



SANYO Semiconductors

DATA SHEET

2SK3485 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

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

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		20	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		2.5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	10	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (250mm×0.8mm)	1.0	W
		Tc=25°C	3.5	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 =1mA, V _{GS} =0V	20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _D =20V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _D =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _D =10V, I _D =1mA	0.4		1.3	V
Forward Transfer Admittance	y _{fs}	V _D =10V, I _D =1.3A	2.8	4.0		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =1.3A, V _{GS} =4V		110	140	mΩ
	R _{DS(on)2}	I _D =0.7A, V _{GS} =2.5V		140	195	mΩ

Marking : LB

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2SK3485

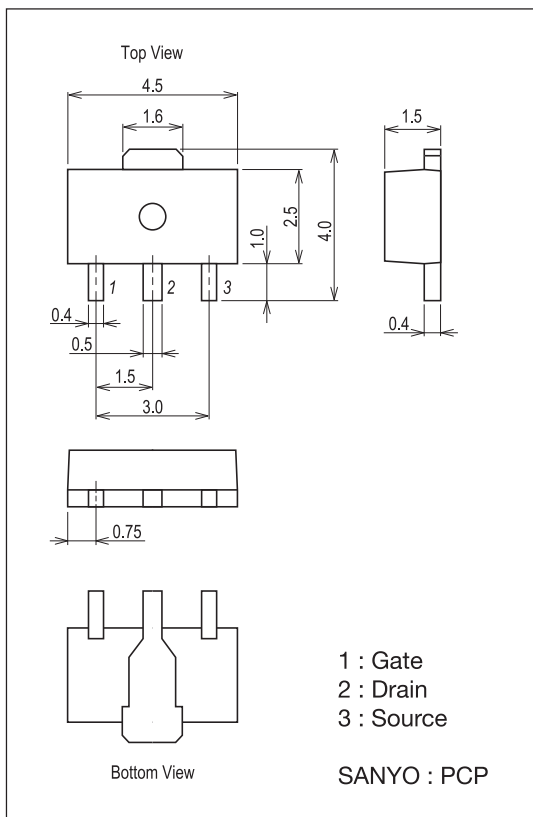
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=10V$, $f=1MHz$		190		pF
Output Capacitance	Coss	$V_{DS}=10V$, $f=1MHz$		40		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V$, $f=1MHz$		25		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		9		ns
Rise Time	t_r	See specified Test Circuit.		33		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		25		ns
Fall Time	t_f	See specified Test Circuit.		21		ns
Total Gate Charge	Qg	$V_{DS}=10V$, $V_{GS}=4V$, $I_D=2.5A$		2.7		nC
Gate-to-Source Charge	Qgs	$V_{DS}=10V$, $V_{GS}=4V$, $I_D=2.5A$		0.6		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=10V$, $V_{GS}=4V$, $I_D=2.5A$		0.6		nC
Diode Forward Voltage	V_{SD}	$I_S=2.5A$, $V_{GS}=0V$		0.92	1.2	V

