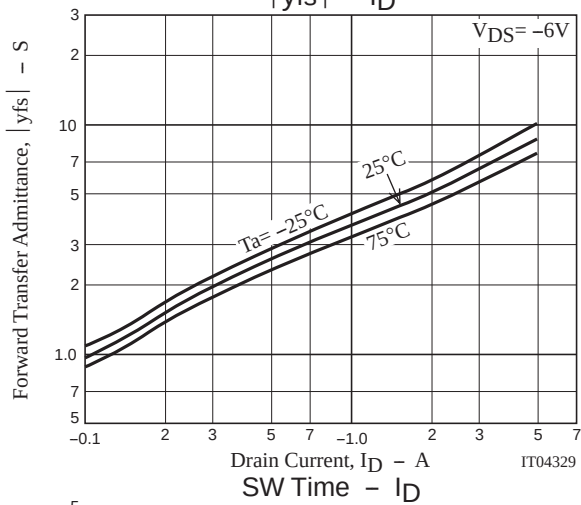
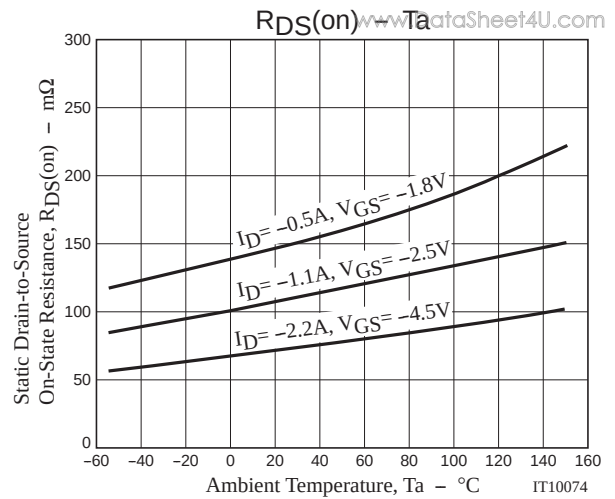
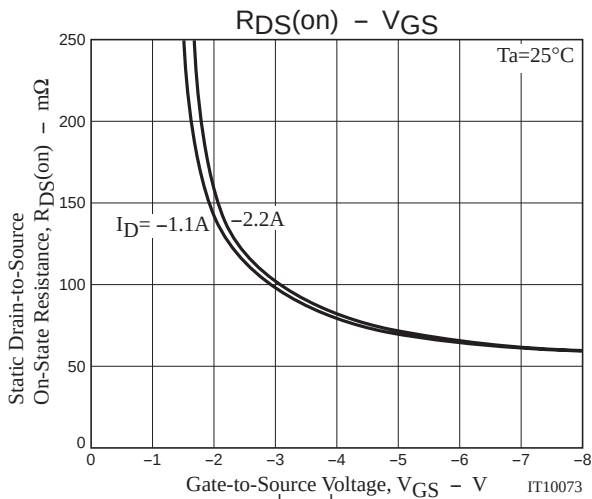
Package Dimensions

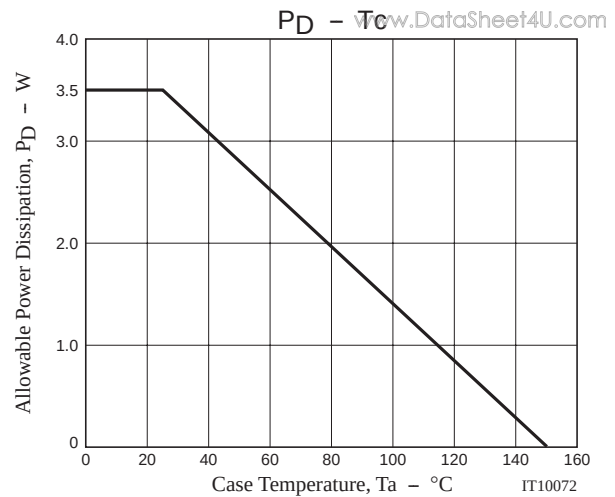
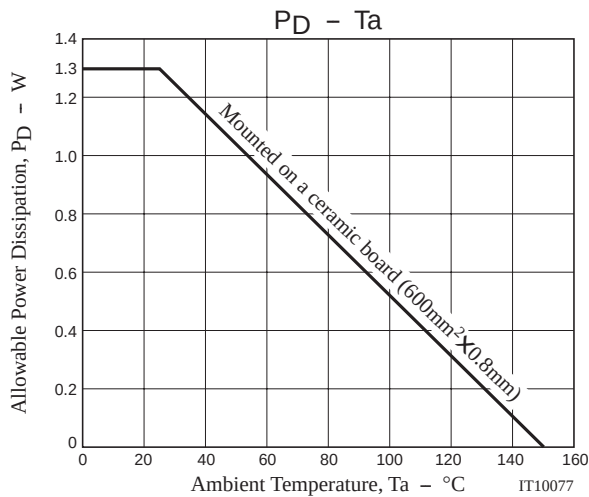
unit : mm (typ)
7007A-003



Switching Time Test Circuit







Note on usage : Since the 2SJ629 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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