



# FSS145

P-Channel Silicon MOSFET

## General-Purpose Switching Device Applications

### Features

- Load switching applications.
- Low ON-resistance.
- 4V drive.

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-45	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-8	A
Drain Current (PW≤10s)	I <sub>D</sub>	Duty cycle≤1%	-8.5	A
Drain Current (PW≤10μs)	I <sub>DP</sub>	Duty cycle≤1%	-32	A
Allowable Power Dissipation	P <sub>D</sub>	Mounted on a ceramic board (1200mm <sup>2</sup> ×0.8mm), PW≤10s	2.9	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 <sub>(BR)DSS</sub>	I <sub>D</sub> =-1mA, V <sub>GS</sub> =0V	-45			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-45V, V <sub>GS</sub> =0V			-1	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±16V, V <sub>DS</sub> =0V			±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> =-8A	10	17		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =-8A, V <sub>GS</sub> =-10V		18	24	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> =-4A, V <sub>GS</sub> =-4V		28	40	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-20V, f=1MHz		3490		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> =-20V, f=1MHz		370		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =-20V, f=1MHz		290		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		35		ns
Rise Time	t <sub>r</sub>	See specified Test Circuit.		65		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	See specified Test Circuit.		270		ns
Fall Time	t <sub>f</sub>	See specified Test Circuit.		125		ns

Marking : S145

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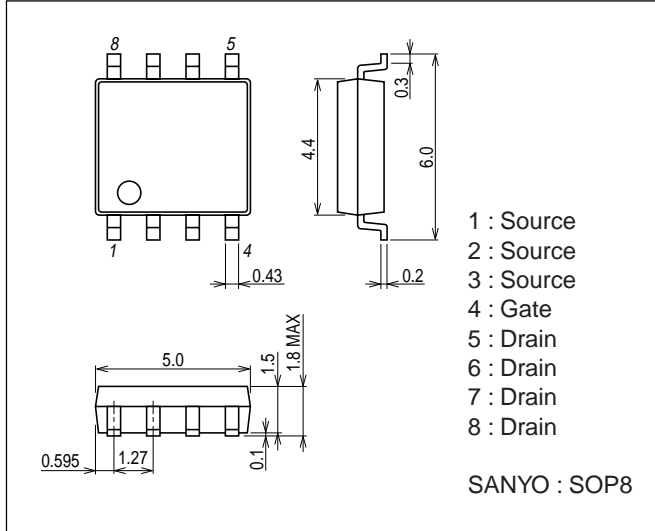
# FSS145

