



**Ultrahigh-Speed Switching Applications**

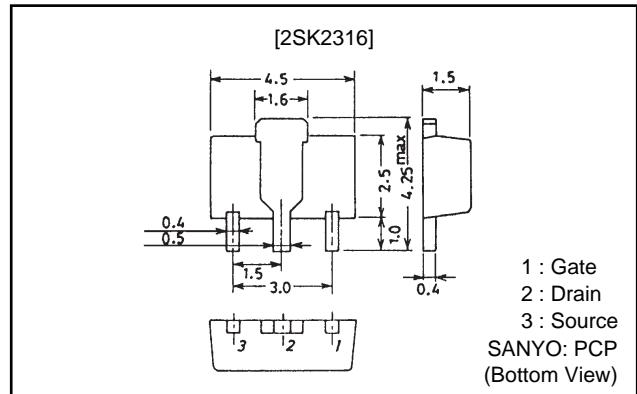
**Features**

- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive (2.5V drive).

**Package Dimensions**

unit: mm

**2062A-PCP**



**Specifications**

**Absolute Maximum Ratings** at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		20	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±10	V
Drain Current (DC)	I <sub>D</sub>		2	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μd, duty cycle≤1%	8	A
Allowable Power Dissipation	P <sub>D</sub>	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)	1.5	W
		T <sub>c</sub> =25°C	3.5	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

**Electrical Characteristics** at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> =1mA, V <sub>GS</sub> =0	20			V
G-S Breakdown Voltage	V <sub>(BR)GSS</sub>	I <sub>G</sub> =±100μA, V <sub>DS</sub> =0	±10			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =16V, V <sub>GS</sub> =0			100	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±8V, V <sub>DS</sub> =0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	0.5		1.5	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1A	1.8	2.8		S
Static Drain-to-Source ON-State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> =1A, V <sub>GS</sub> =4V		140	200	mΩ
ON-State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> =1A, V <sub>GS</sub> =2.5V		200	320	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, f=1MHz		170		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> =10V, f=1MHz		145		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =10V, f=1MHz		50		pF

