

**SANYO**

No.5094

**2SK2440**

N-Channel Silicon MOSFET

Ultrahigh-Speed  
Switching Applications

**Features**

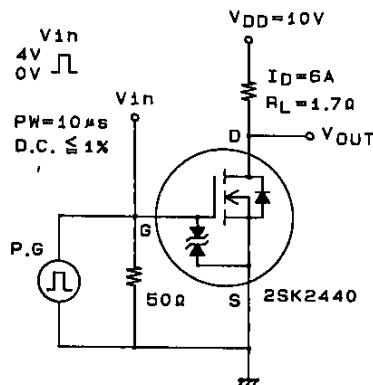
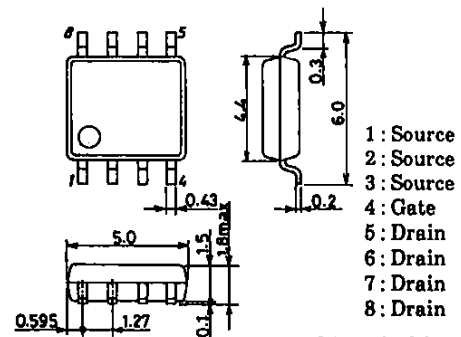
- Low ON resistance.
- Ultrahigh-speed switching.
- 2.5V drive.

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

			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>	6	A
Drain Current(Pulse)	I <sub>DP</sub>	PW ≤ 10μs, duty cycle ≤ 1%	48
Allowable Power Dissipation	P <sub>D</sub>	Mounted on ceramic board (1200mm <sup>2</sup> × 0.8mm)	2.0
Channel Temperature	T <sub>ch</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

