



2SJ459

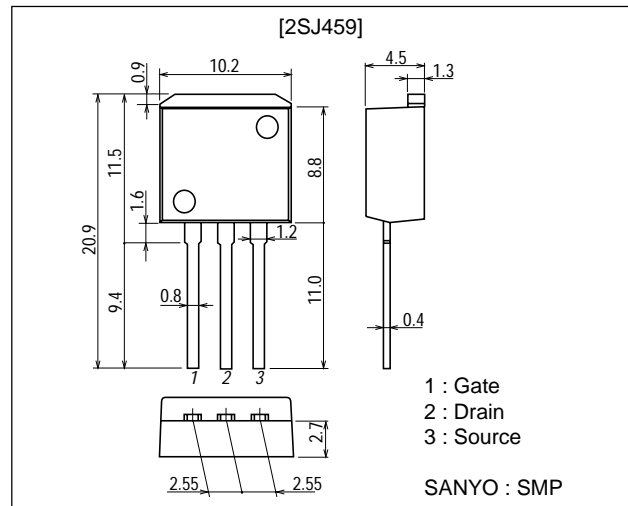
Ultrahigh-Speed Switching Applications

Features

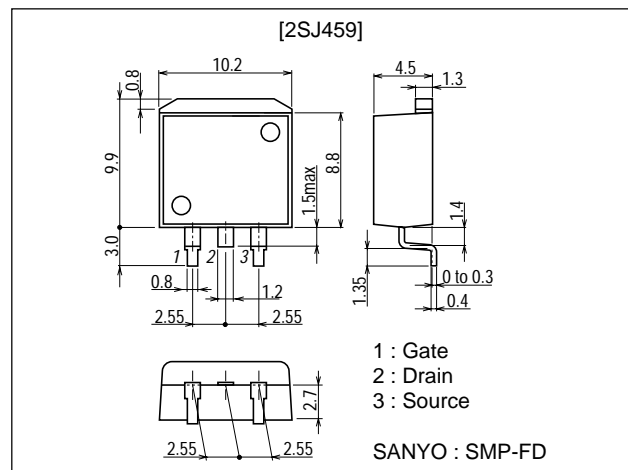
- High-speed diode incorporated.

Package Dimensions

unit : mm
2093A



unit : mm
2090A



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2SJ459

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-450	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current (DC)	I _D		-4	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-16	A
Allowable Power Dissipation	P _D		1.65	W
		T _c =25°C	70	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