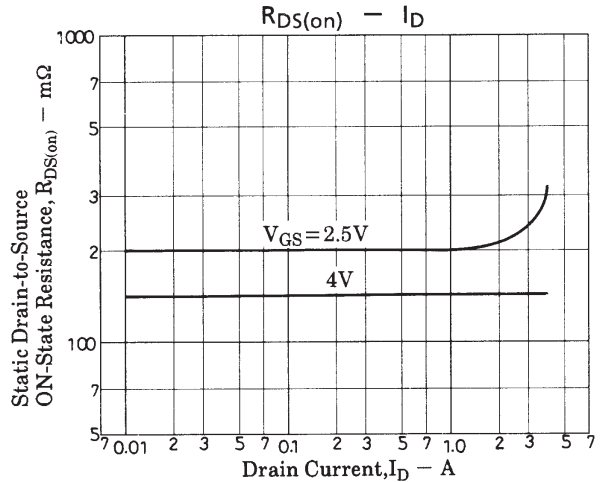
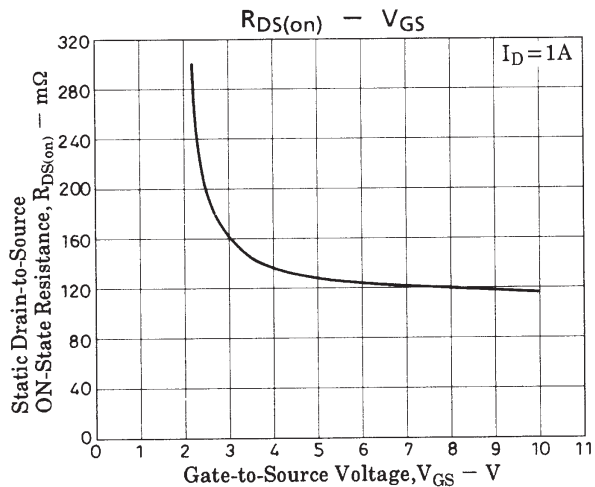
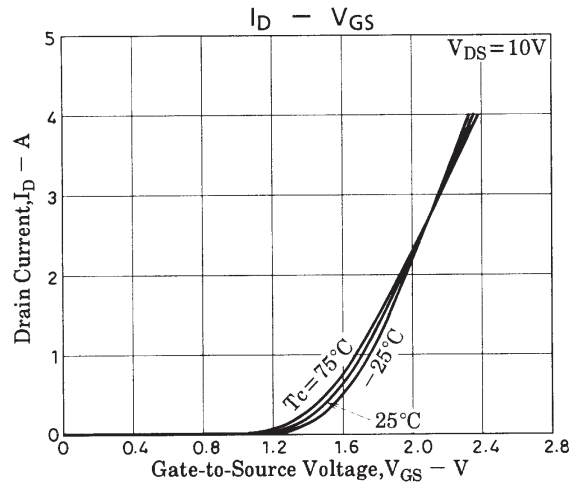
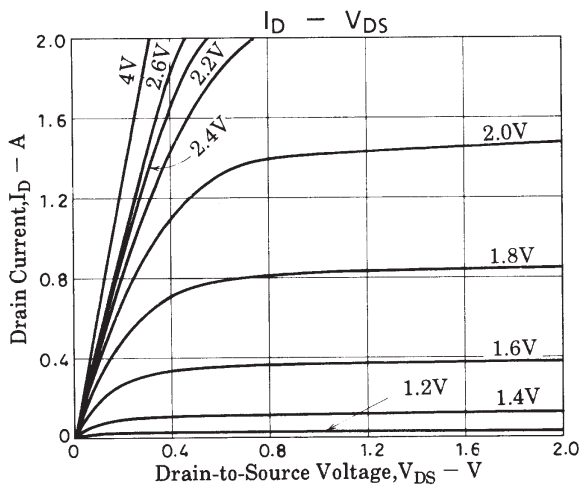
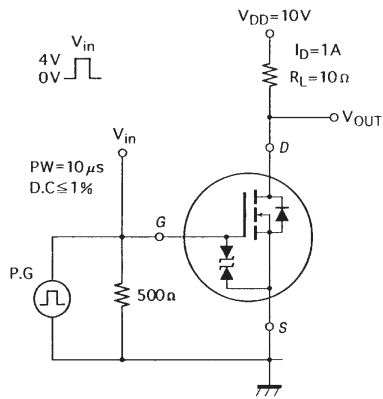
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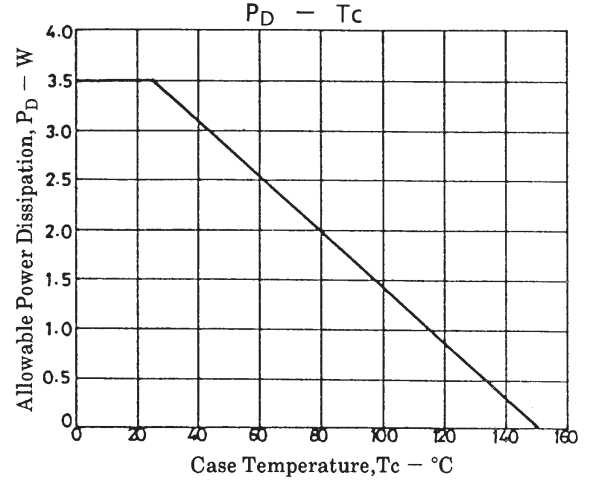
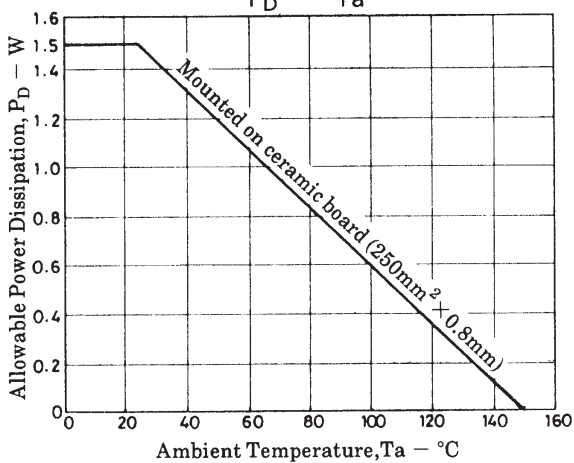
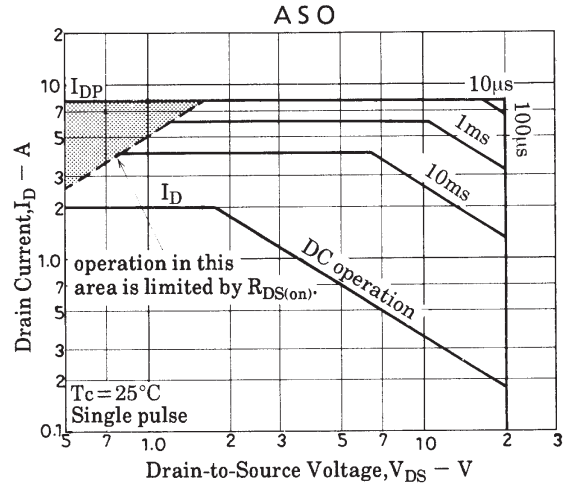
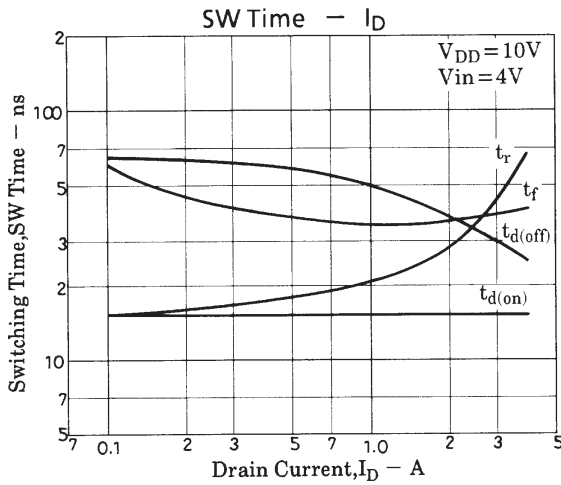
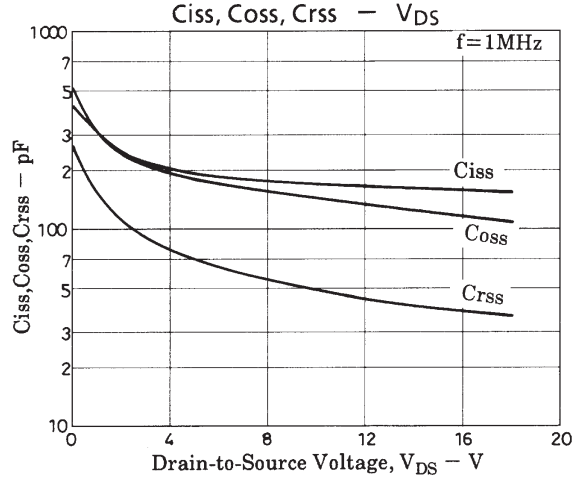
