



# CPH3327 — P-Channel Silicon MOSFET

## General-Purpose Switching Device Applications

### Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 4V drive.

### Specifications

**Absolute Maximum Ratings** at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-100	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-0.6	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	-2.4	A
Allowable Power Dissipation	P <sub>D</sub>	Mounted on a ceramic board (900mm <sup>2</sup> X0.8mm)	1	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-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 <sub>D</sub> =-1mA, V <sub>GS</sub> =0	-100			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-100V, V <sub>GS</sub> =0			-1	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±16V, V <sub>DS</sub> =0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-300mA	0.5	1.0		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =-300mA, V <sub>GS</sub> =-10V		1.1	1.45	Ω
	R <sub>DS(on)2</sub>	I <sub>D</sub> =-300mA, V <sub>GS</sub> =-4V		1.2	1.7	Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-20V, f=1MHz		245		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> =-20V, f=1MHz		16		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =-20V, f=1MHz		13		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		8.5		ns
Rise Time	t <sub>r</sub>	See specified Test Circuit.		2.7		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	See specified Test Circuit.		36		ns
Fall Time	t <sub>f</sub>	See specified Test Circuit.		16		ns

Marking : YC

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# CPH3327

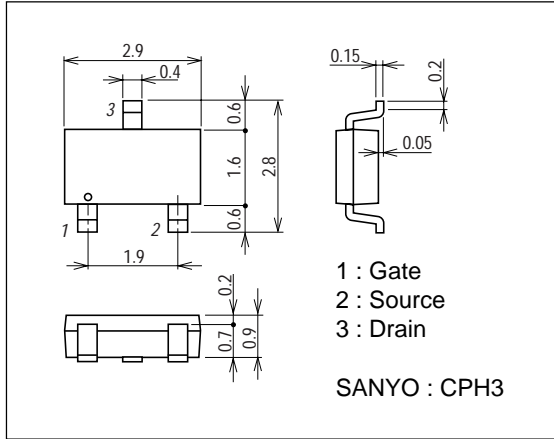
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V <sub>DS</sub> =-50V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-0.6A		7.0		nC
Gate-to-Source Charge	Qgs	V <sub>DS</sub> =-50V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-0.6A		1.0		nC
Gate-to-Drain "Miller" Charge	Qgd	V <sub>DS</sub> =-50V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-0.6A		1.0		nC
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-0.6A, V <sub>GS</sub> =0		-0.85	-1.2	V