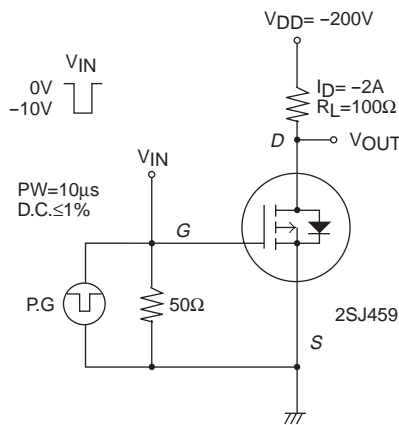
Electrical Characteristics at Ta=25°C

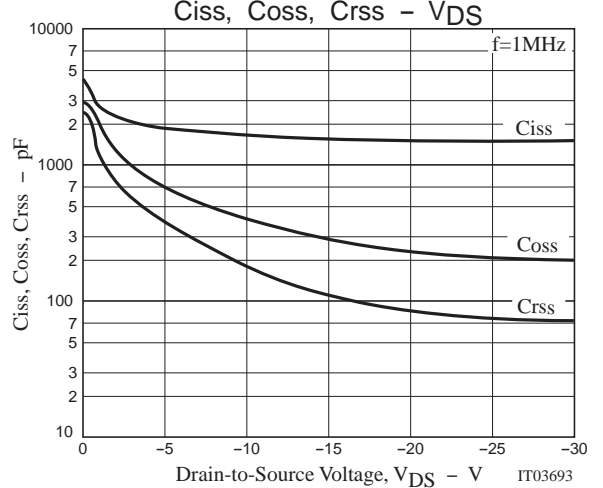
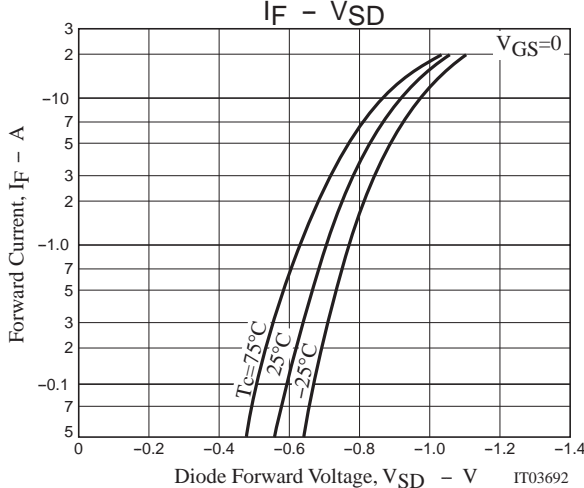
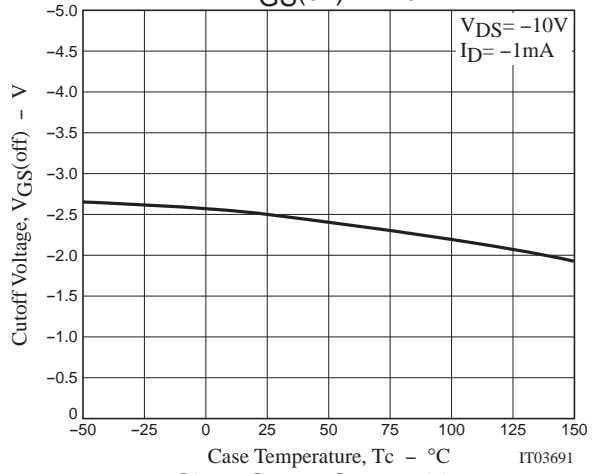
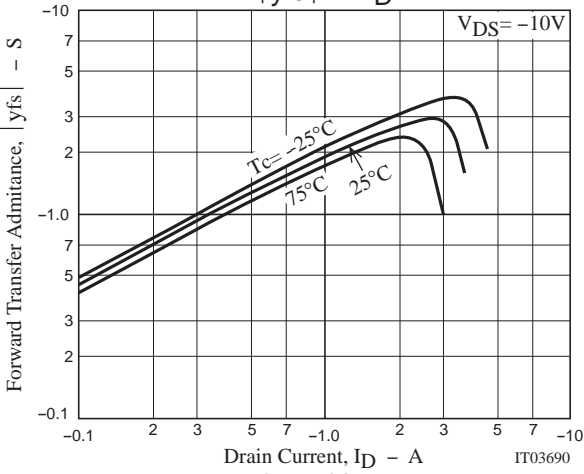
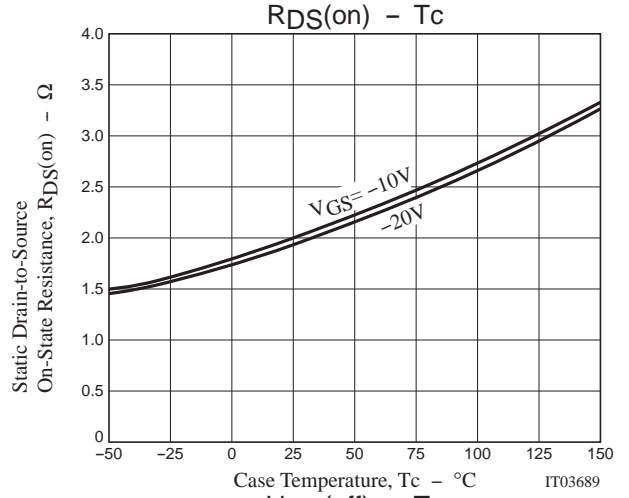
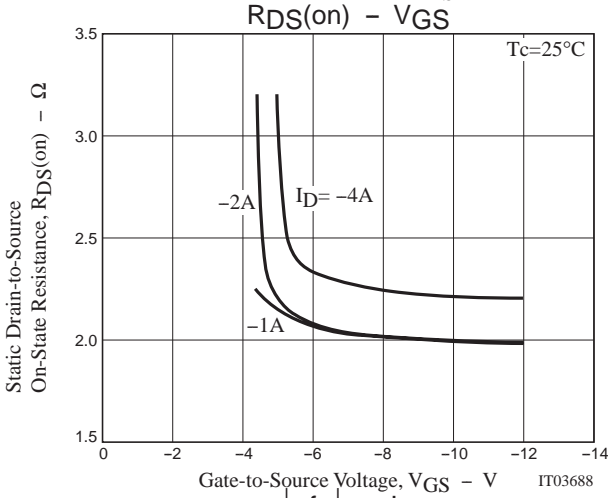
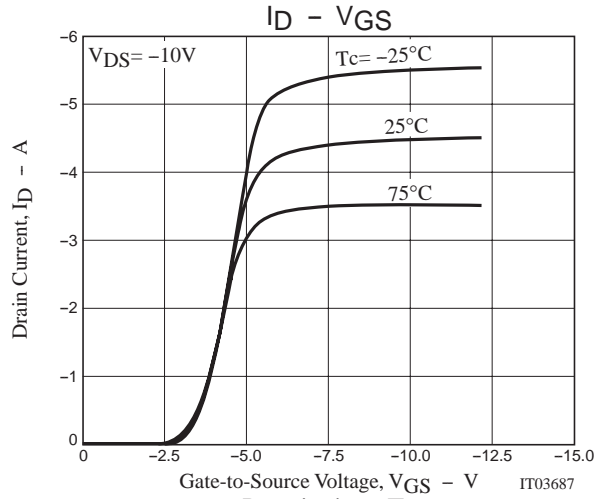
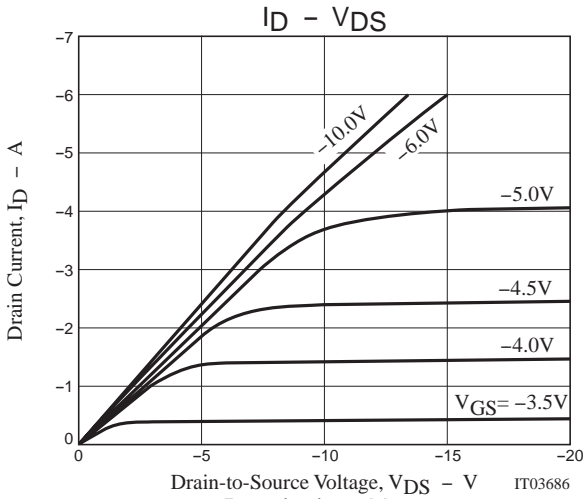
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =-10mA, V _{GS} =0	-450			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-360V, V _{GS} =0			-1.0	mA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±30V, V _{DS} =0			±100	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-2.0		-3.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-2A	1.2	2.4		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =-2A, V _{GS} =-10V		2.0	2.8	Ω
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		1500		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		230		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-20V, f=1MHz		80		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		35		ns
Rise Time	t _r	See specified Test Circuit.		50		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		300		ns
Fall Time	t _f	See specified Test Circuit.		80		ns
Diode Forward Voltage	V _{SD}	I _S =-4A, V _{GS} =0			-1.5	V
Diode Reverse Recovery Time	t _{rr}	I _S =-4A, di / dt=100A / μs	150	195		ns