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

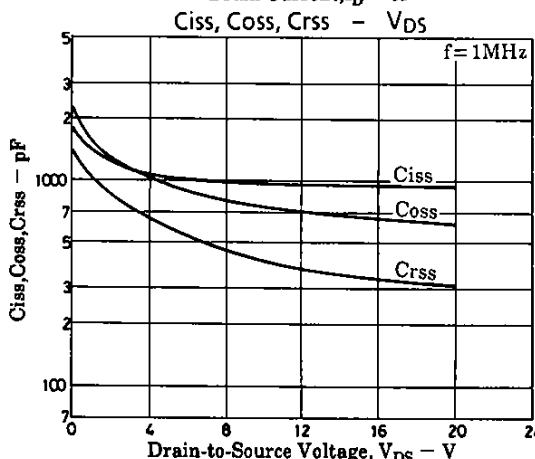
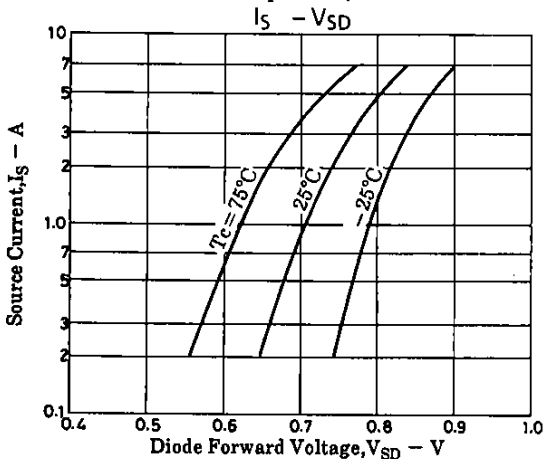
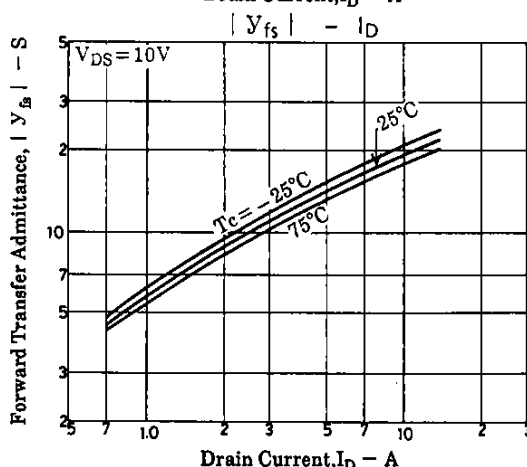
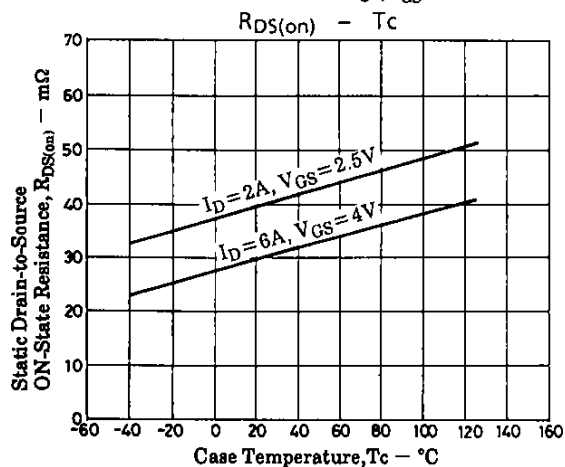
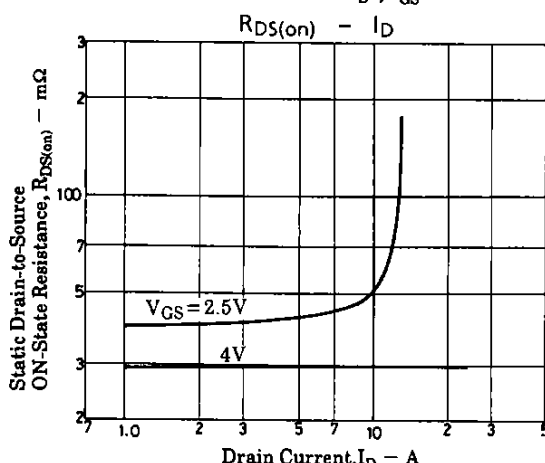
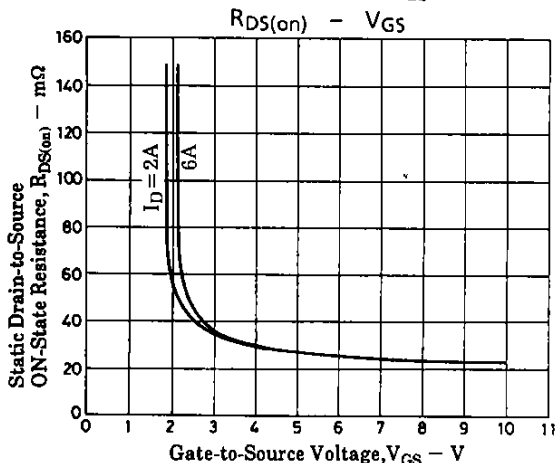
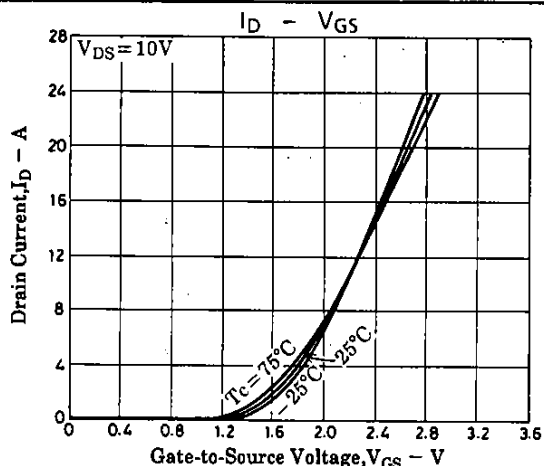
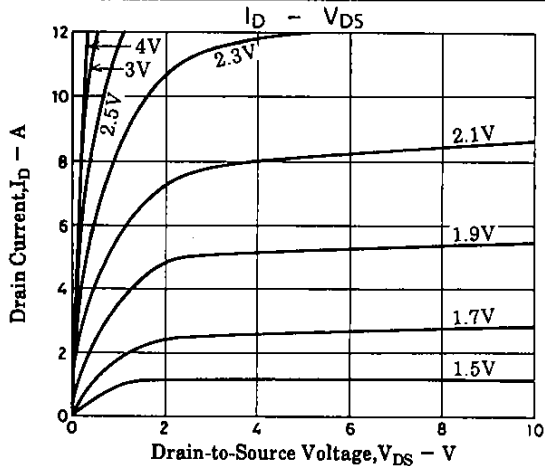
			min	typ	max	unit
D-S Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 1mA, V <sub>GS</sub> = 0	20			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 16V, V <sub>GS</sub> = 0			100	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±8V, V <sub>DS</sub> = 0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA	0.4		1.4	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 6A	10	14		S
Static Drain-to-Source ON-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> = 6A, V <sub>GS</sub> = 4V		30	38	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> = 2A, V <sub>GS</sub> = 2.5V		40	58	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		1000		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		750		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 10V, f = 1MHz		400		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		25		ns
Rise Time	t <sub>r</sub>	"		135		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	"		135		ns
Fall Time	t <sub>f</sub>	"		150		ns
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> = 6A, V <sub>GS</sub> = 0		1.0	1.2	V

