



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 _{DSS}		-45	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		-8	A
Drain Current (PW≤10s)	I _D	Duty cycle≤1%	-8.5	A
Drain Current (PW≤10μs)	I _{DP}	Duty cycle≤1%	-32	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (1200mm ² ×0.8mm), PW≤10s	2.9	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	-45			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-45V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-8A	10	17		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-8A, V _{GS} =-10V		18	24	mΩ
	R _{DS(on)2}	I _D =-4A, V _{GS} =-4V		28	40	mΩ
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		3490		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		370		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-20V, f=1MHz		290		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		35		ns
Rise Time	t _r	See specified Test Circuit.		65		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		270		ns
Fall Time	t _f	See specified Test Circuit.		125		ns

Marking : S145

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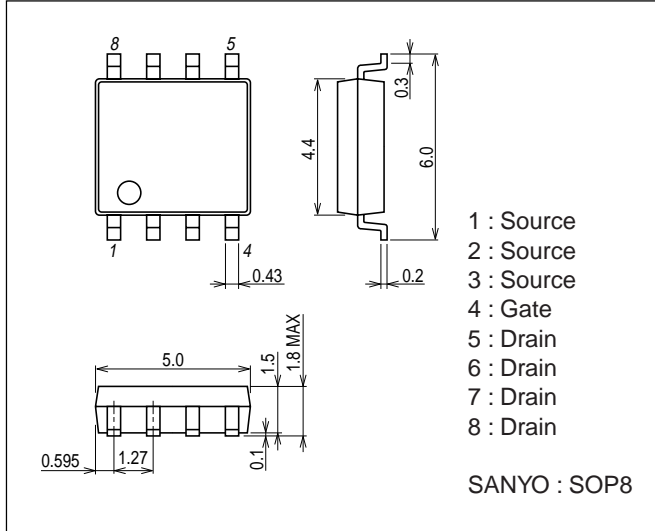
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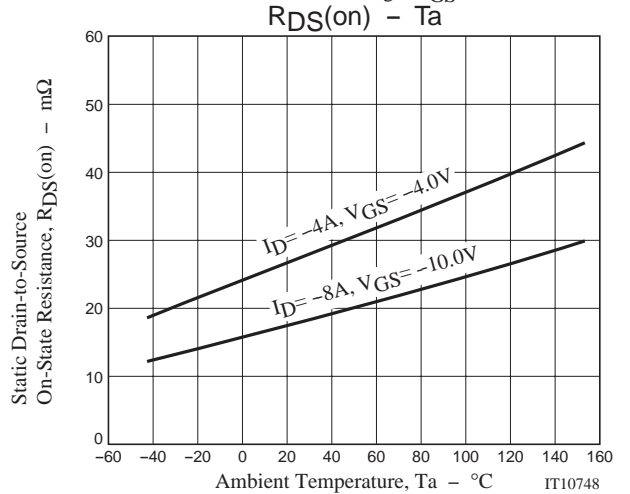
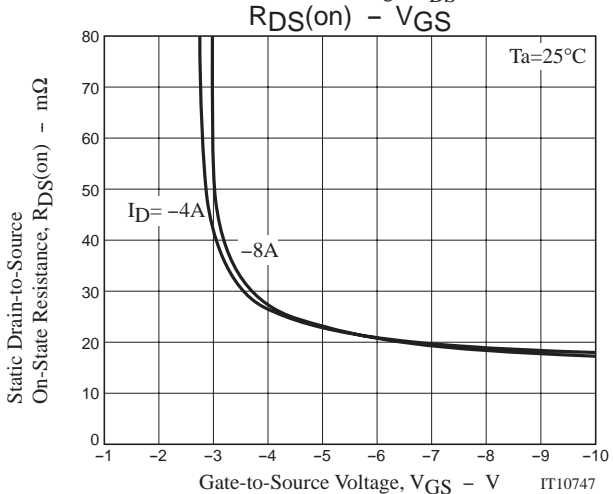
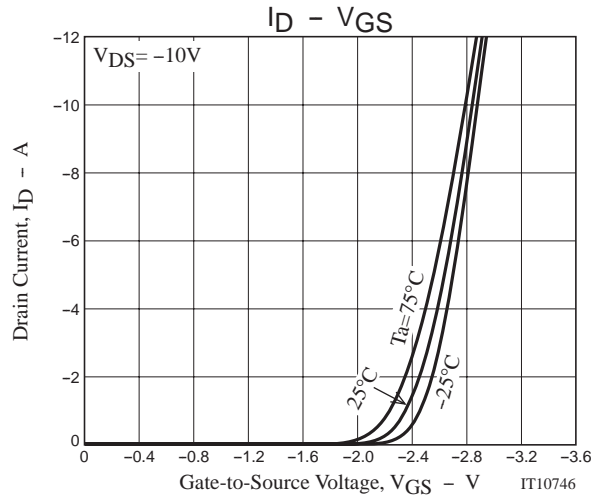
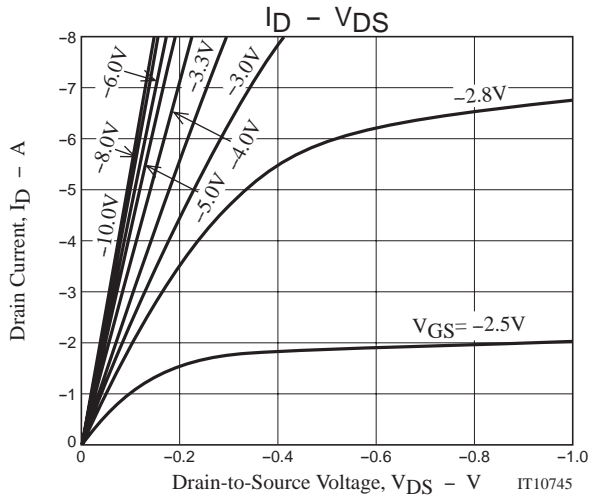
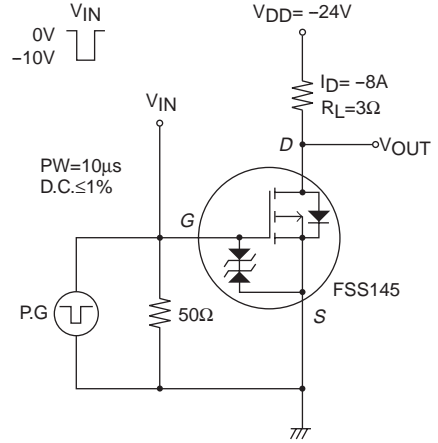
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	$V_{DS}=-24V, V_{GS}=-10V, I_D=-8A$		63		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-24V, V_{GS}=-10V, I_D=-8A$		9		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=-24V, V_{GS}=-10V, I_D=-8A$		12		nC
Diode Forward Voltage	VSD	$I_S=-8A, V_{GS}=0V$		-0.81	-1.5	V

