

SANYO	No.3461A	2SK1458
		N-Channel Silicon MOSFET Ultrahigh-Speed Switching Applications

Features

- Low ON-state resistance.
- Ultrahigh-speed switching.
- Micaless package facilitating mounting.

Absolute Maximum Ratings at Ta = 25°C

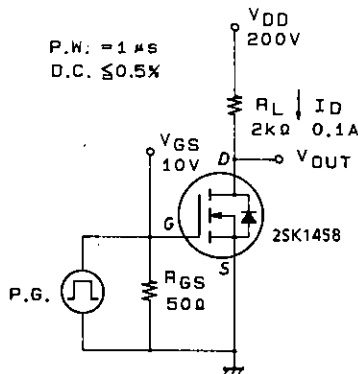
Drain-to-Source Voltage	V_{DSS}		900	V	unit
Gate-to-Source Voltage	V_{GSS}		±30	V	
Drain Current(DC)	I_D		0.2	A	
Drain Current(Pulse)	I_{DP}	$PW \leq 10\mu s, \text{ duty cycle} \leq 1\%$	0.4	A	
Allowable Power Dissipation	P_D		2.0	W	
		$T_c = 25^\circ C$	20	W	
Channel Temperature	T_{ch}		150	°C	
Storage Temperature	T_{stg}		-55 to +150	°C	

Electrical Characteristics at Ta = 25°C

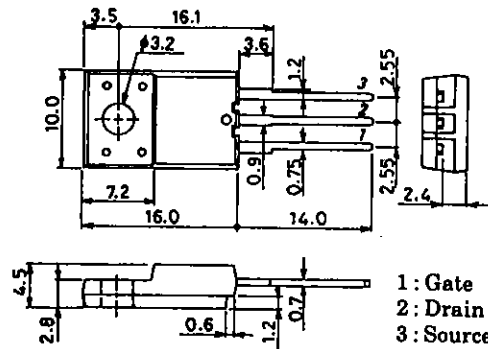
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	900			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 900V, V_{GS} = 0$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 30V, V_{DS} = 0$			±100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	2.0		3.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 20V, I_D = 0.1A$	0.08	0.15		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 0.1A, V_{GS} = 10V$		50	70	Ω
Input Capacitance	C_{iss}	$V_{DS} = 20V, f = 1MHz$		45		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V, f = 1MHz$		25		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V, f = 1MHz$		10		pF
Turn-ON Delay Time	$t_{d(on)}$	$I_D = 0.1A, V_{GS} = 10V$ $V_{DD} = 200V, R_{GS} = 50\Omega$		10		ns
Rise Time	t_r		15	ns		
Turn-OFF Delay Time	$t_{d(off)}$		30	ns		
Fall Time	t_f		180	ns		
Diode Forward Voltage	V_{SD}	$I_S = 0.2A, V_{GS} = 0$			1.8	V

(Note) Be careful in handling the 2SK1458 because it has no protection diode between gate and source.

