Ordering number:ENN6434

P-Channel Silicon MOSFET

2SJ485

Ultrahigh-Speed Switching Applications

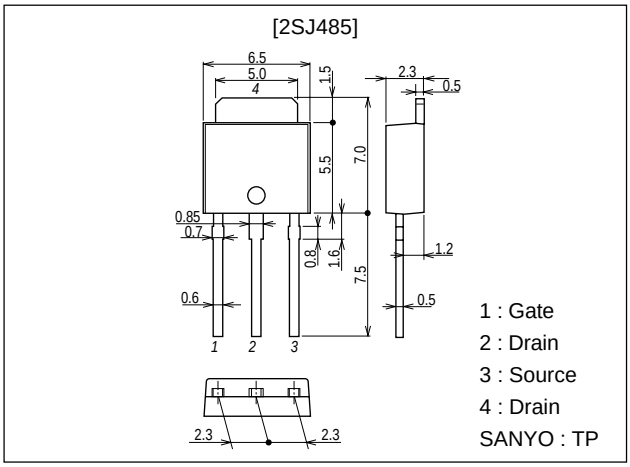
Features

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

Package Dimensions

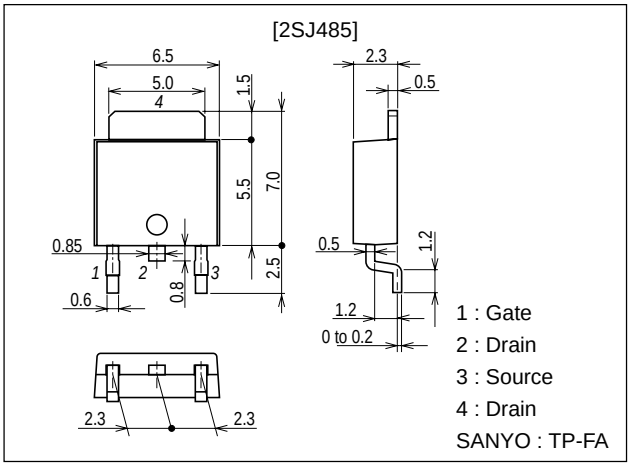
unit:mm

2083B



unit:mm

2092B



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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges,or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co.,Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Specifications

Absolute Maximum Ratings at Ta = 25˚C

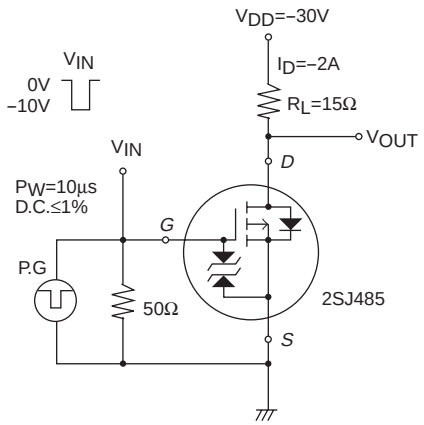
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		–60	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		–4	A
Drain Current (Pulse)	I_{DP}	PW≤10µs, duty cycle≤1%	–16	A
Allowable Power Dissipation	P_D		1	W
		Tc=25˚C	20	W
Channel Temperature	Tch		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

