

SANYO

No.5094

2SK2440

N-Channel Silicon MOSFET

Ultrahigh-Speed
Switching Applications

Features

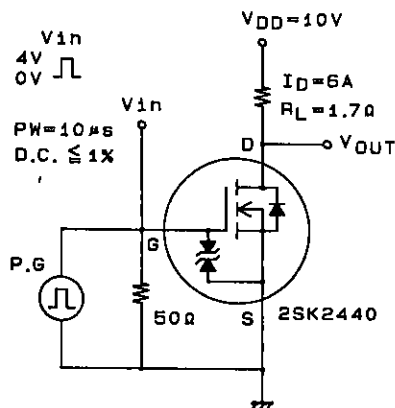
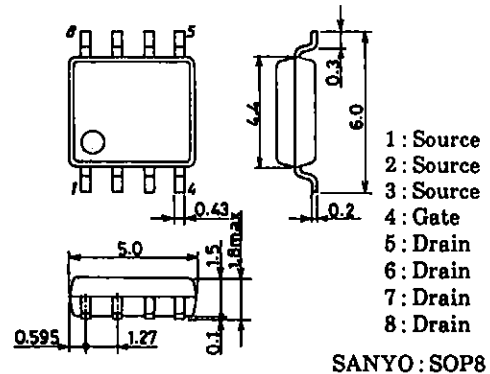
- Low ON resistance.
- Ultrahigh-speed switching.
- 2.5V drive.

