Ordering number : ENN8353

Discontinued

SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET

2SK2433 — General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Low-voltage drive.
- Enables simplified fabrication, high-density mounting, and miniaturization in end products due to the surface mountable package.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		60	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current	I_D		30	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	120	A
Allowable Power Dissipation	P_D	Tc=25°C	40	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−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	60			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	I_G=±100μA, V_{DS}=0V	±20			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			100	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±16V, V_{DS}=0V			±10	μA
Cutoff Voltage	$V_{GS}(off)$	V_{DS}=10V, I_D=1mA	1.0		2.0	V
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=10V, I_D=15A	16.0	27.0		S
Static Drain-to-Source On-State Resistance	$R_{DS}(on)1$	I_D=15A, V_{GS}=10V		30	40	mΩ
	$R_{DS}(on)2$	I_D=15A, V_{GS}=4V		40	55	mΩ
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		1900		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		500		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		100		pF

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SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Discontinued

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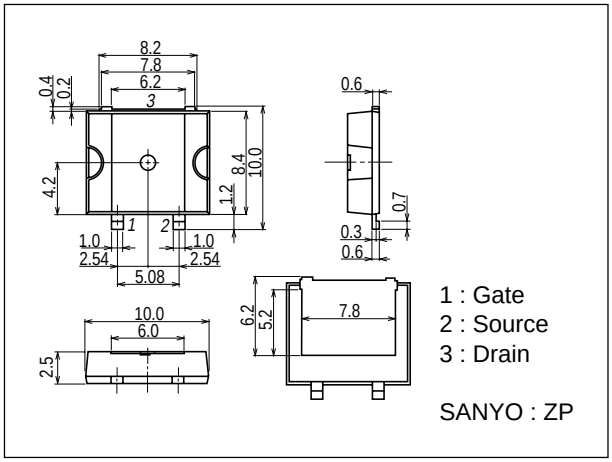
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	t_r	See specified Test Circuit.		30		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		335		ns
Fall Time	t_f	See specified Test Circuit.		225		ns
Diode Forward Voltage	V_{SD}	I_S=30A, V_{GS}=0V		1.0	1.5	V