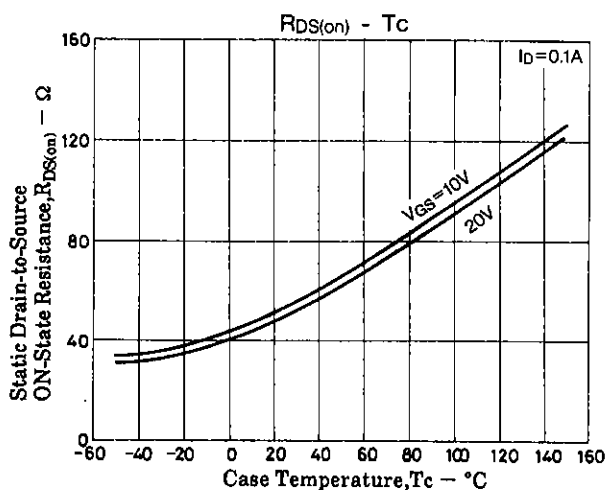
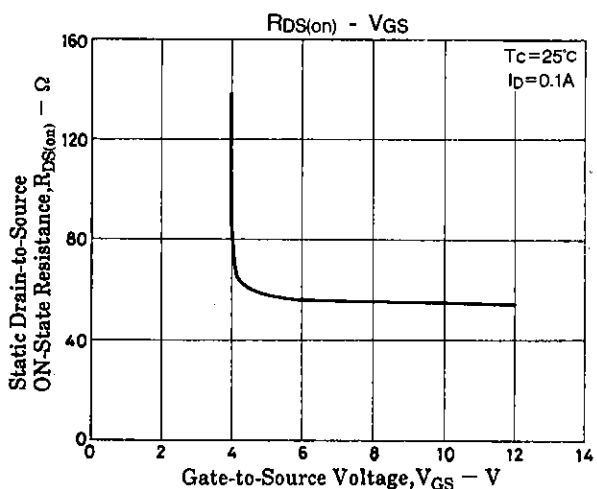
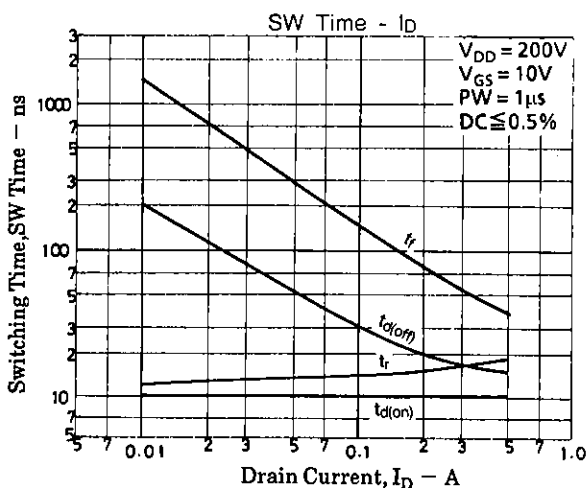
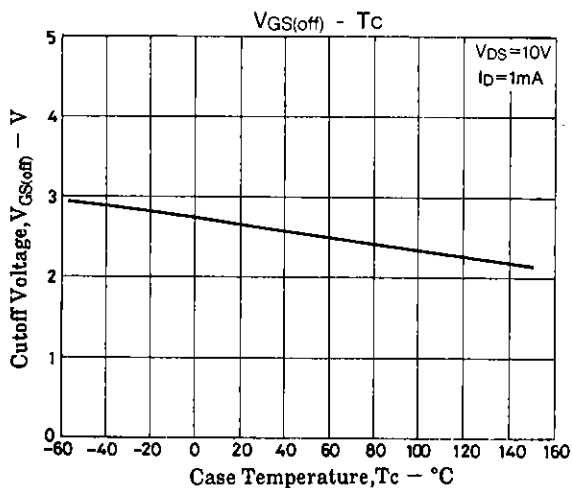