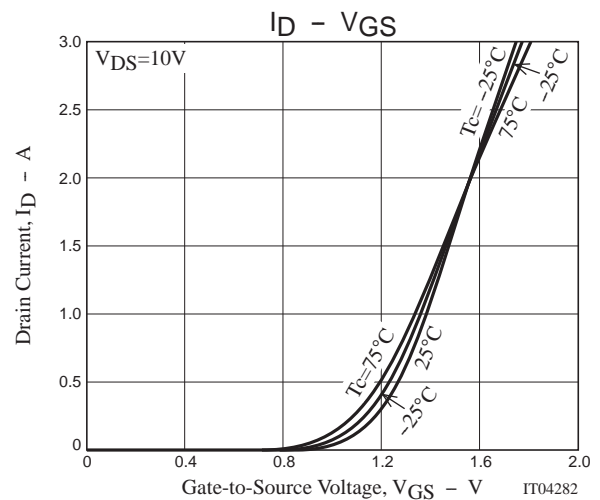
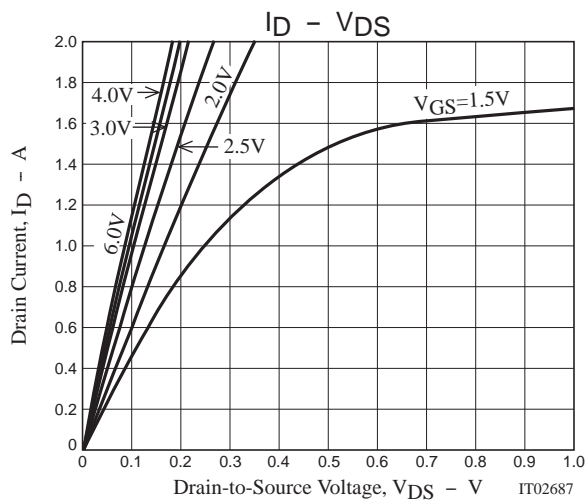
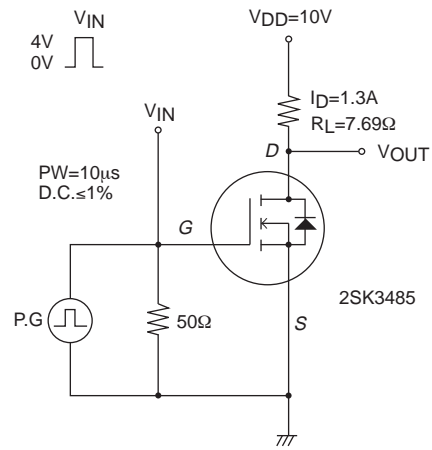
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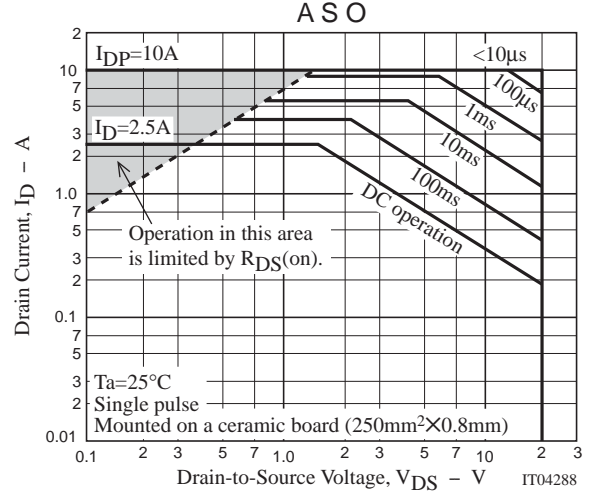
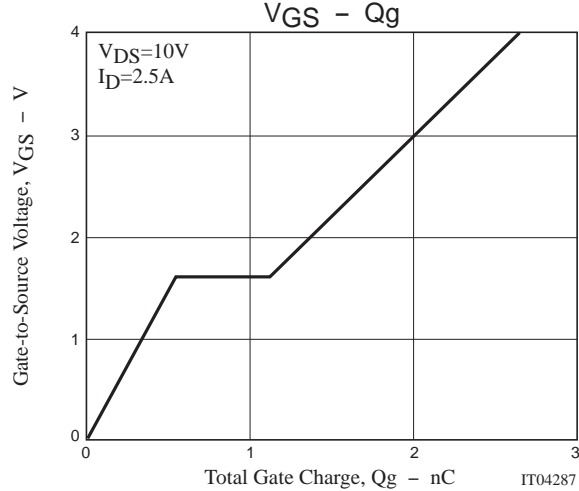
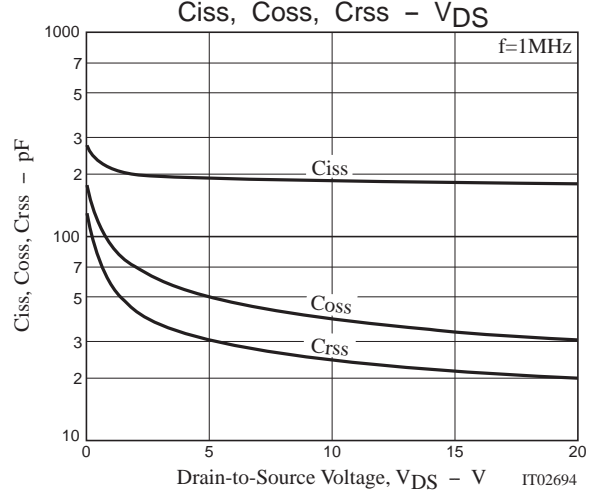