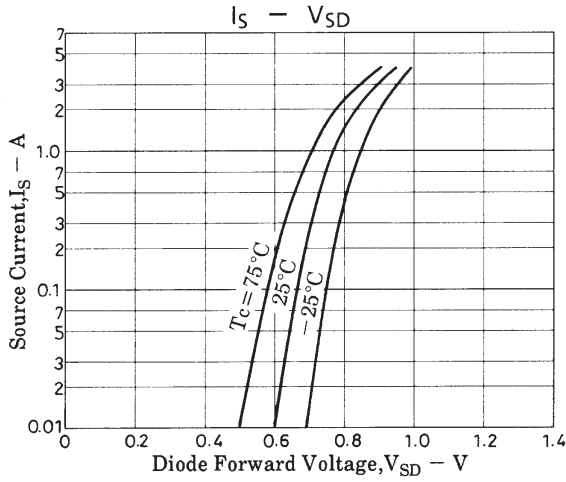
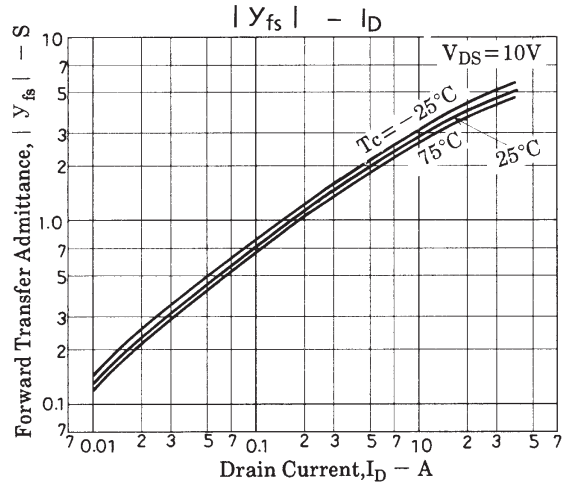
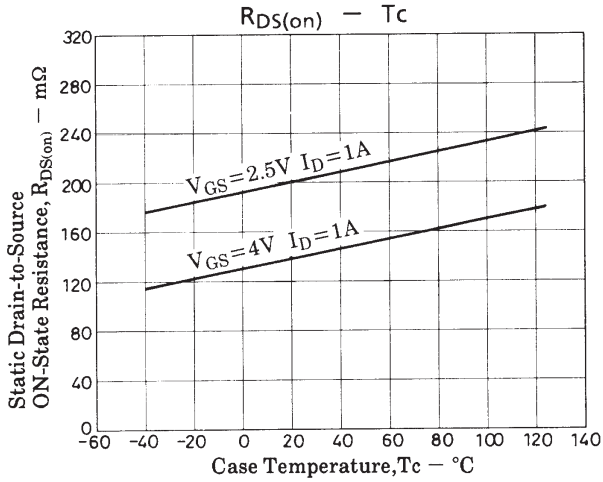
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	$t_r$	"		20		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		50		ns
Fall Time	$t_f$	"		35		ns
Diode Forward Voltage	$V_{SD}$	$I_S=2A, V_{GS}=0$		1.0		V

Making : KP

### Switching Time Test Circuit





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