

**2SJ584LS**

Ultrahigh-Speed Switching Applications

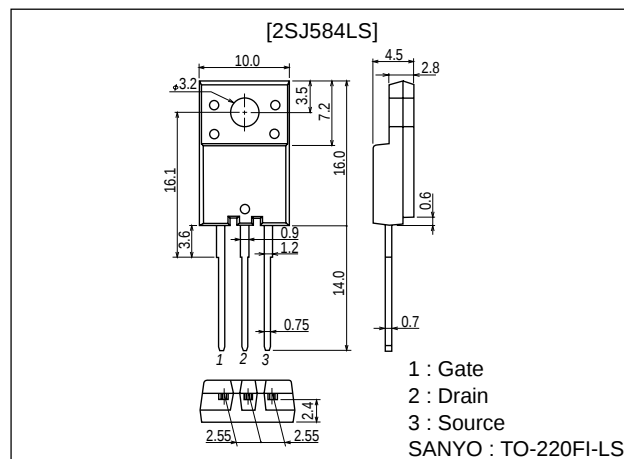
Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- Micaless package facilitating mounting.

Package Dimensions

unit:mm

2078B



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-250	V
Gate-to-Source Voltage	V_{GSS}		±30	V
Drain Current (DC)	I_D		-4.5	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	-18	A
Allowable Power Dissipation	P_D		2.0	W
		$T_c = 25^\circ C$	25	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	$V_{(BR)DSS}$	$I_D = -1mA$, $V_{GS} = 0$	-250			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu A$, $V_{DS} = 0$	±30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -250V$, $V_{GS} = 0$			-100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 25V$, $V_{DS} = 0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V$, $I_D = -1mA$	-3.5		-5.0	V
Forward Transfer Admittance	yfs	$V_{DS} = -10V$, $I_D = -2.5A$	1.5	2.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D = -2.5A$, $V_{GS} = -10V$		0.95	1.2	Ω

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SANYO Electric Co., Ltd. Semiconductor Company

