

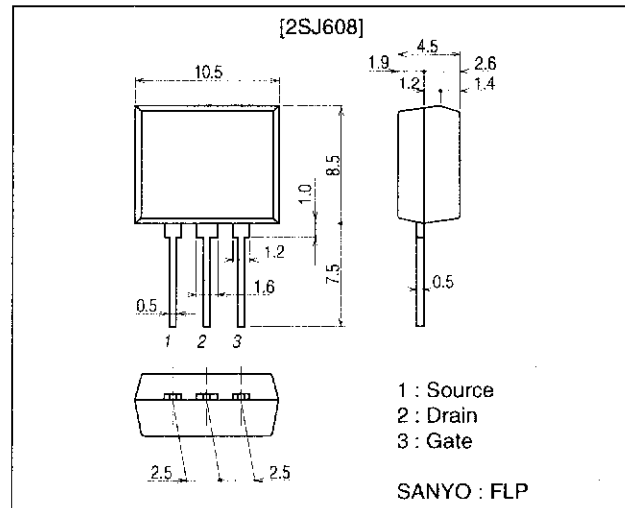
**SANYO****2SJ608****Ultrahigh Speed Switching Applications****Features**

- Low ON-resistance.
- Ultrahigh speed switching.
- Low-voltage drive.
- Mounting height 9.5mm.
- Meets radial taping.

**Package Dimensions**

unit : mm

2085A

**Specifications****Absolute Maximum Ratings** at  $T_a=25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DS}$		-30	V
Gate-to-Source Voltage	$V_{GS}$		$\pm 20$	V
Drain Current (DC)	$I_D$		-4	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}$ , duty cycle $\leq 1\%$	-16	A
Allowable Power Dissipation	$P_D$		1.4	W
Channel Temperature	$T_{ch}$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

**Electrical Characteristics** at  $T_a=25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}$ , $V_{GS} = 0$	-30			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -30\text{V}$ , $V_{GS} = 0$			-1	$\mu\text{A}$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 16\text{V}$ , $V_{DS} = 0$			$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}$ , $I_D = -1\text{mA}$	-1.0		-2.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10\text{V}$ , $I_D = -2\text{A}$	2.9	4.2		S