Absolute Maximum Ratings at Ta = 25°C

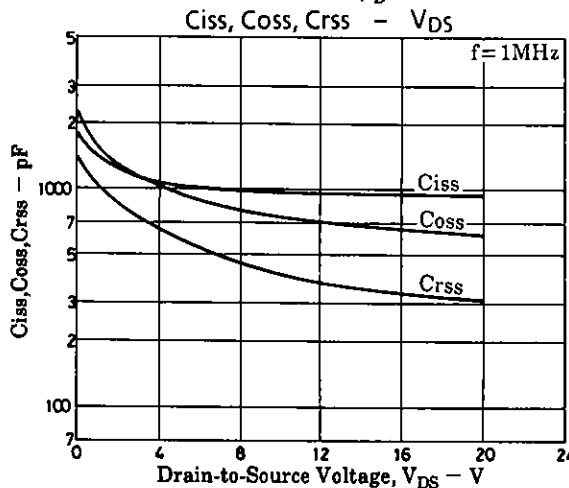
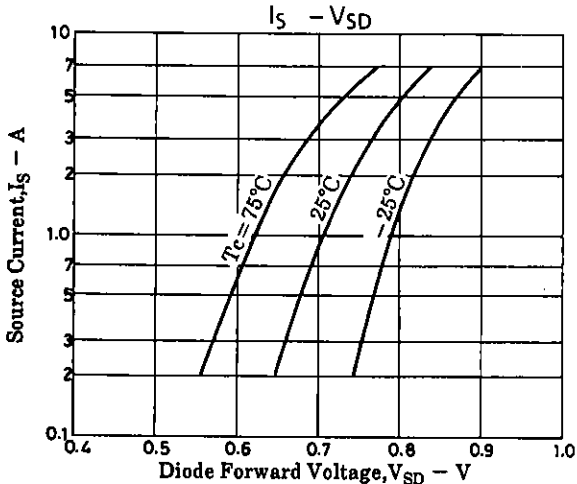
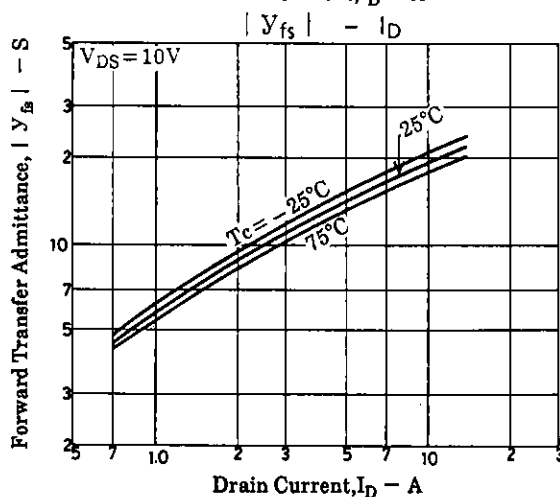
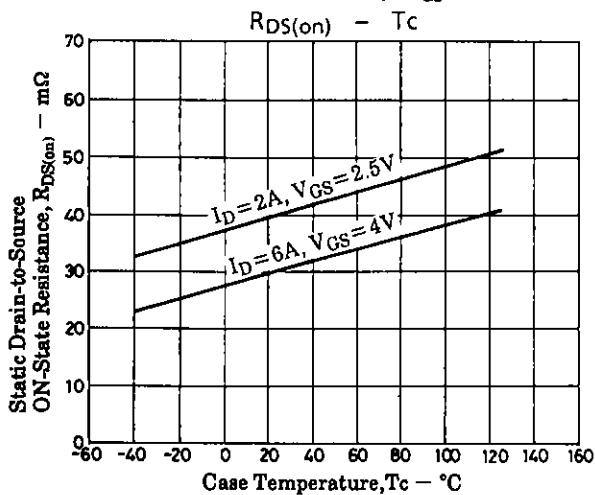
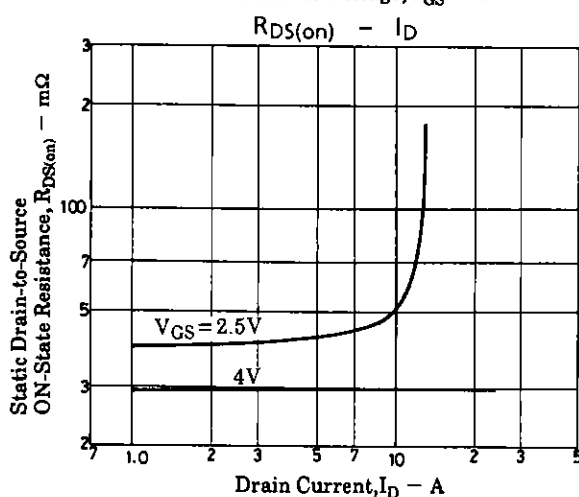
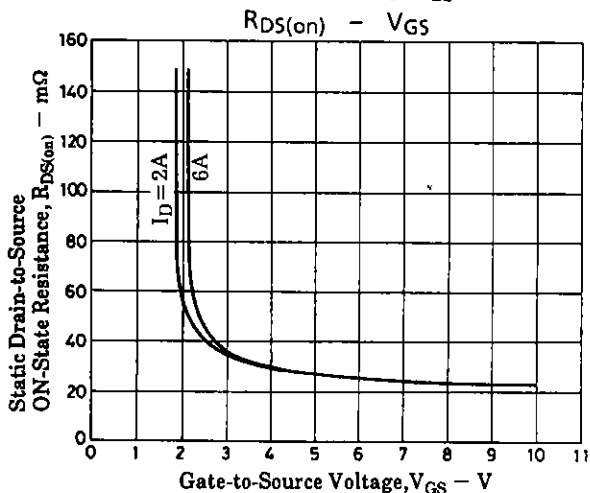
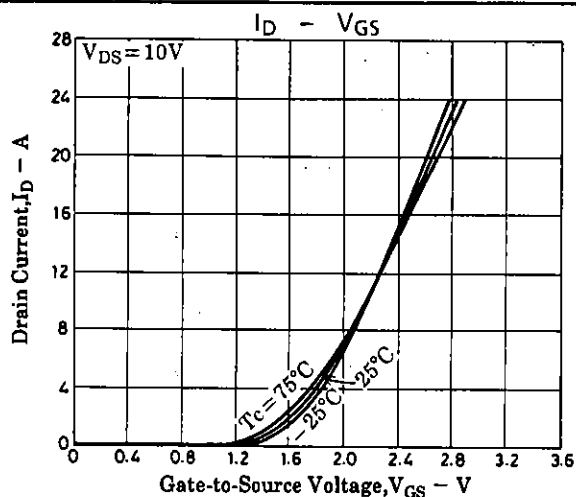
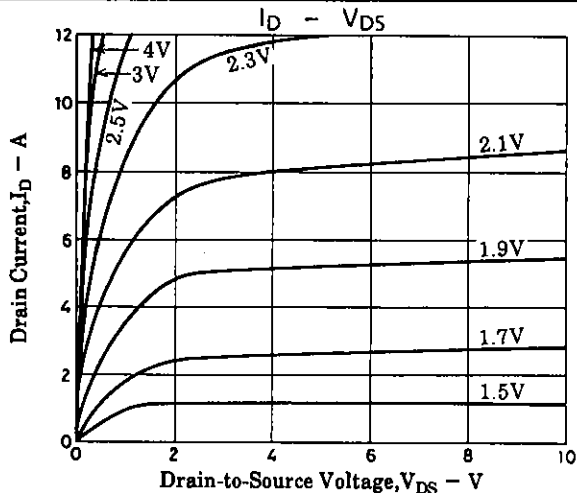
			unit
Drain-to-Source Voltage	V_{DSS}	20	V
Gate-to-Source Voltage	V_{GSS}	± 10	V
Drain Current(DC)	I_D	6	A
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	48 A
Allowable Power Dissipation	P_D	Mounted on ceramic board (1200mm ² × 0.8mm)	2.0 W
Channel Temperature	T_{ch}	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

