



2SK2433 — N-Channel Silicon MOSFET

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	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	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	y _{fs}	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	C _{iss}	V _{DS} =20V, f=1MHz		1900		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		500		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		100		pF

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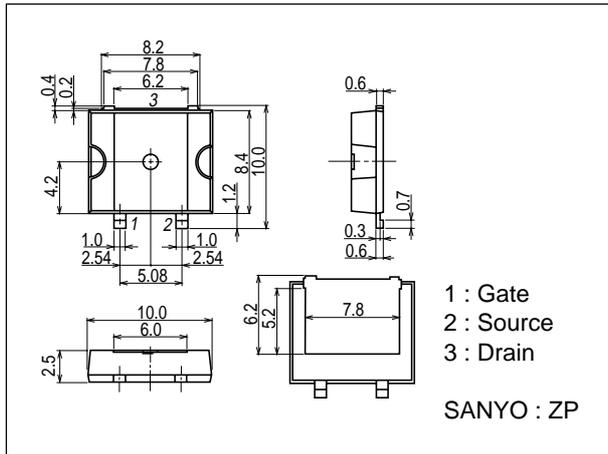
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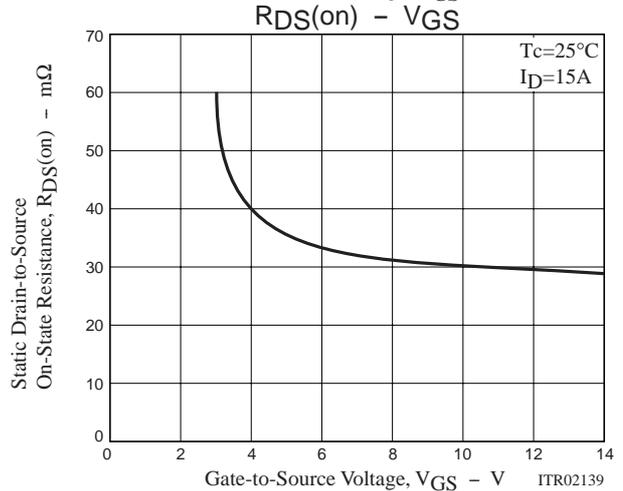
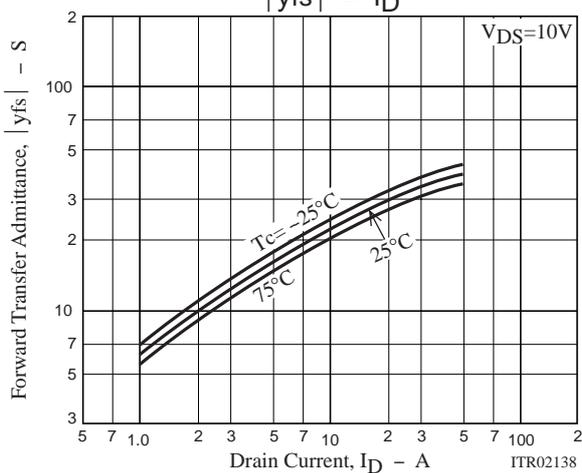
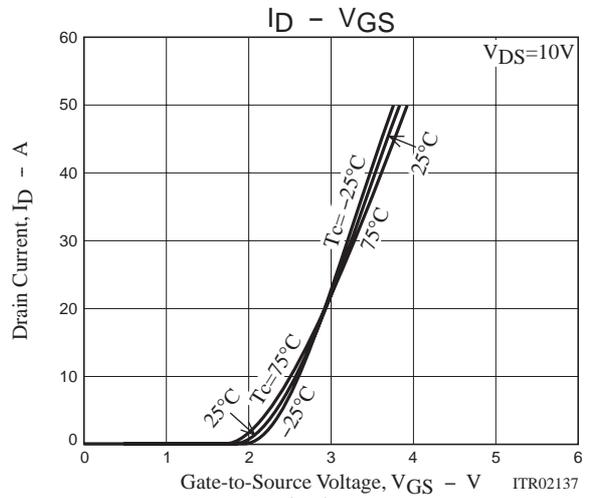
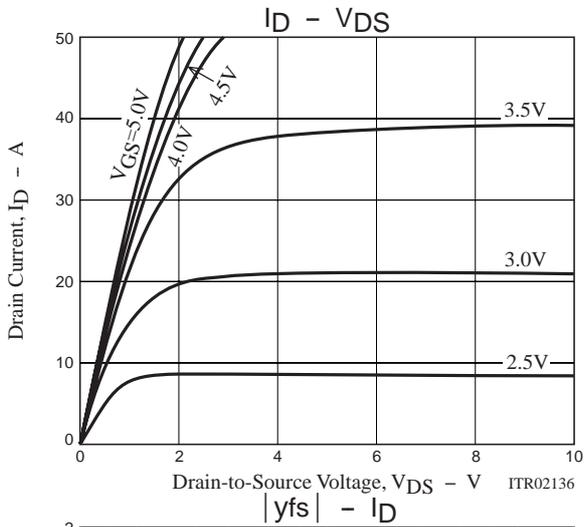
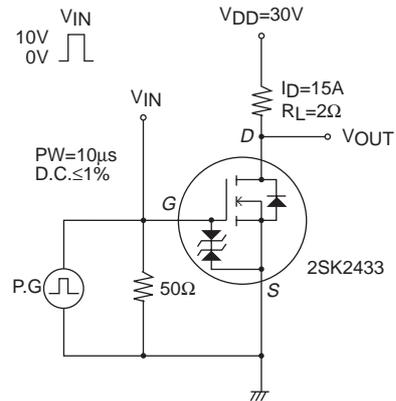
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	t_r	See specified Test Circuit.		30		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		335		ns
Fall Time	t_f	See specified Test Circuit.		225		ns
Diode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