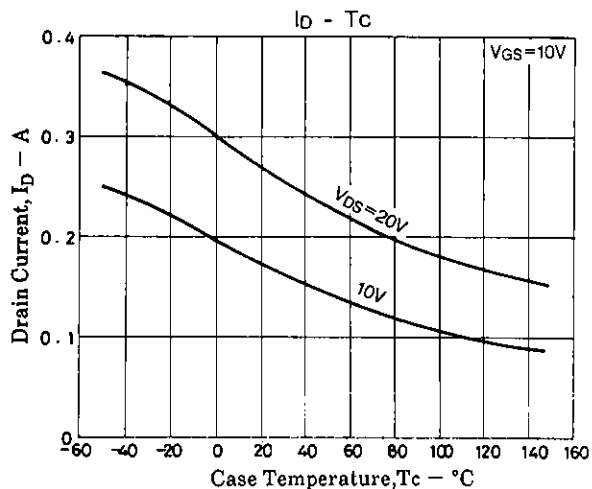
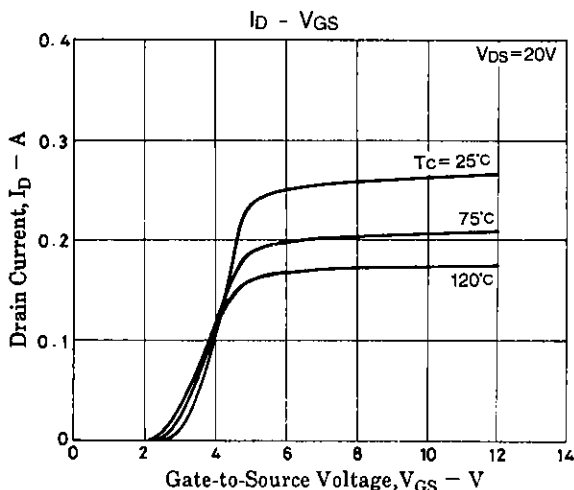
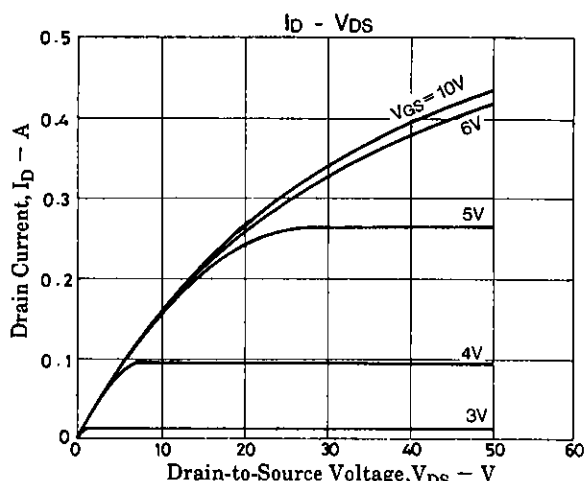
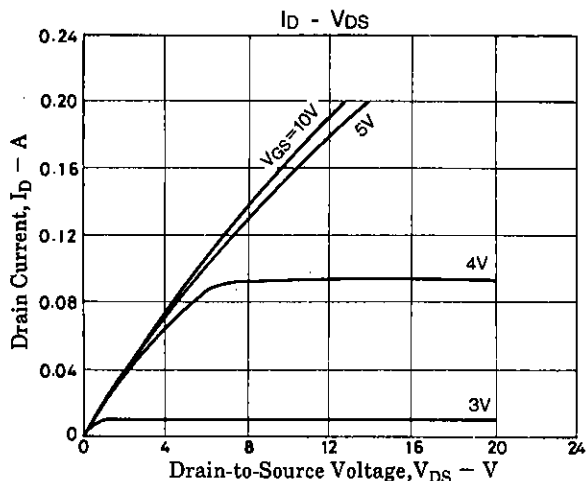
Switching Time Test Circuit