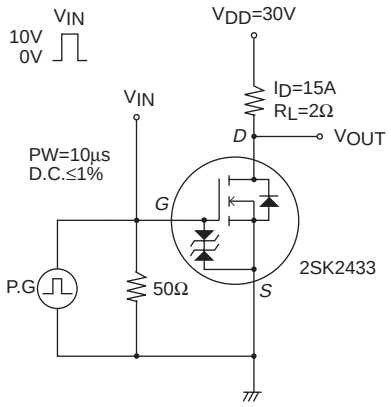
Package Dimensions

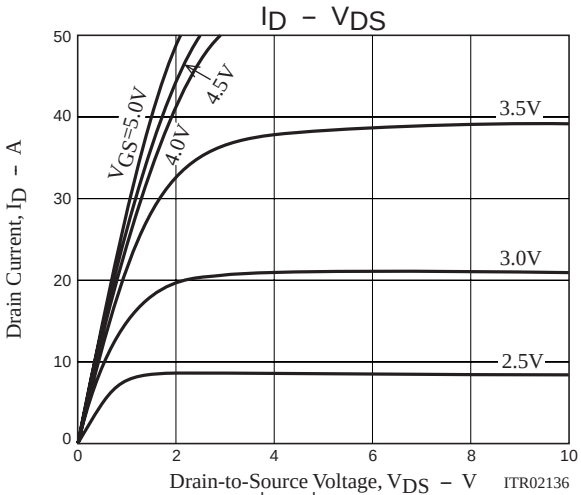
unit : mm

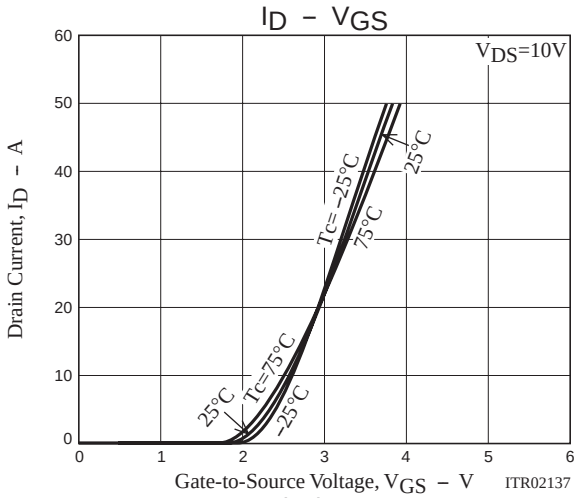
7002-001

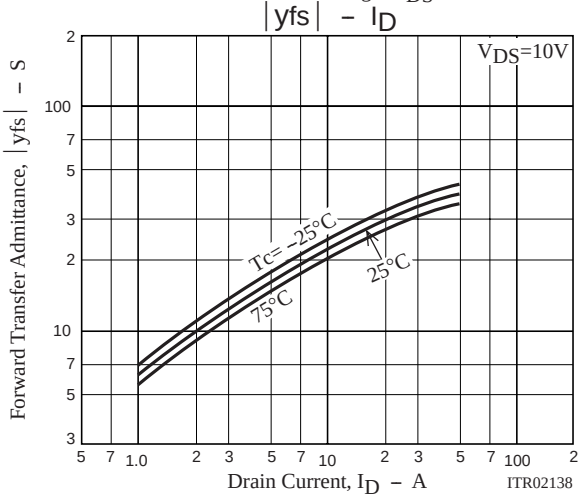


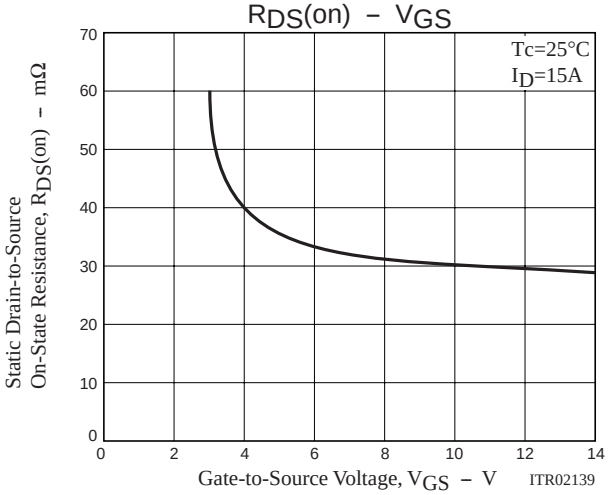
Switching Time Test Circuit











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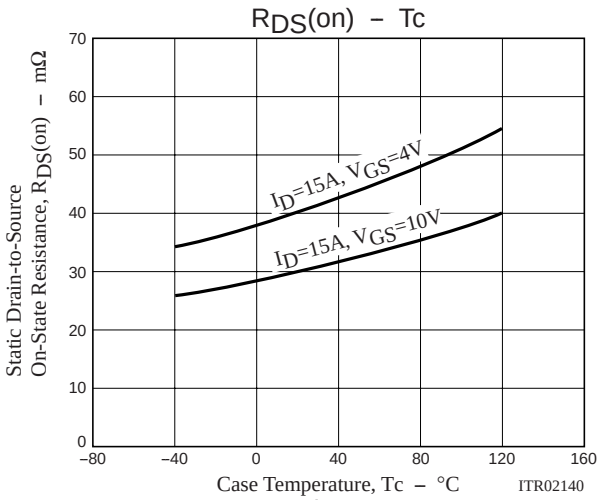