Package Dimensions

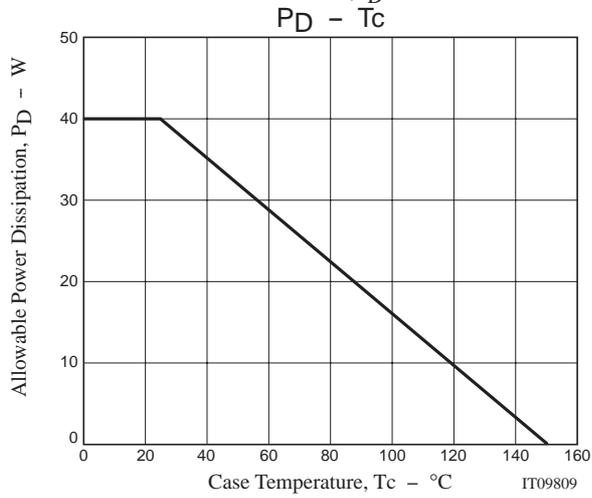
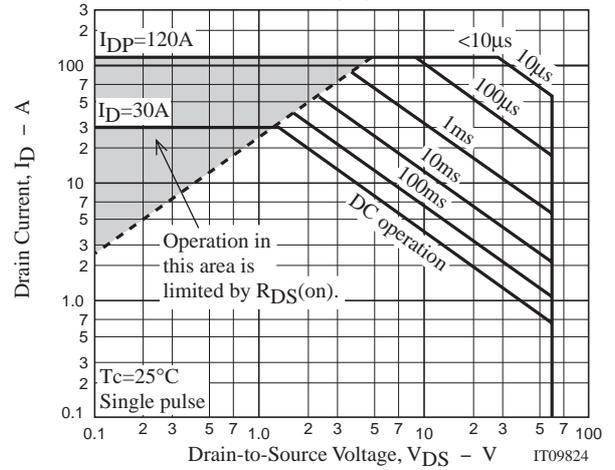
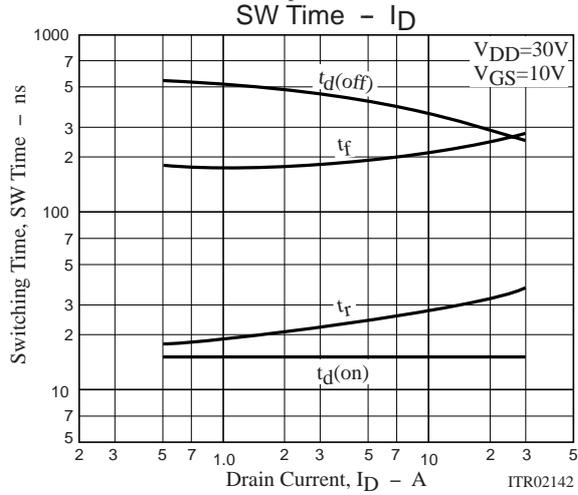
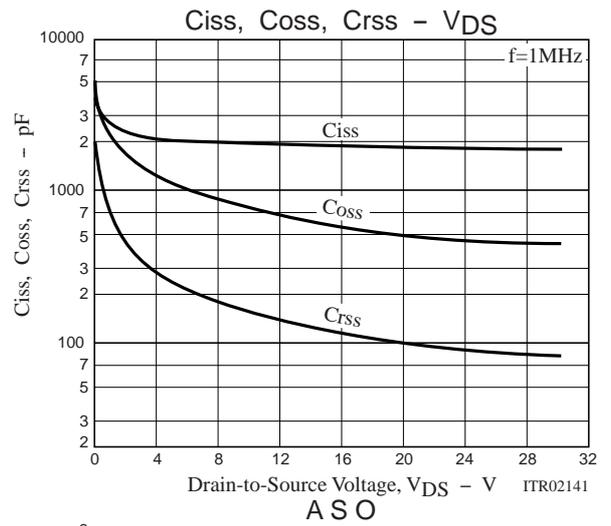
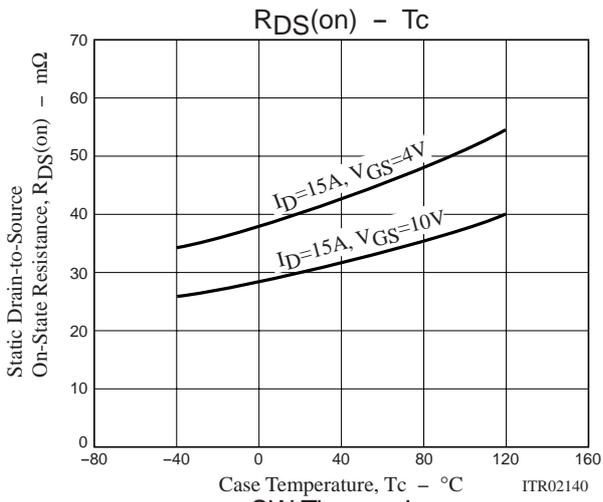
unit : mm
7002-001



Switching Time Test Circuit



2SK2433



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

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