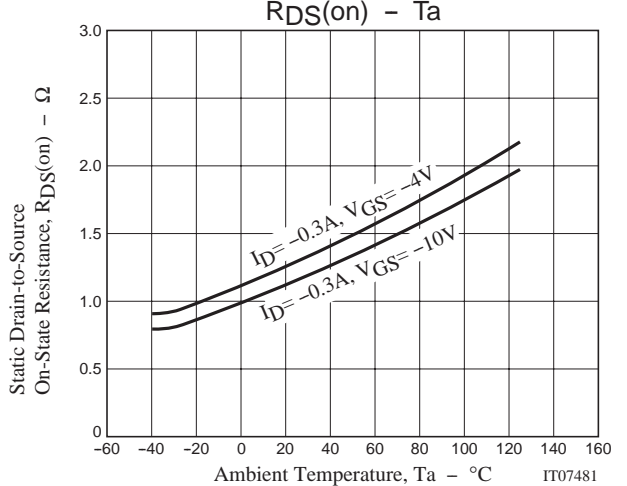
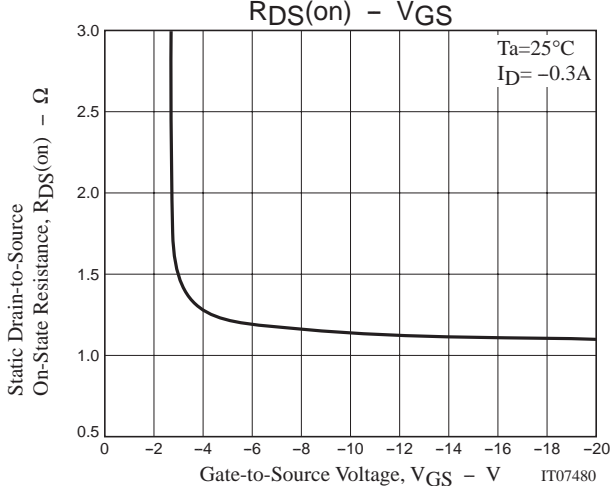
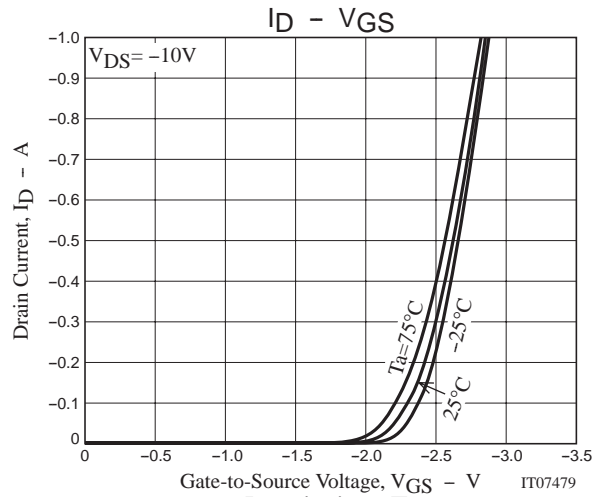
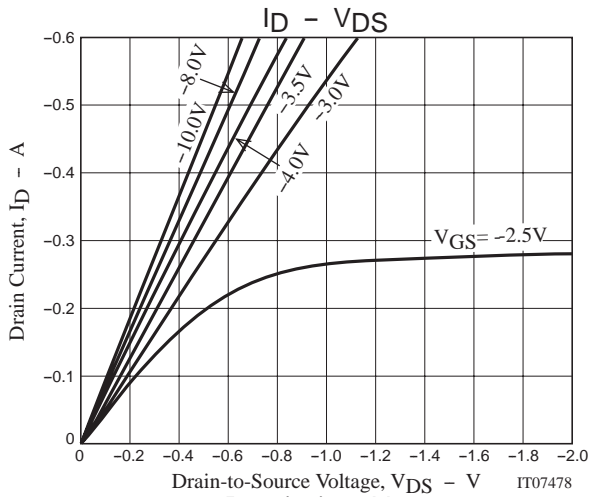
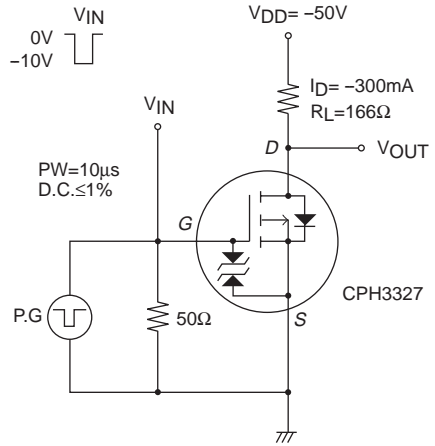
## Package Dimensions