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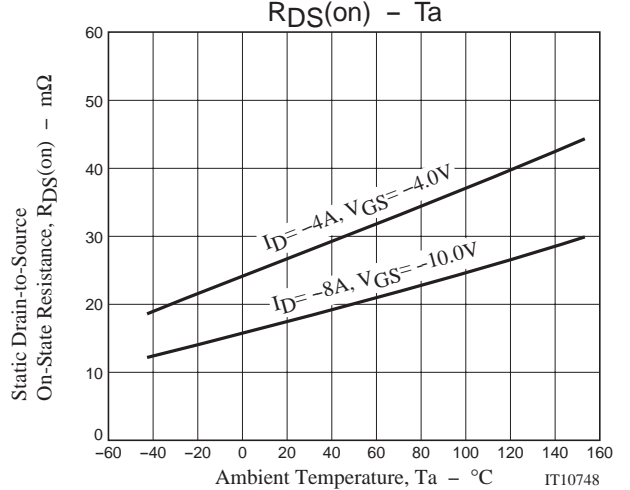
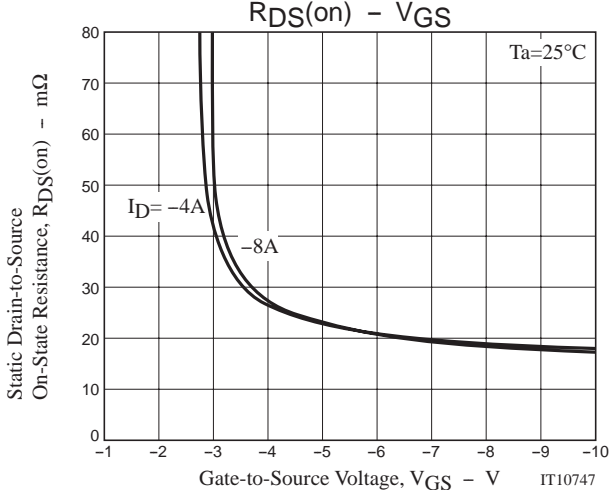
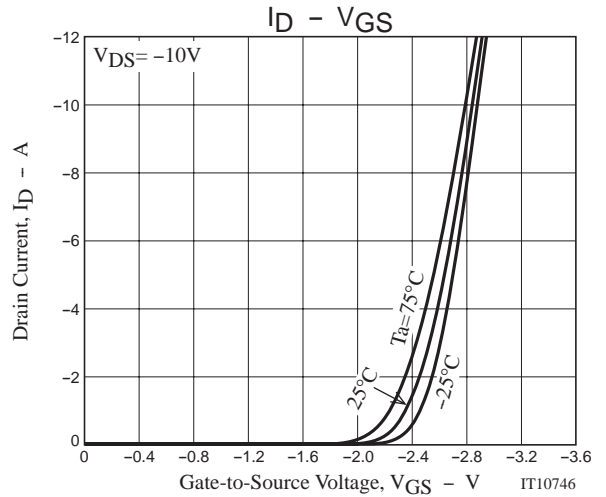
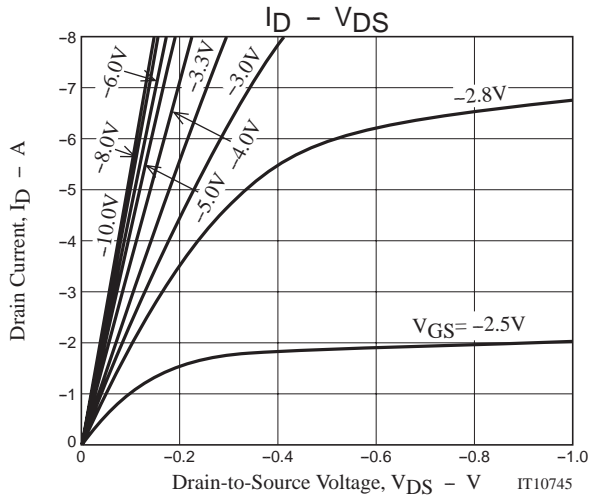
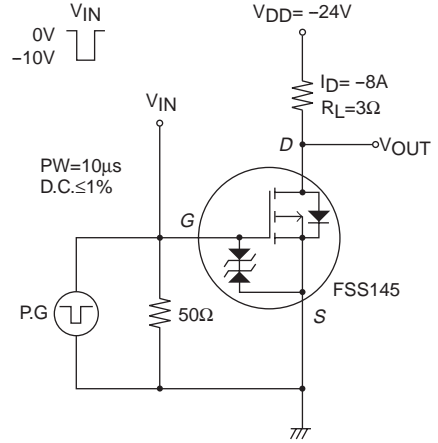
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V <sub>DS</sub> =-24V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-8A		63		nC
Gate-to-Source Charge	Qgs	V <sub>DS</sub> =-24V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-8A		9		nC
Gate-to-Drain "Miller" Charge	Qgd	V <sub>DS</sub> =-24V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-8A		12		nC
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-8A, V <sub>GS</sub> =0V		-0.81	-1.5	V