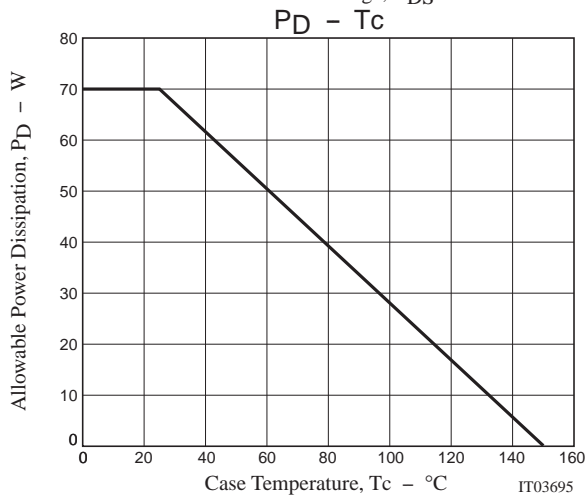
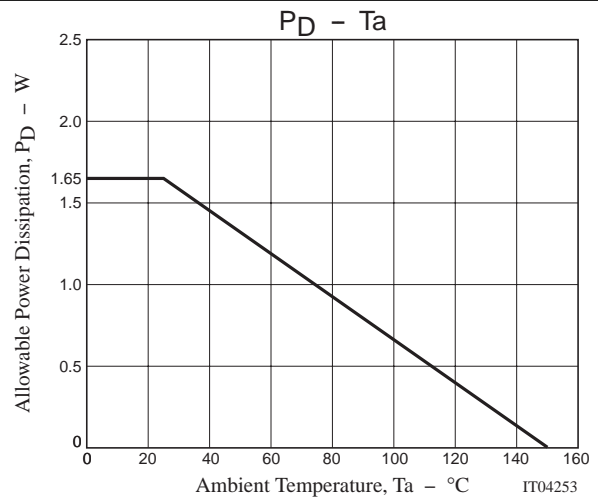
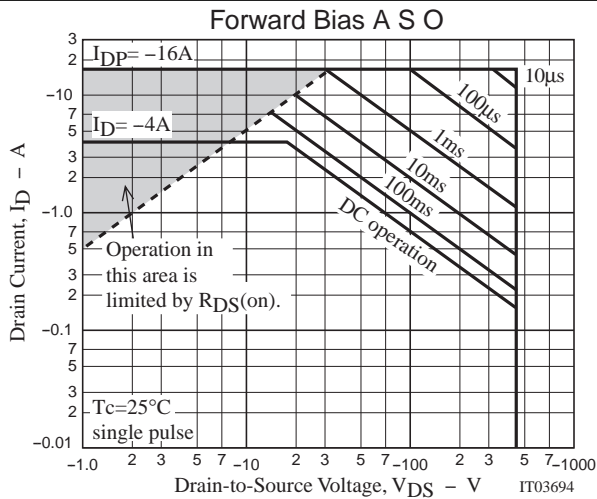
Marking : J459

*(Note) Care must be taken in handling the 2SJ459 because no protection diode is provided between gate and source.

Switching Time Test Circuit







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