

SANYO Semiconductors DATA SHEET

2SJ538—P-Channel Silicon MOSFET Load Switching Applications

Features

- · Low ON-resistance.
- · 4V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		-30	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	ID		-15	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-45	Α
Allowable Power Dissipation	PD		1.0	W
	"	Tc=25°C	30	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =-30V, V _{GS} =0V			-100	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0V			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =-10V, I _D =-1mA	-1.0		-2.5	V
Forward Transfer Admittance	yfs	VDS=-10V, ID=-8A	10	15		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =-8A, V _G S=-10V		24	30	mΩ
	RDS(on)2	I _D =-4A, V _G S=-4V		40	52	mΩ
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		2000		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		1000		pF
Reverse Transfer Capacitance	Crss	V _{DS} =-10V, f=1MHz		470	·	pF

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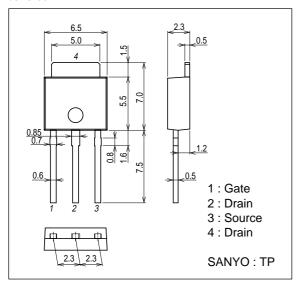
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Turn-ON Delay Time	td(on)	See specified Test Circuit.		20		ns
Rise Time	t _r	See specified Test Circuit.		70		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		210		ns
Fall Time	tf	See specified Test Circuit.		140		ns
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-10V, I _D =-8A		58		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-10V, I _D =-8A		7		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =-10V, V _{GS} =-10V, I _D =-8A		17		nC
Diode Forward Voltage	V _{SD}	I _S =-8A, V _{GS} =0V		-1.0	-1.5	V

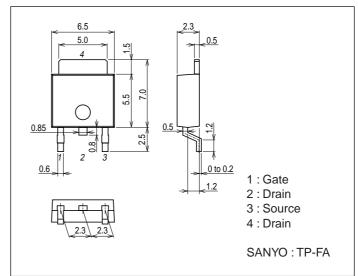
Package Dimensions

unit : mm (typ) 7518-004

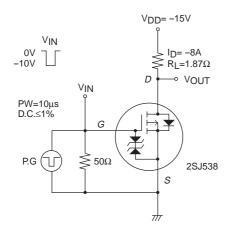


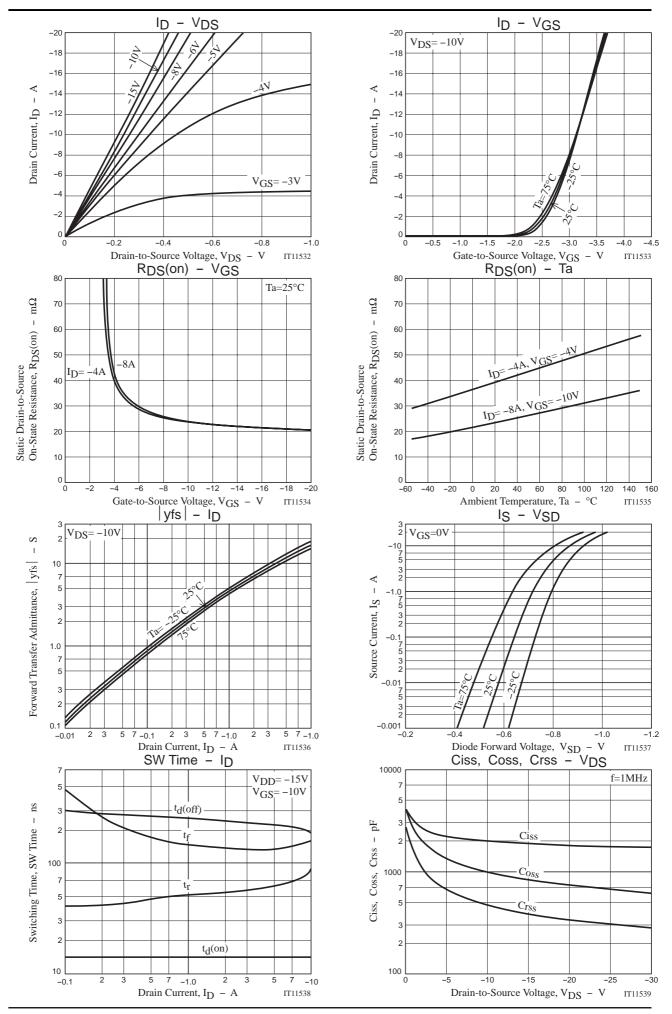
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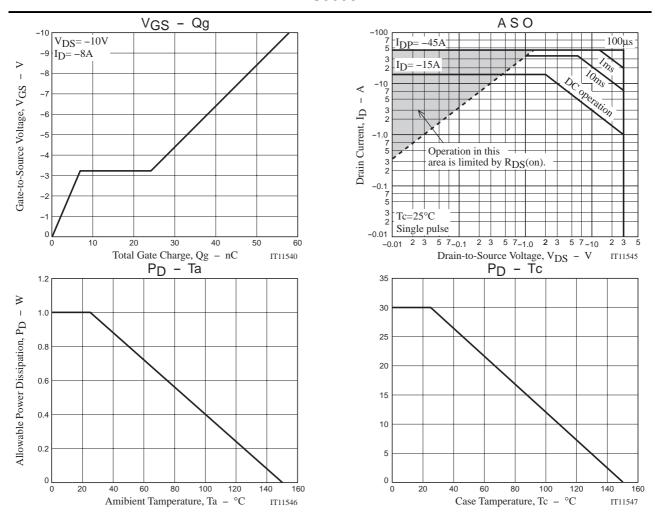
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Switching Time Test Circuit







Note on usage: Since the 2SJ538 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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