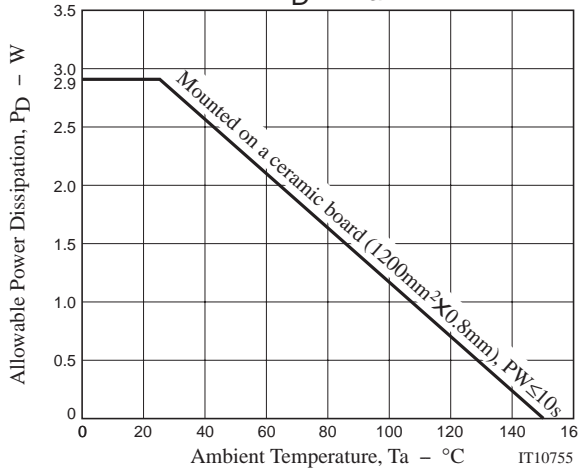
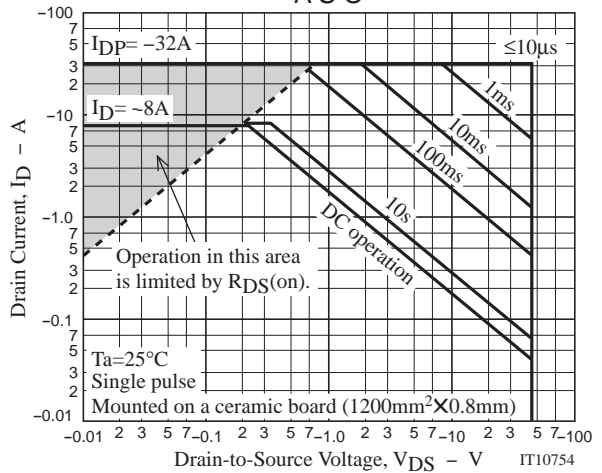
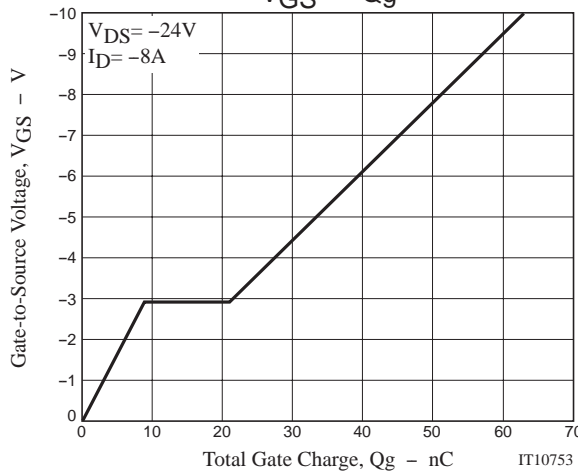
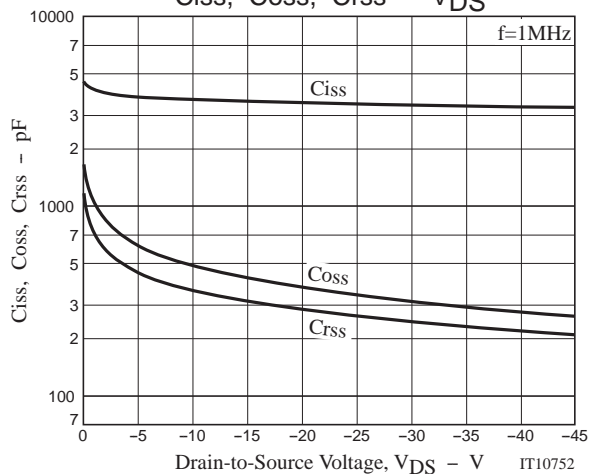
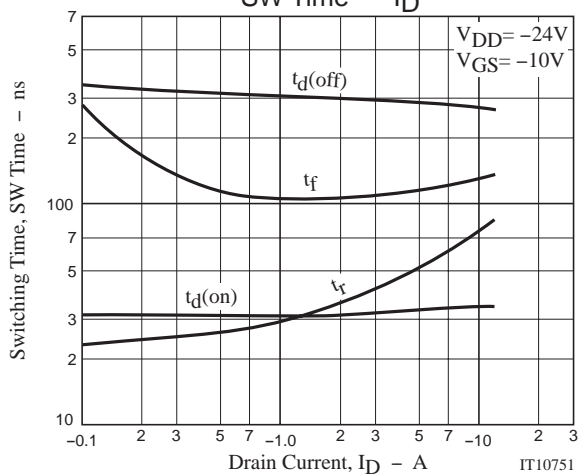
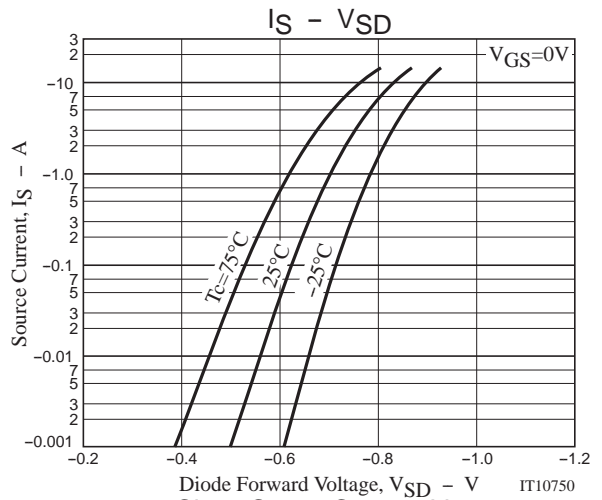
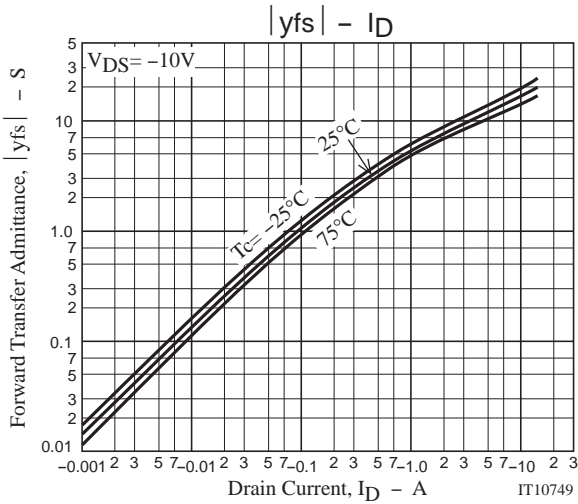
Package Dimensions

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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