



Load Switching Applications

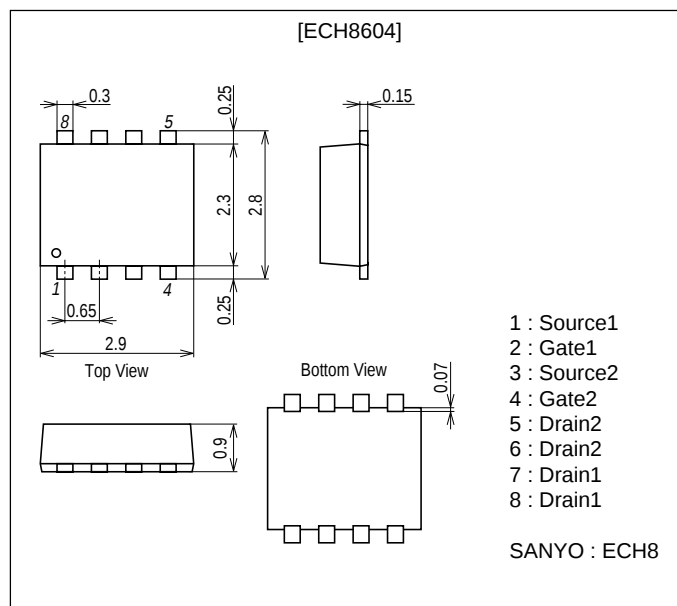
Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 2.5V drive

Package Dimensions

unit : mm

2206A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		20	V
Gate-to-Source Voltage	V_{GSS}		± 10	V
Drain Current (DC)	I_D		6	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	40	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (900mm $\times$ 0.8mm)1unit	1.3	W
Total Dissipation	P_T	Mounted on a ceramic board (900mm $\times$ 0.8mm)	1.5	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	$V_{(BR)DSS}$	$I_D = 1mA$, $V_{GS} = 0$	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V$, $V_{GS} = 0$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8V$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	0.5		1.3	V