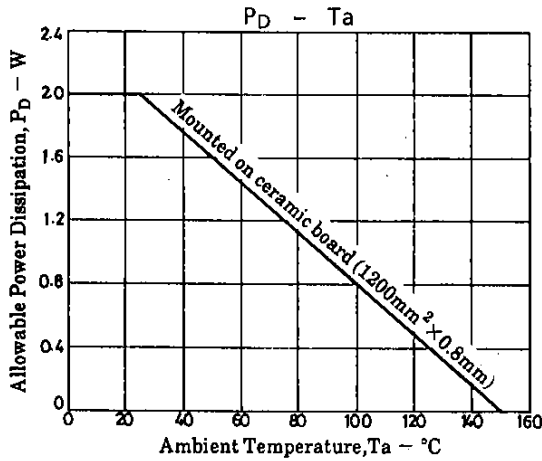
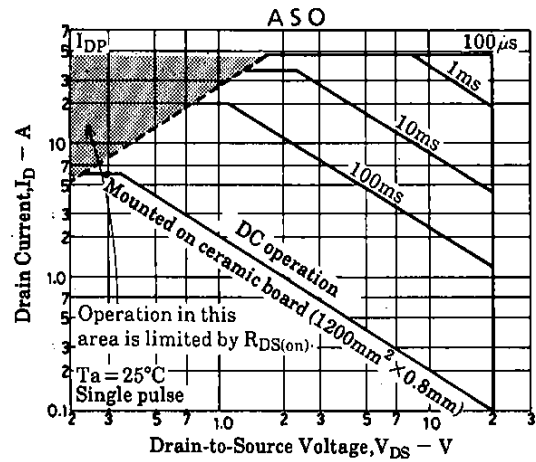
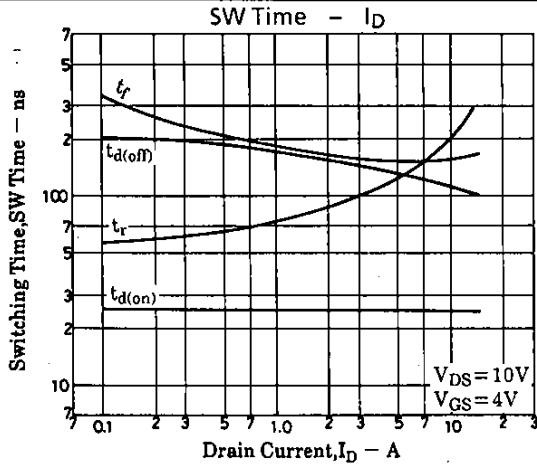
**Switching Time Test Circuit****Package Dimensions 2116**  
(unit : mm)

SANYO: SOP8

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