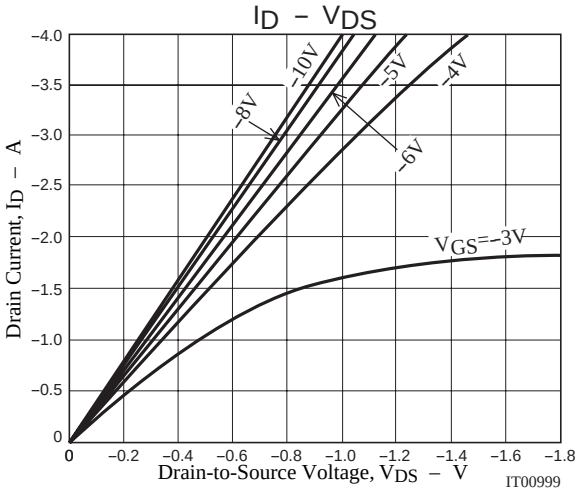
Electrical Characteristics at Ta = 25˚C

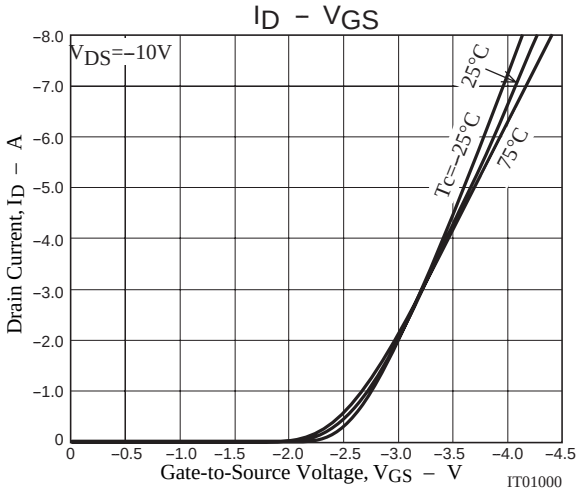
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=–1mA, V_{GS}=0	–60			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=–60V, V_{GS}=0			–100	µA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0			±10	µA
Cutoff Voltage	V_{GS}(off)	V_{DS}=–10V, I_D=–1mA	–1.0		–2.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=–10V, I_D=–2A	2.4	3.8		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)1	I_D=–2A, V_{GS}=–10V		250	330	mΩ
	R_{DS}(on)2	I_D=–2A, V_{GS}=–4V		350	480	mΩ
Input Capacitance	Ciss	V_{DS}=–20V, f=1MHz		370		pF
Output Capacitance	Coss	V_{DS}=–20V, f=1MHz		120		pF
Reverse Transfer Capacitance	Crss	V_{DS}=–20V, f=1MHz		25		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	t_r	See specified Test Circuit		45		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		170		ns
Fall Time	t_f	See specified Test Circuit		110		ns
Diode Forward Voltage	V_{SD}	I_S=–4A, V_{GS}=0		–1.0	–1.2	V