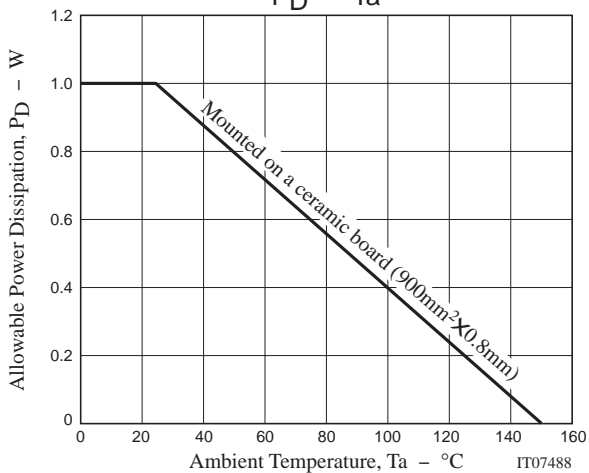
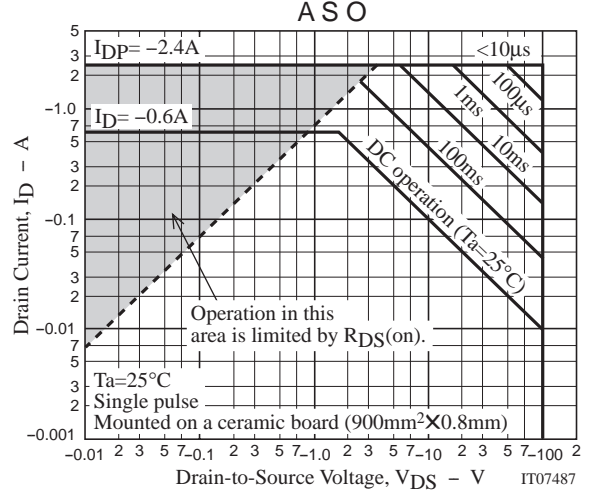
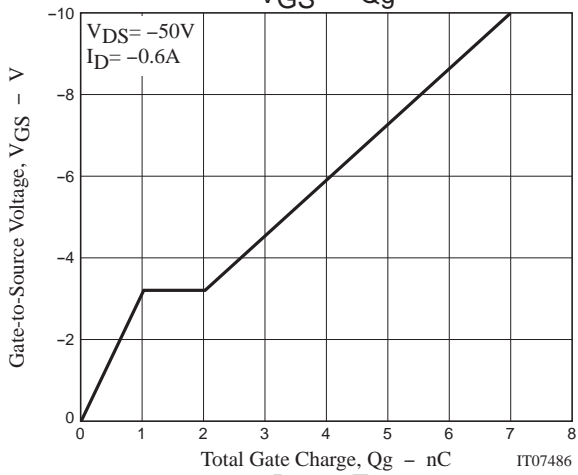
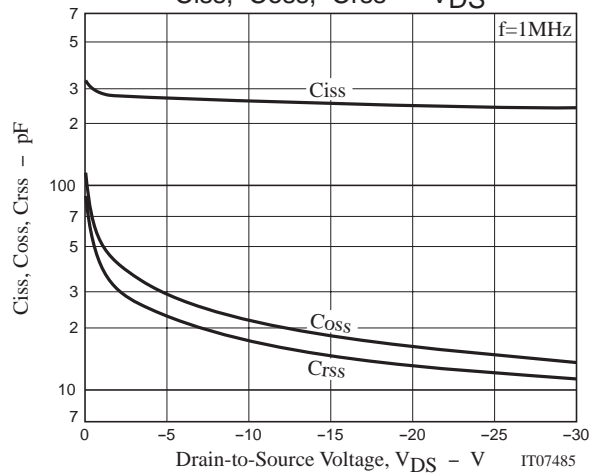
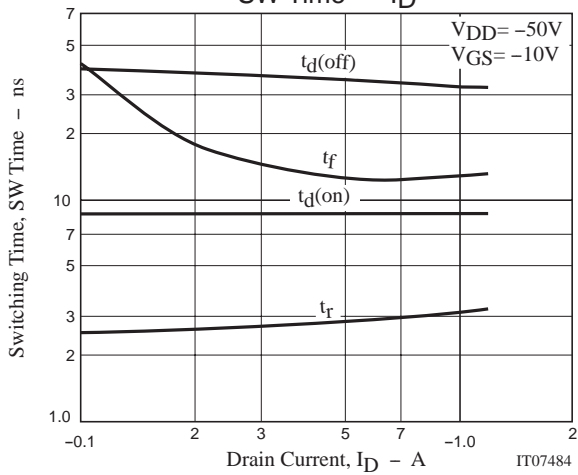
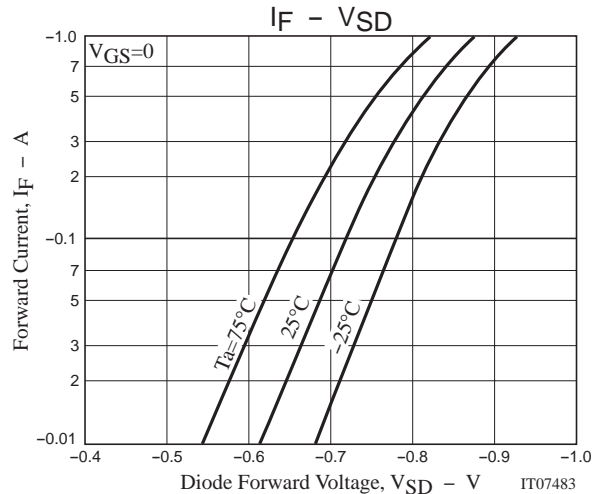
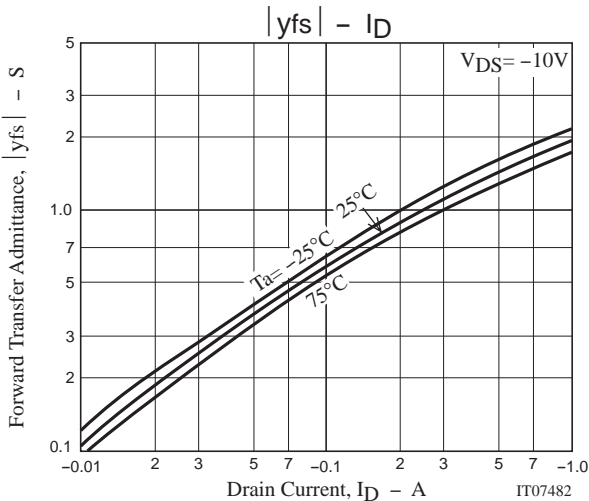
unit : mm

2152A



## Switching Time Test Circuit





Note on usage : Since the CPH3327 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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