Marking : KE

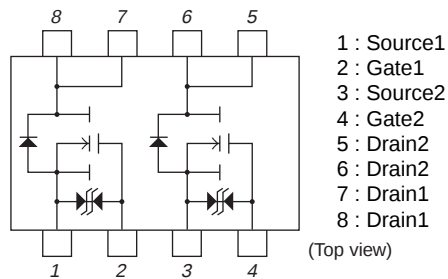
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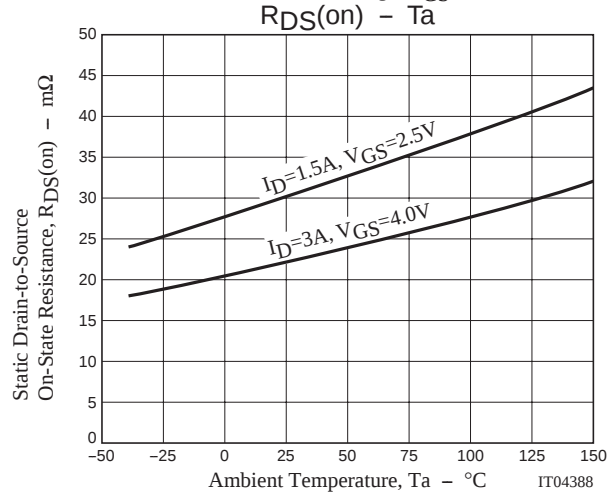
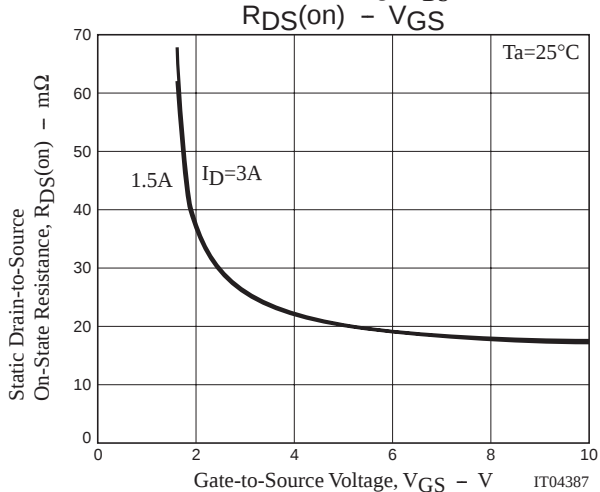
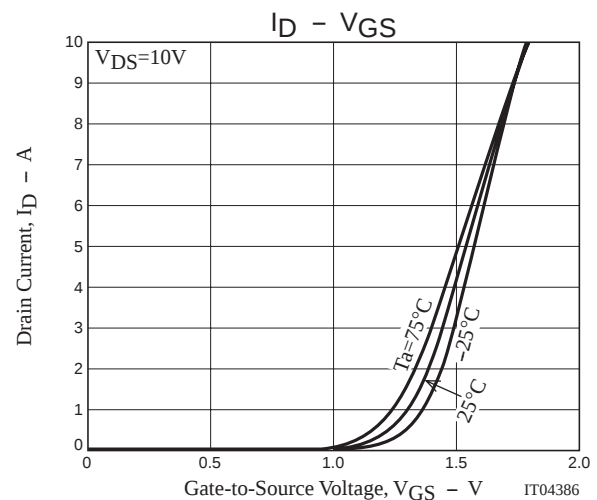
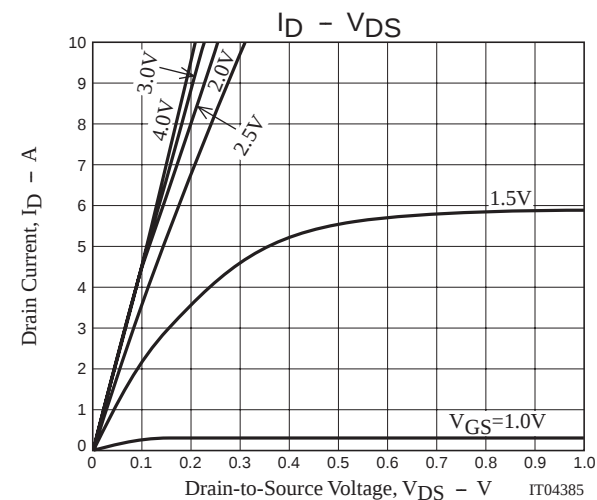
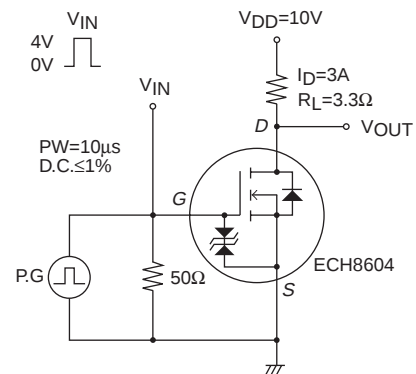
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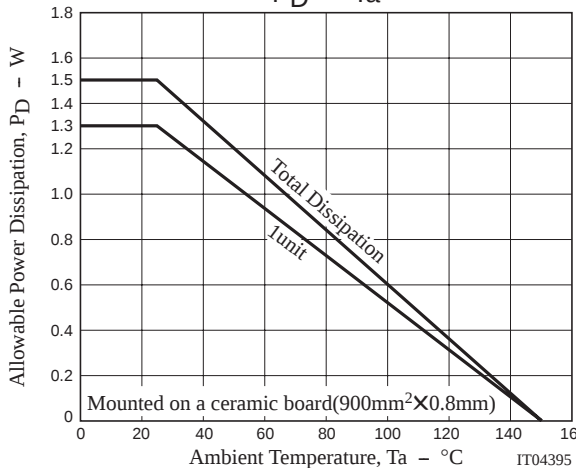
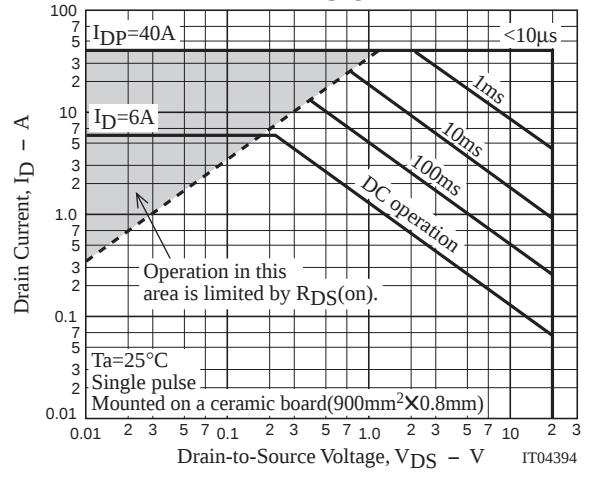
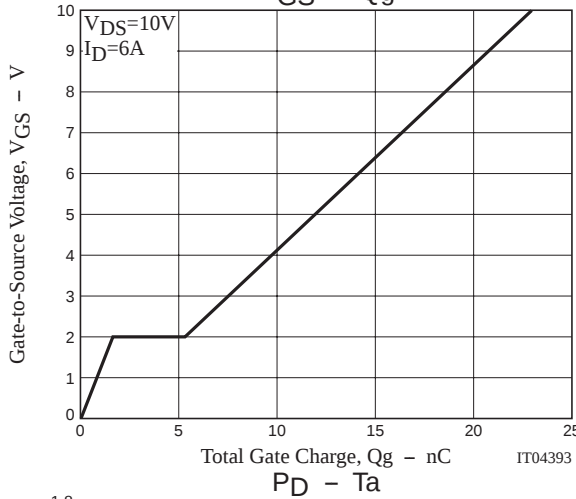
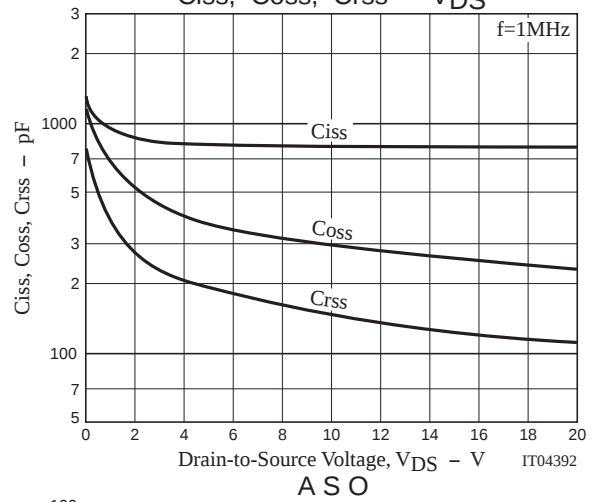
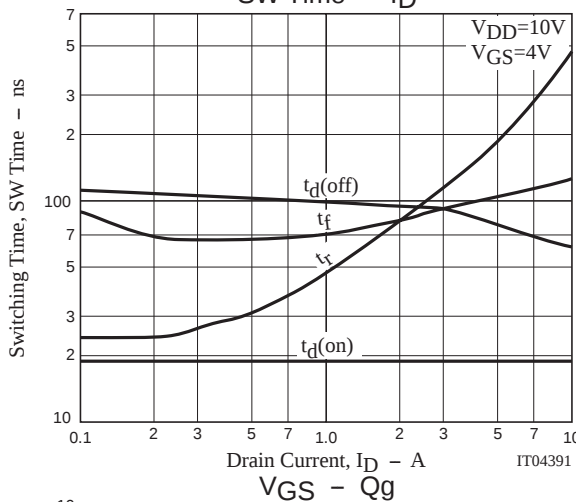
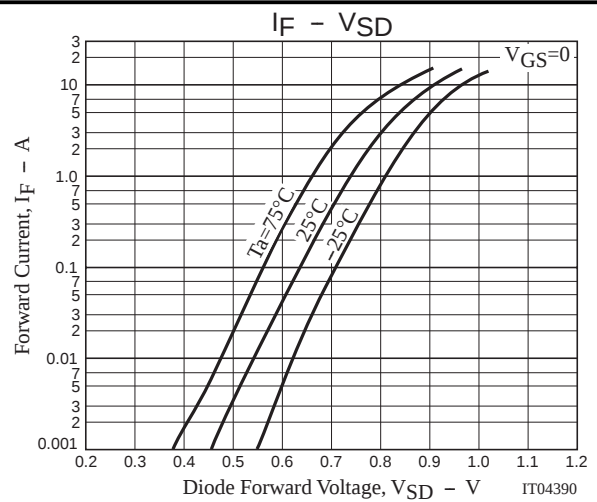
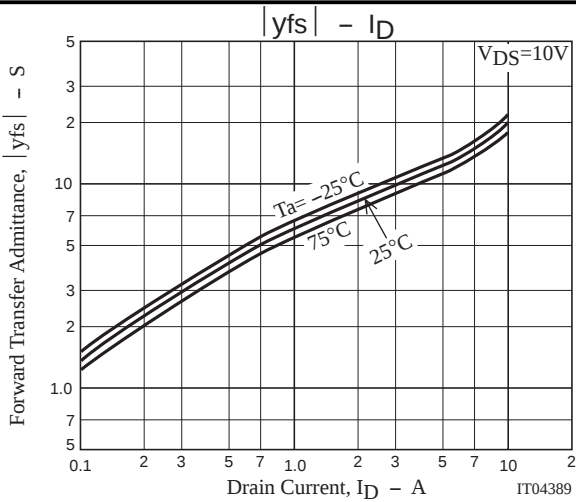
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=3A$	7	10		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=3A, V_{GS}=4V$		22	30	$m\Omega$
	$R_{DS(on)2}$	$I_D=1.5A, V_{GS}=2.5V$		30	44	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		700		pF
Output Capacitance	C_{oss}	$V_{DS}=10V, f=1MHz$		300		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, f=1MHz$		150		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		19		ns
Rise Time	t_r	See specified Test Circuit.		134		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		90		ns
Fall Time	t_f	See specified Test Circuit.		94		ns
Total Gate Charge	Q_g	$V_{DS}=10V, V_{GS}=10V, I_D=6A$		23		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=10V, V_{GS}=10V, I_D=6A$		1.6		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=10V, V_{GS}=10V, I_D=6A$		3.6		nC
Diode Forward Voltage	V_{SD}	$I_S=6A, V_{GS}=0$		0.84	1.2	V

Electrical Connection



Switching Time Test Circuit





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