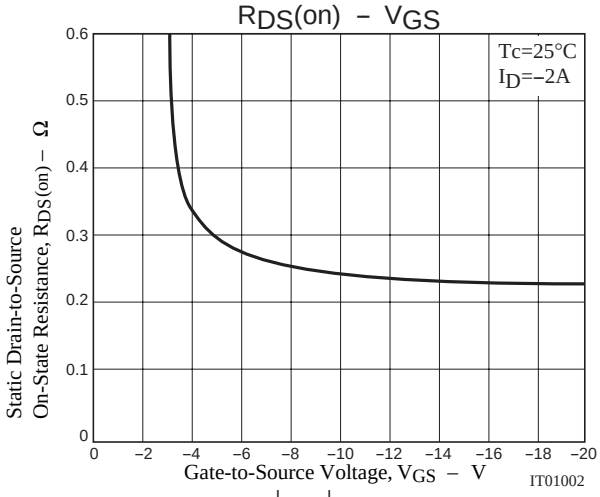
Marking : J485

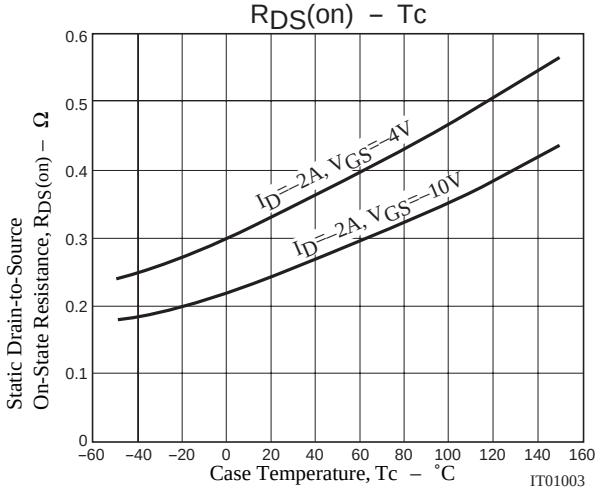
Switching Time Test Circuit

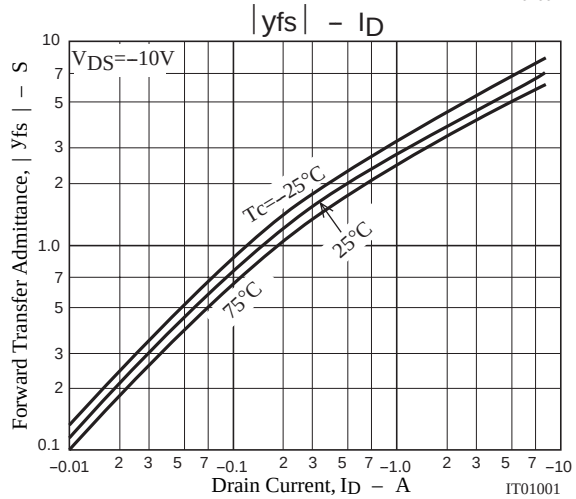


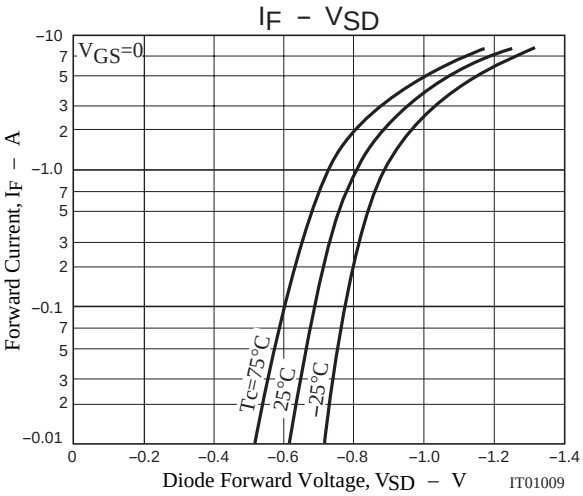

ID – VDS
Drain Current, ID – A
Drain-to-Source Voltage, VDS – V
–10V
–8V
–5V
–4V
–6V
VGS=–3V
IT00999

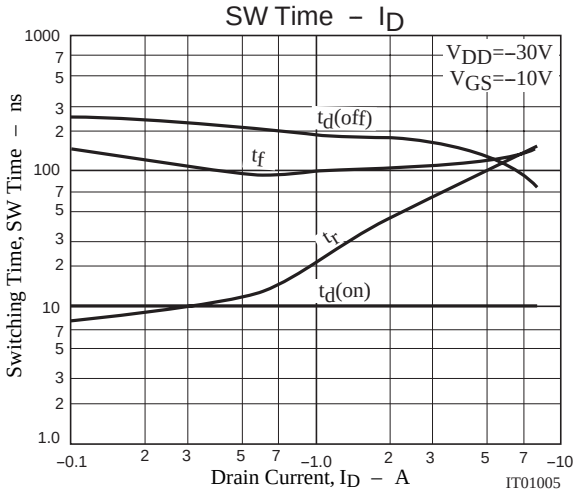

ID – VGS
VDS=–10V
Drain Current, ID – A
Gate-to-Source Voltage, VGS – V
25°C
Tc=–25°C
75°C
IT01000

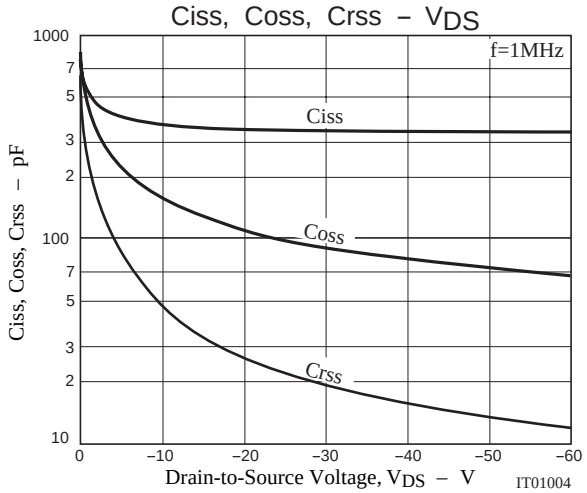

RDS(on) – VGS
Tc=25°C
ID=–2A
Static Drain-to-Source On-State Resistance, RDS(on) – Ω
Gate-to-Source Voltage, VGS – V
IT01002