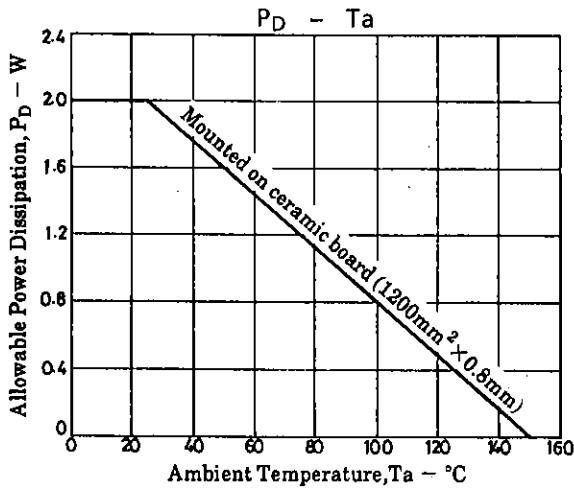
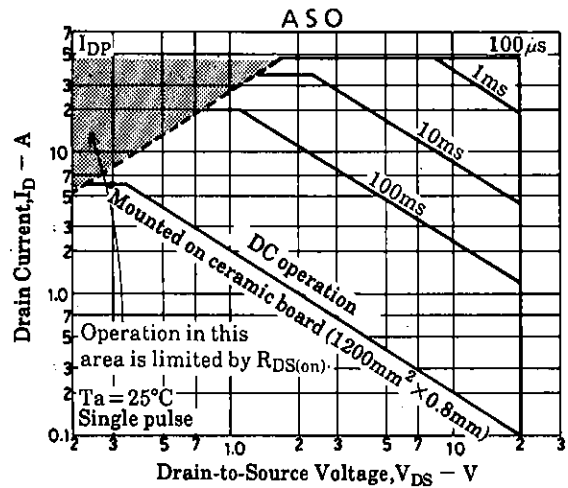
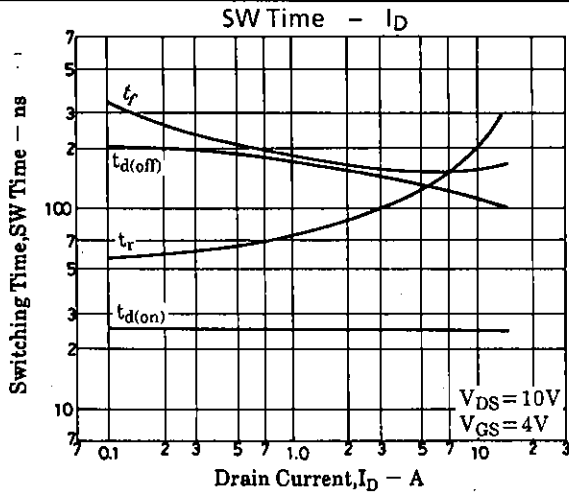
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	20			V
Zero-Gate Voltage	I_{DSS}	$V_{DS} = 16V, V_{GS} = 0$			100	μA
Drain Current						
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8V, V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	0.4		1.4	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 6A$	10	14		S
Static Drain-to-Source	$R_{DS(on)1}$	$I_D = 6A, V_{GS} = 4V$		30	38	m Ω
ON-State Resistance	$R_{DS(on)2}$	$I_D = 2A, V_{GS} = 2.5V$		40	58	m Ω
Input Capacitance	C_{iss}	$V_{DS} = 10V, f = 1MHz$		1000		pF
Output Capacitance	C_{oss}	$V_{DS} = 10V, f = 1MHz$		750		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10V, f = 1MHz$		400		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		25		ns
Rise Time	t_r	"		135		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		135		ns
Fall Time	t_f	"		150		ns
Diode Forward Voltage	V_{SD}	$I_S = 6A, V_{GS} = 0$		1.0	1.2	V

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

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