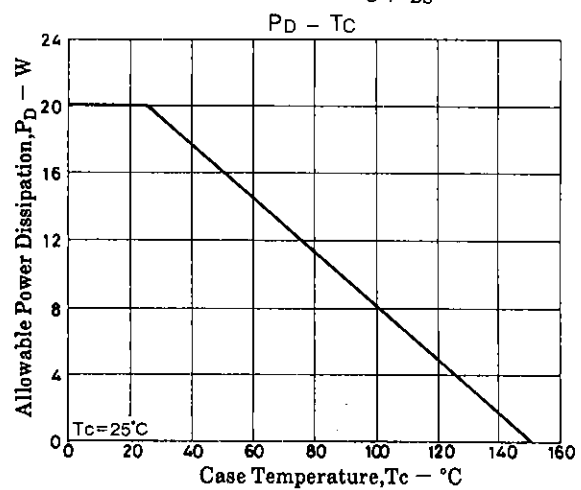
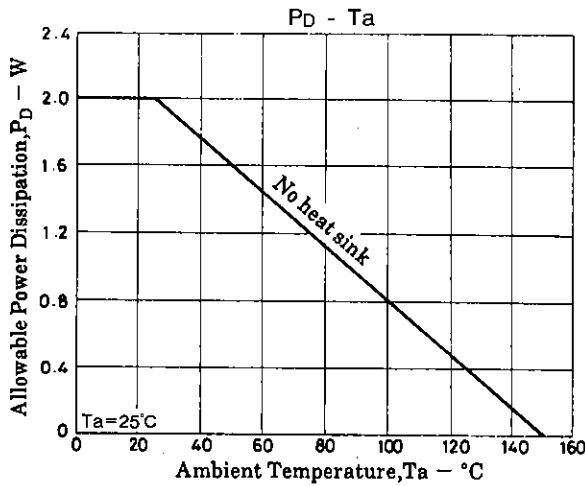
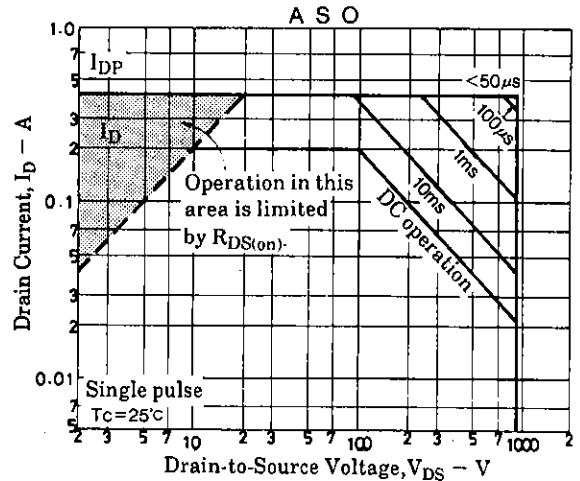
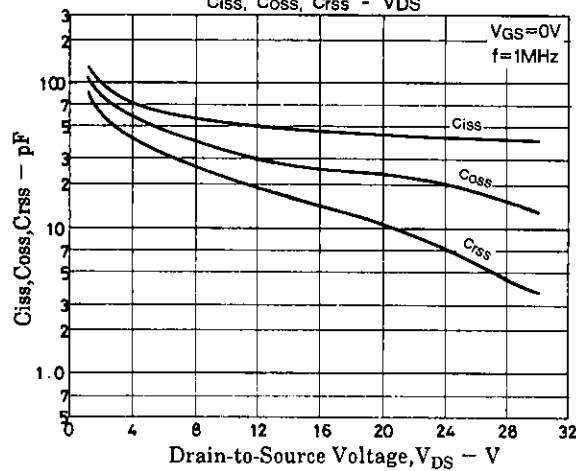
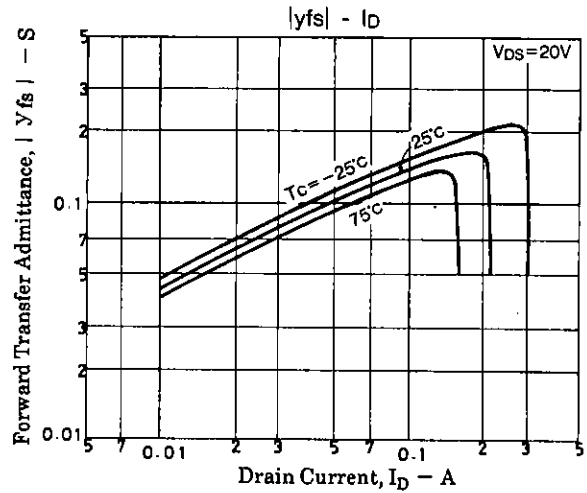
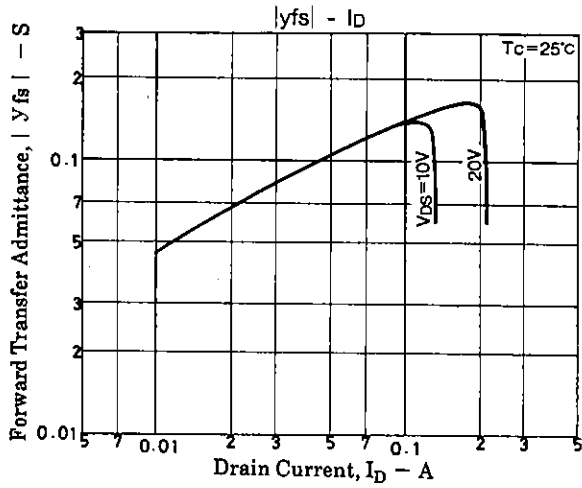


Package Dimensions 2078B
(unit : mm)



SANYO: TO-220FI(LS)





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