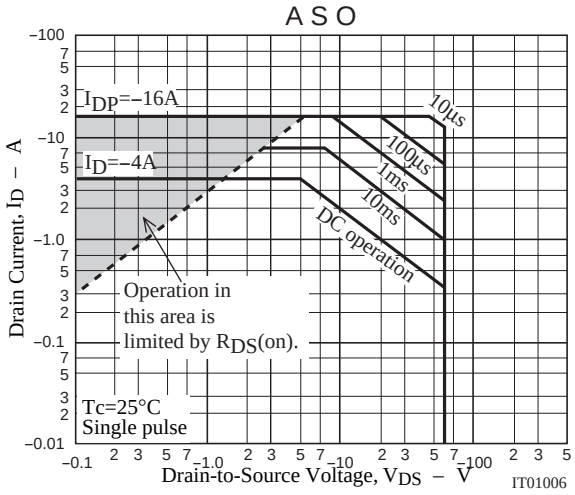

RDS(on) – Tc
ID=–2A, VGS=–4V
ID=–2A, VGS=–10V
Static Drain-to-Source On-State Resistance, RDS(on) – Ω
Case Temperature, Tc – °C
IT01003

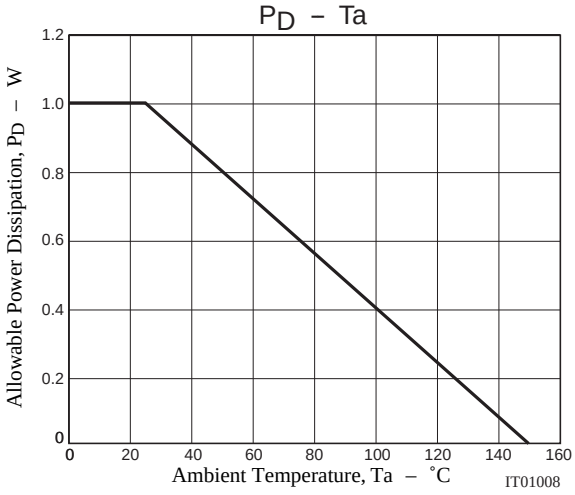

|yfs| – ID
VDS=–10V
Tc=–25°C
25°C
75°C
Forward Transfer Admittance, |yfs| – S
Drain Current, ID – A
IT01001

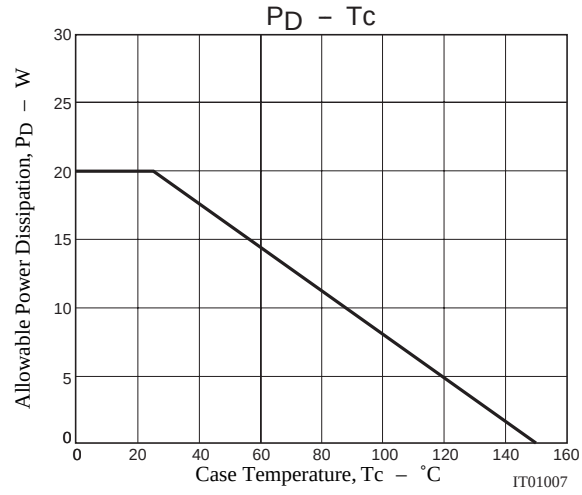

IF – VSD
VGS=0
Tc=75°C
25°C
–25°C
Forward Current, IF – A
Diode Forward Voltage, VSD – V
IT01009


SW Time – ID
VDD=–30V
VGS=–10V
td(off)
tf
tr
td(on)
Switching Time, SW Time – ns
Drain Current, ID – A
IT01005


Ciss, Coss, Crss – VDS
f=1MHz
Ciss
Coss
Crss
Ciss, Coss, Crss – pF
Drain-to-Source Voltage, VDS – V
IT01004







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