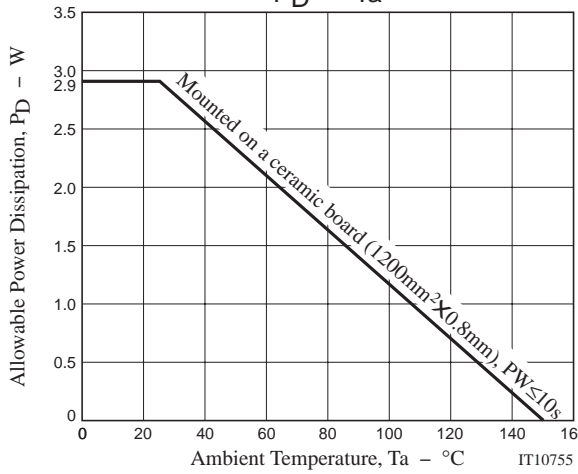
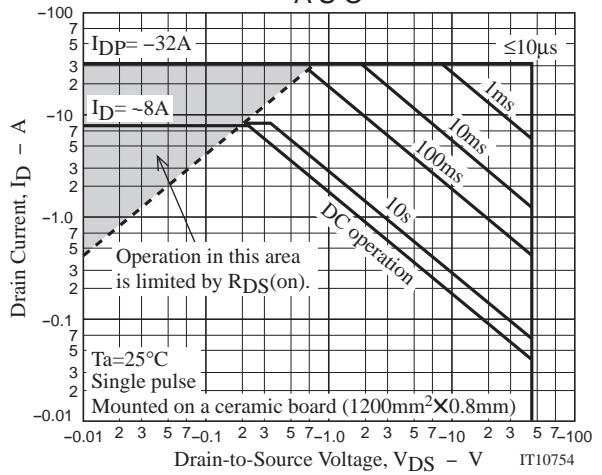
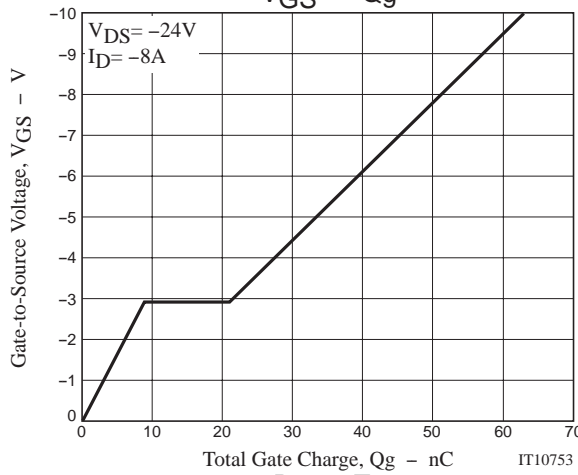
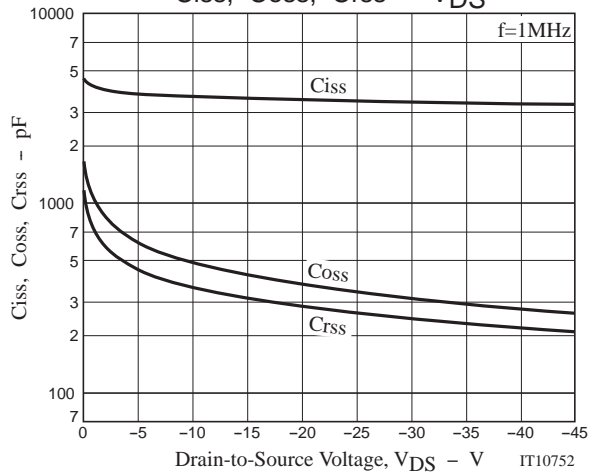
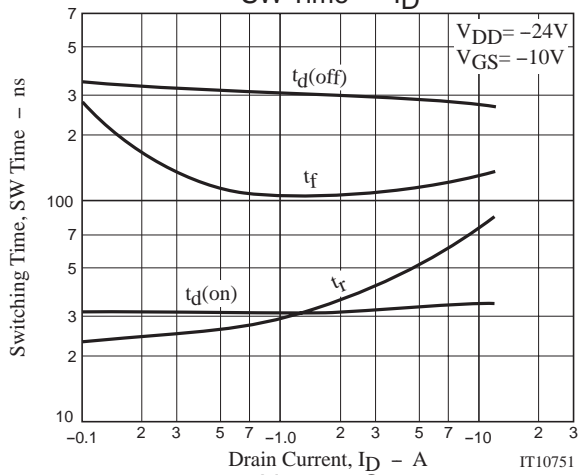
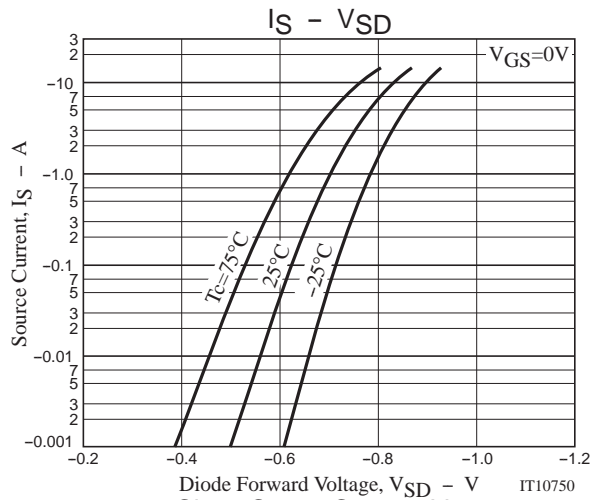
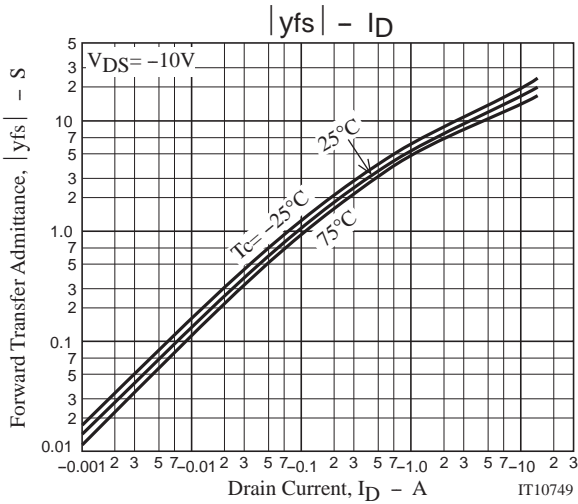
## Package Dimensions

unit : mm  
7005-002



## Switching Time Test Circuit





Note on usage : Since the FSS145 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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