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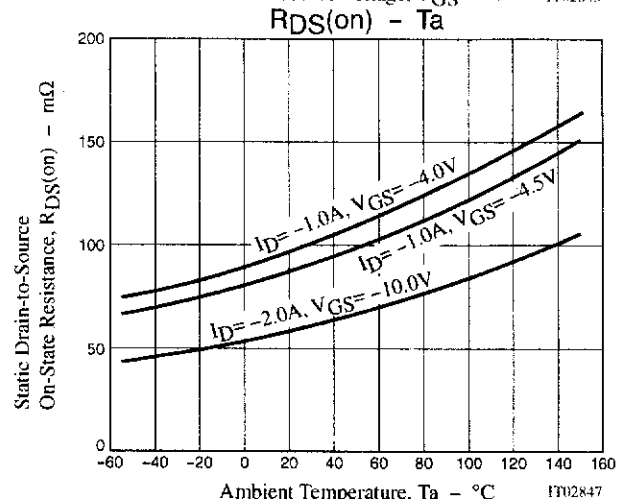
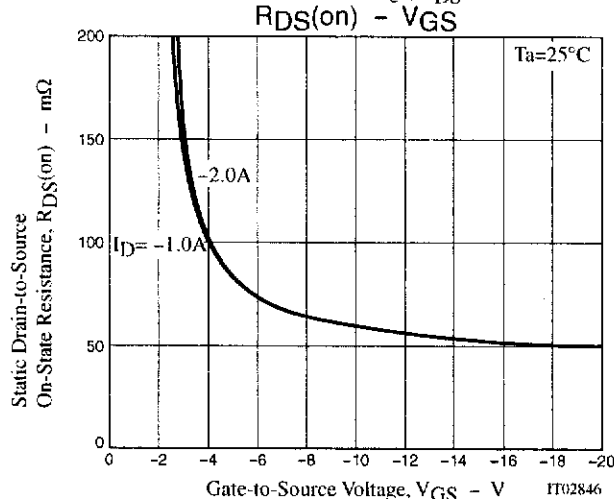
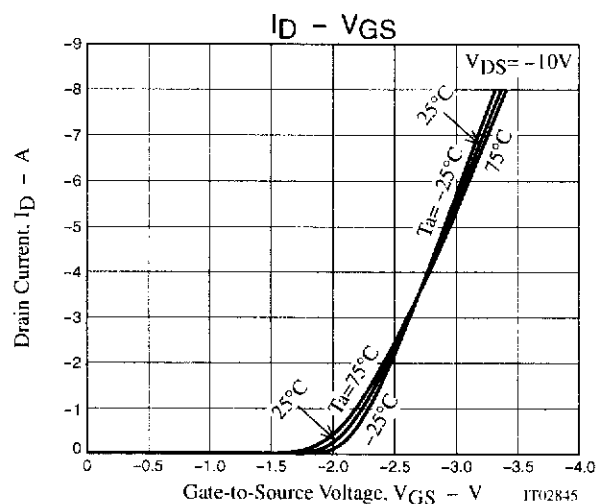
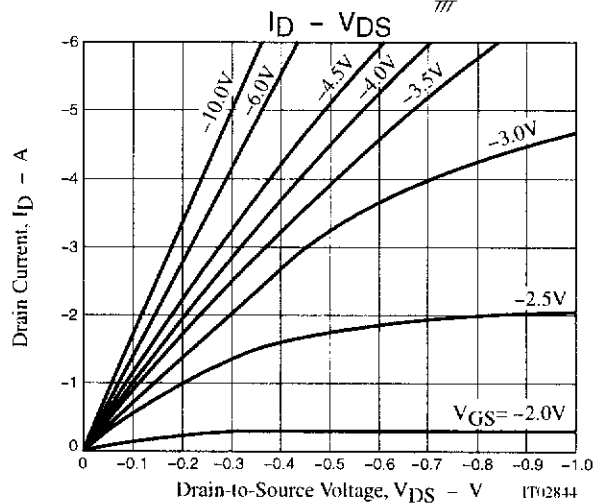
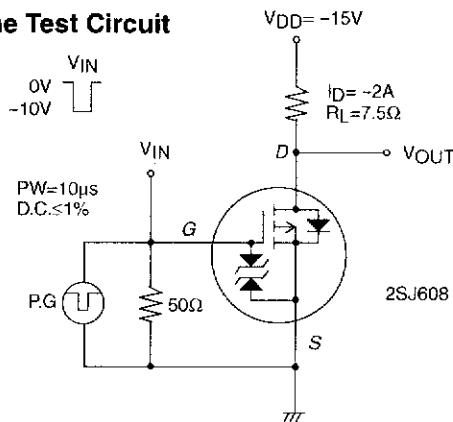
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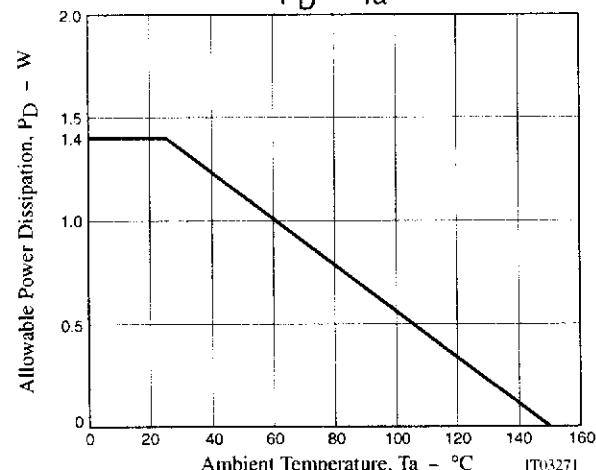
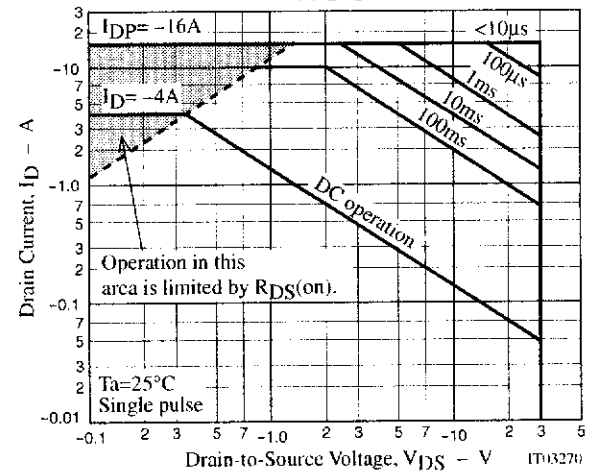
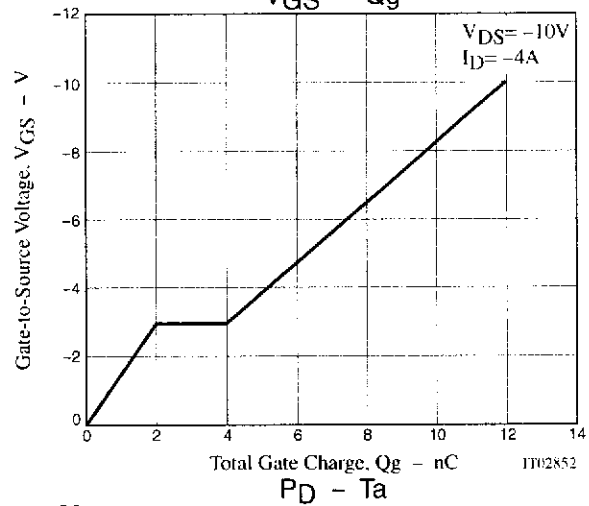
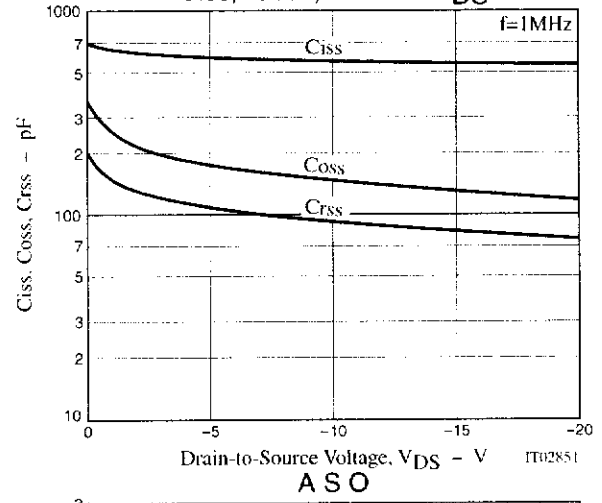
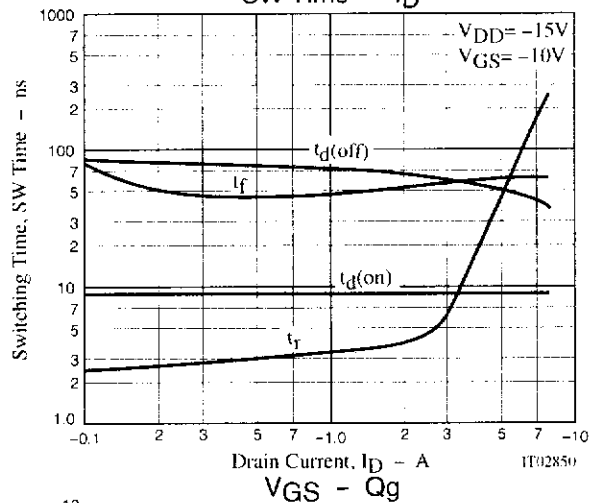
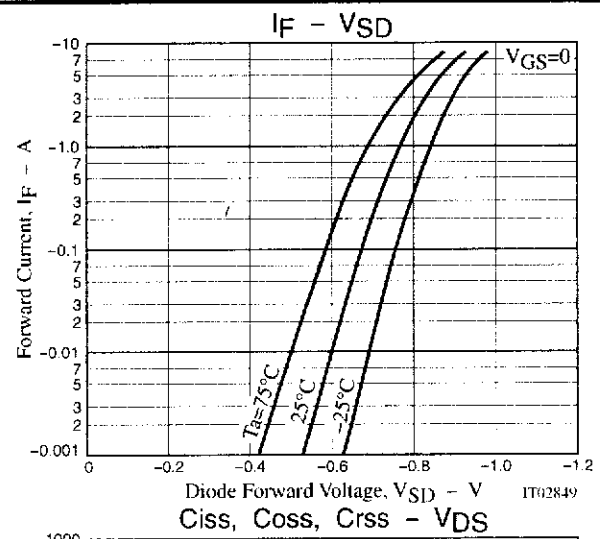
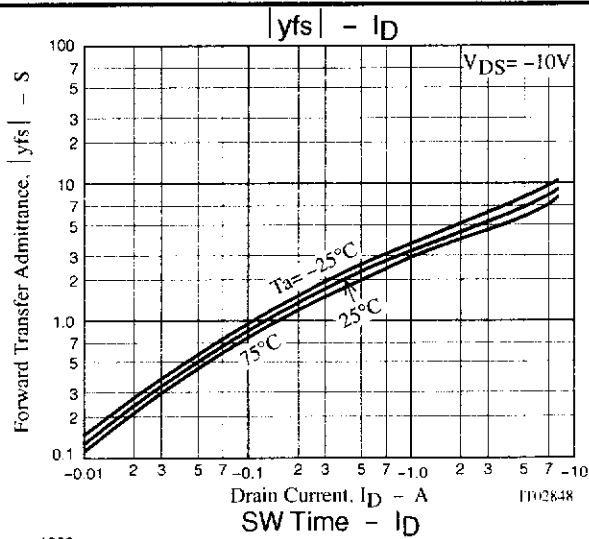
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on) 1}$	$I_D = -2A, V_{GS} = -10V$		60	78	$m\Omega$
	$R_{DS(on) 2}$	$I_D = -1A, V_{GS} = -4.5V$		90	126	$m\Omega$
	$R_{DS(on) 3}$	$I_D = -1A, V_{GS} = -4V$		100	140	$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -10V, f = 1MHz$		560		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -10V, f = 1MHz$		150		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -10V, f = 1MHz$		95		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		9		ns
Rise Time	$t_r$	See specified Test Circuit		4		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		70		ns
Fall Time	$t_f$	See specified Test Circuit		55		ns
Total Gate Charge	$Q_g$	$V_{DS} = -10V, V_{GS} = -10V, I_D = -4A$		12		nC
Gate-to-Source Charge	$Q_{gs}$	$V_{DS} = -10V, V_{GS} = -10V, I_D = -4A$		2		nC
Gate-to-Drain "Miller" Charge	$Q_{gd}$	$V_{DS} = -10V, V_{GS} = -10V, I_D = -4A$		2		nC
Diode Forward Voltage	$V_{SD}$	$I_S = -4A, V_{GS} = 0$		-0.88	-1.5	V

## Switching Time Test Circuit





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