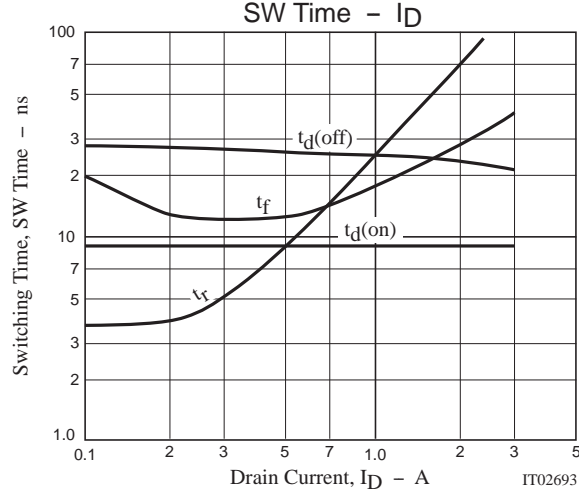
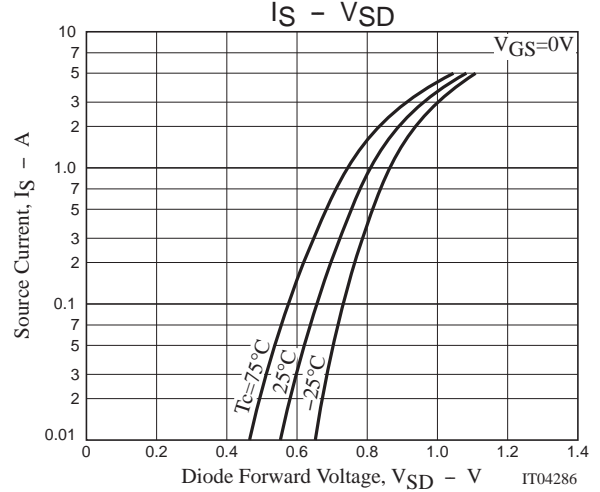
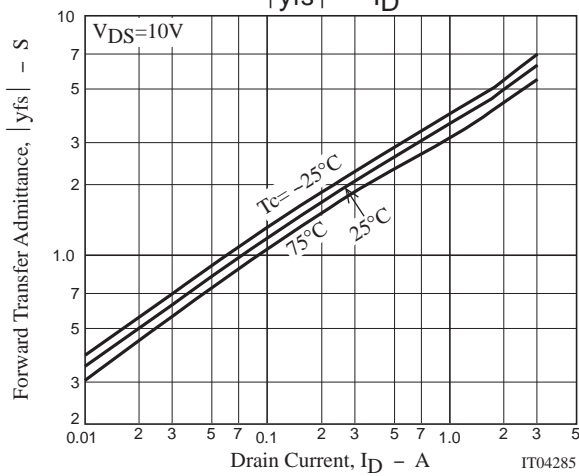
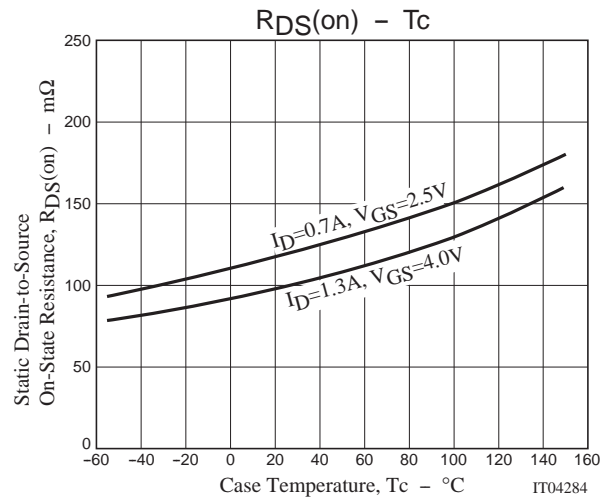
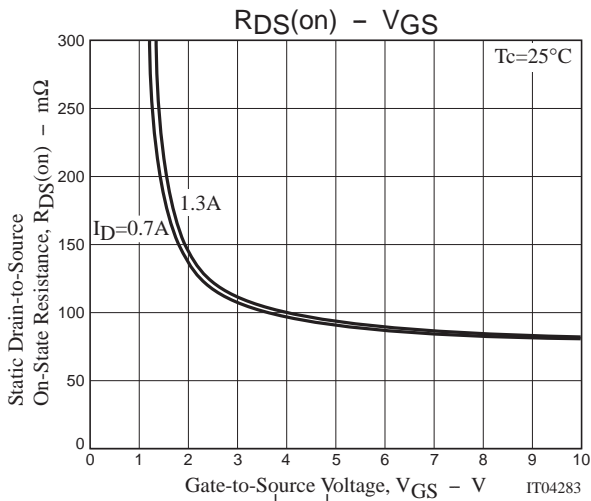
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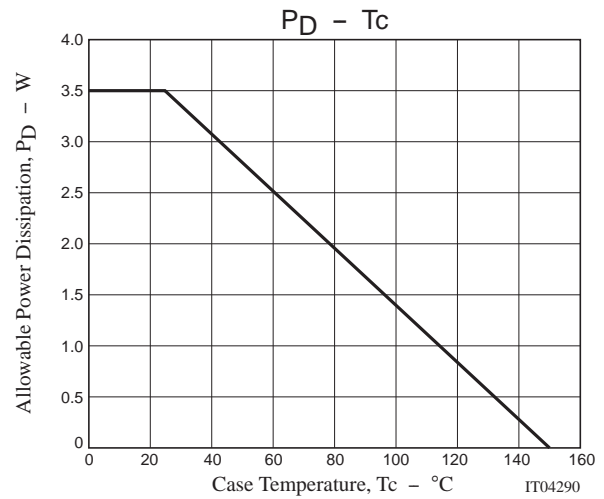
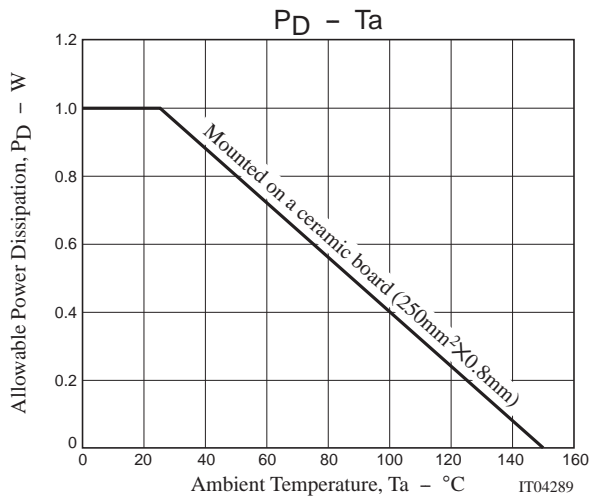
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Switching Time Test Circuit







Note on usage : Since the 2SK3485 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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