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

80300TS (KOTO) TA-2755 No.6410-1/4

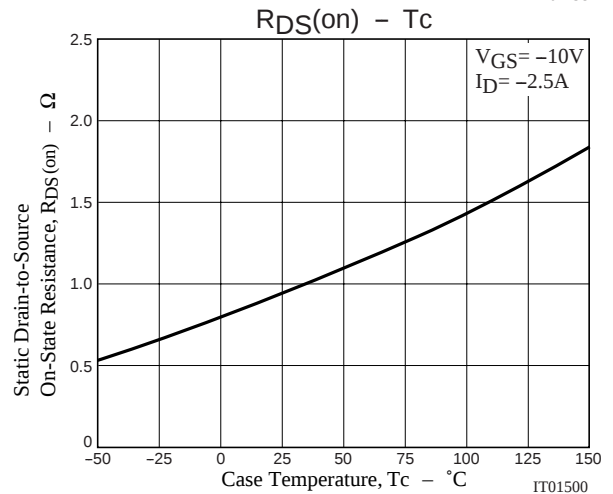
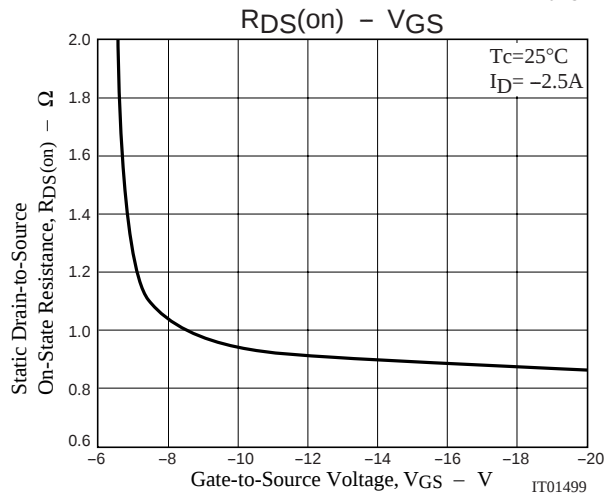
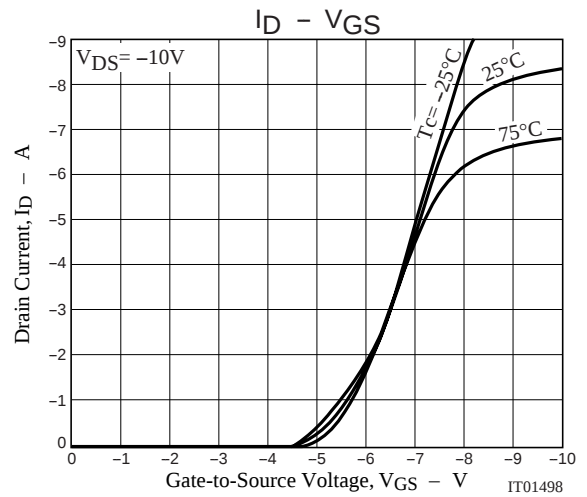
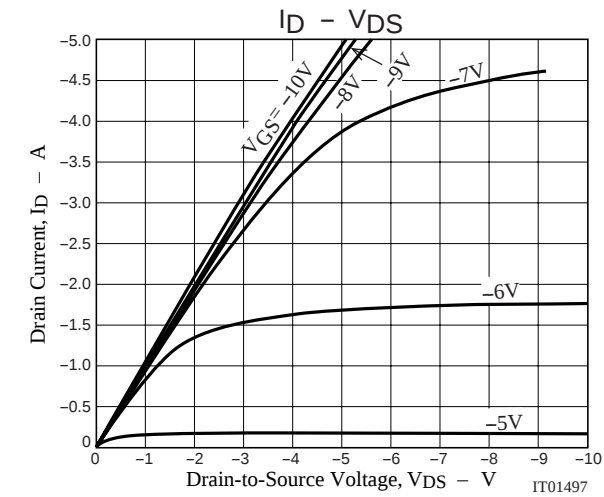
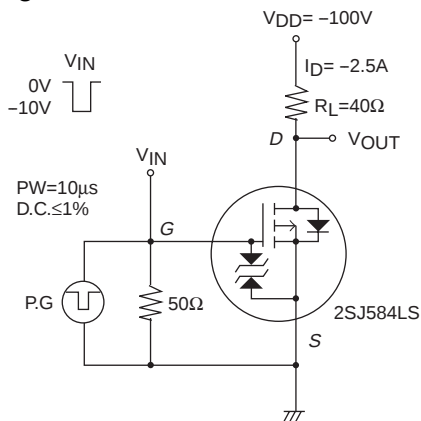
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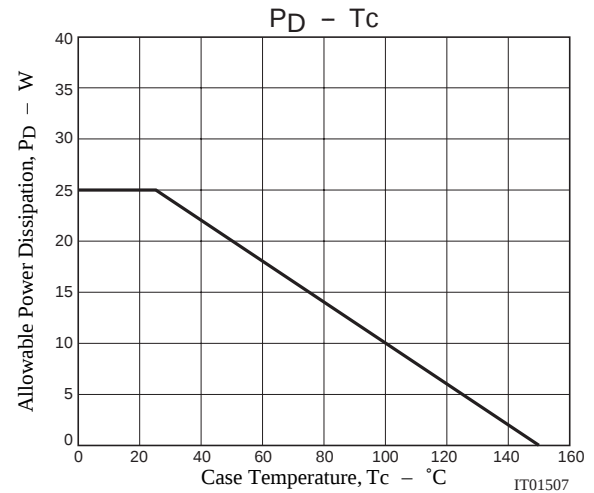
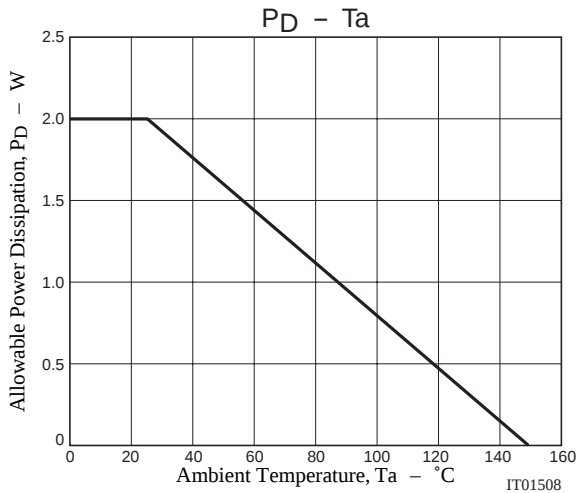
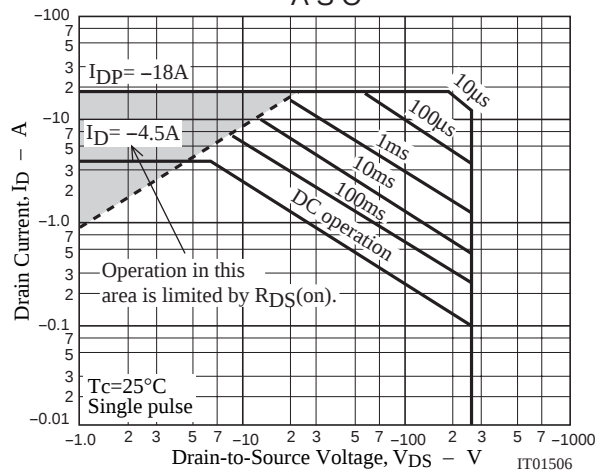
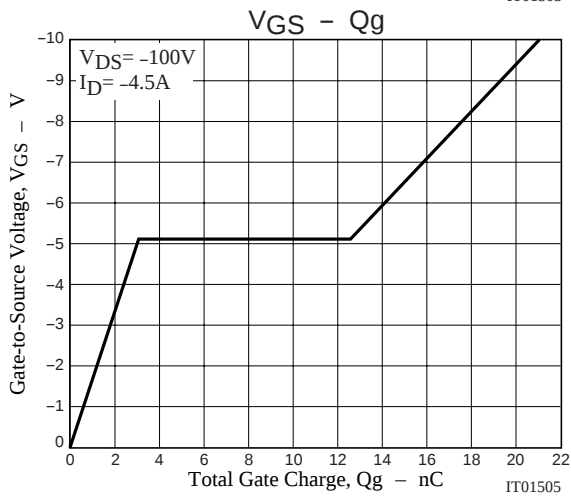
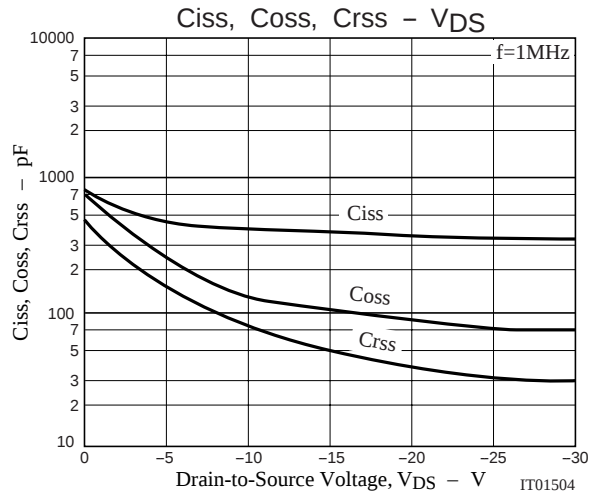
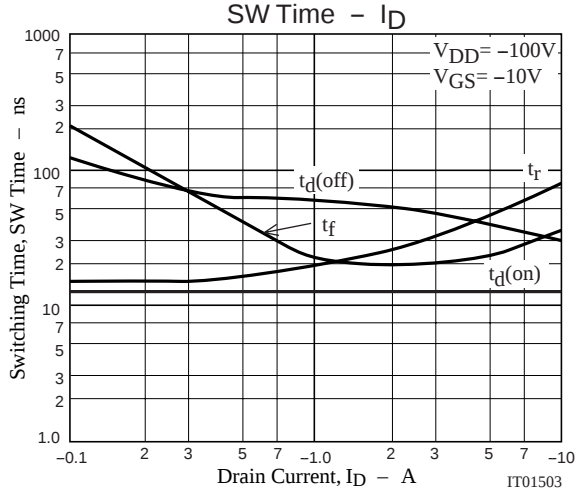
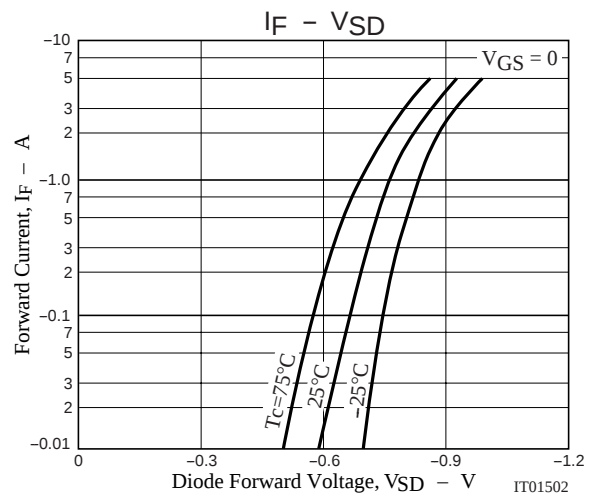
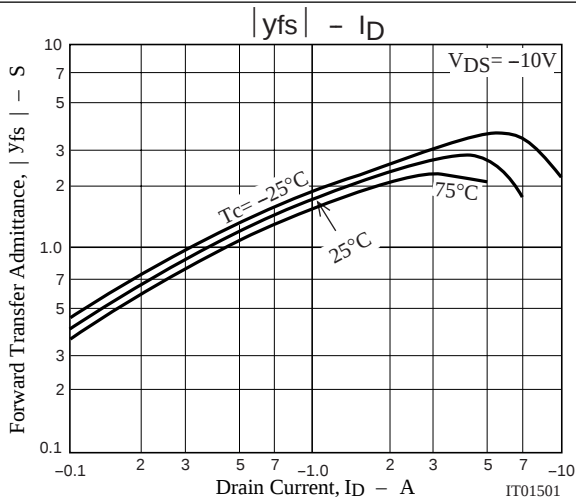
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	C_{iss}	$V_{DS} = -20V, f = 1MHz$		450		pF
Output Capacitance	C_{oss}	$V_{DS} = -20V, f = 1MHz$		120		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20V, f = 1MHz$		50		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		12.5		ns
Rise Time	t_r	See specified Test Circuit		30		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		52		ns
Fall Time	t_f	See specified Test Circuit		21		ns
Total Gate Charge	Q_g	$V_{DS} = -100V, V_{GS} = -10V, I_D = -4.5A$		22		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -100V, V_{GS} = -10V, I_D = -4.5A$		3.7		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS} = -100V, V_{GS} = -10V, I_D = -4.5A$		11		nC
Diode Forward Voltage	V_{SD}	$I_S = -4.5A, V_{GS} = 0$		-0.9	-1.5	V

Marking : J584

Switching Time Test Circuit



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