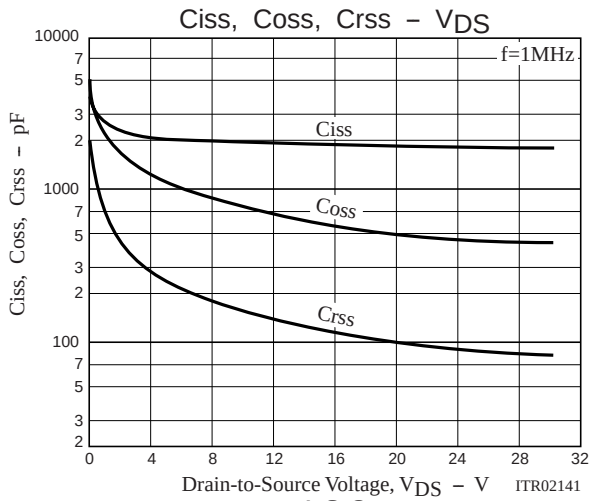

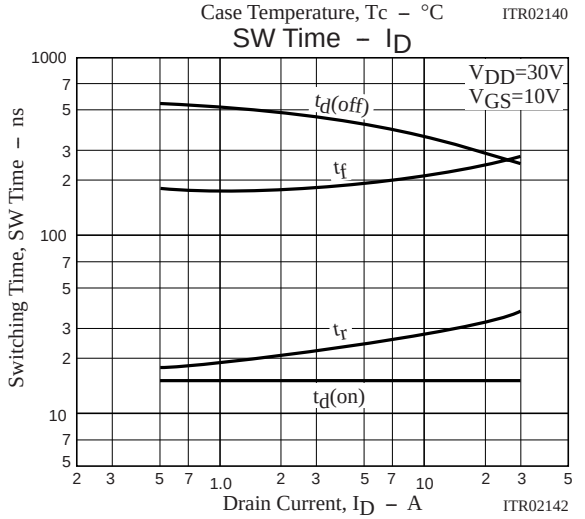

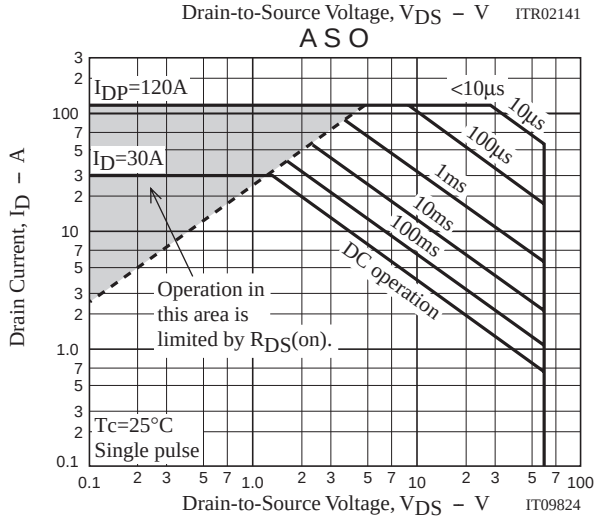

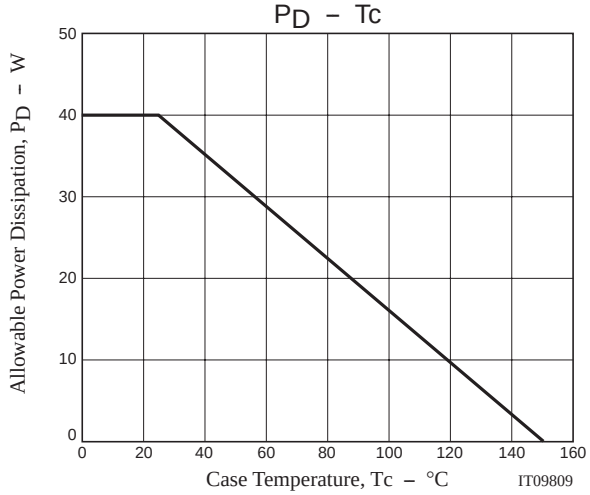

Note on usage : Since the 2SK2433 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.