Ordering number : EN8603

Discontinued

SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET

2SK2405 — General-Purpose Switching Device Applications

Features

- Built-in FRD.
- 10V drive.

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		10	A
Drain Current (Pulse)	I_{DP}		40	A
Allowable Power Dissipation	P_D		1.65	W
		Tc=25°C	70	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	450			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=450V, V_{GS}=0V			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}= ±30V, V_{DS}=0V			±100	nA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=1mA	2.0		3.0	V
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=10V, I_D=6A	3	6		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	I_D=6A, V_{GS}=10V		0.55	0.75	Ω
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		1500		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		220		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		75		pF

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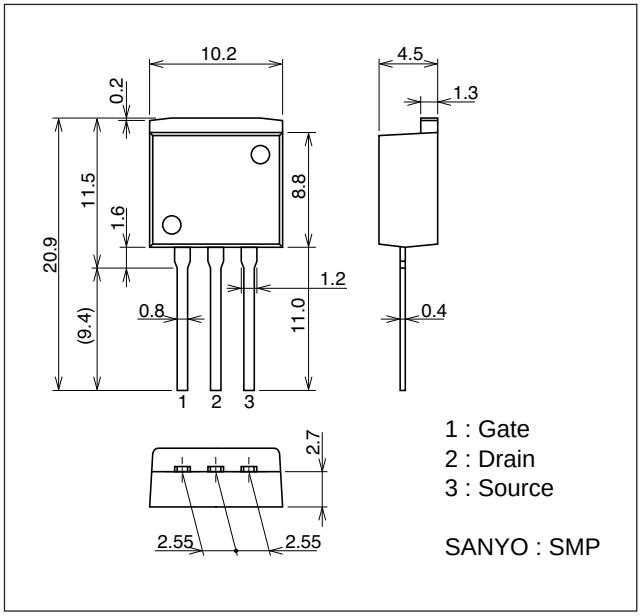
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	t_{d}(on)	See specified Test Circuit.		22		ns
Rise Time	t_{r}	See specified Test Circuit.		60		ns
Turn-OFF Delay Time	t_{d}(off)	See specified Test Circuit.		230		ns
Fall Time	t_{f}	See specified Test Circuit.		75		ns
Diode Forward Voltage	V_{SD}	I_S=10A, V_{GS}=0V			1.5	V
Diode Reverse Recovery Time	t_{rr}	I_S=10A, di / dt=100A / μs		150	195	ns

Package Dimensions

unit : mm(typ)

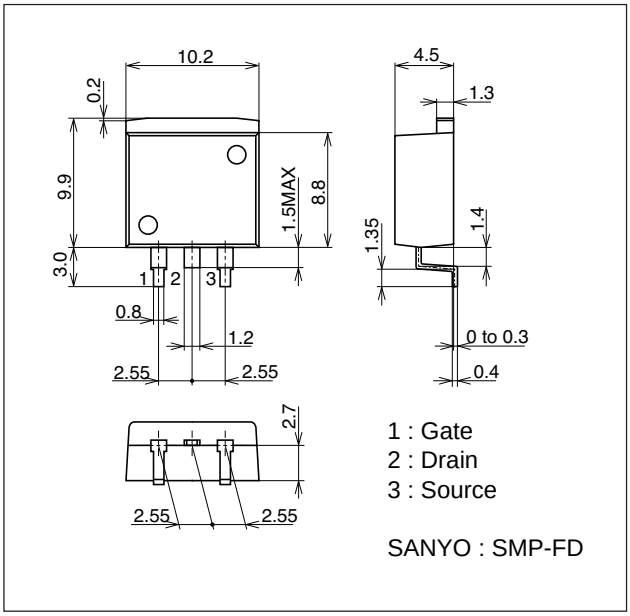
7513-002



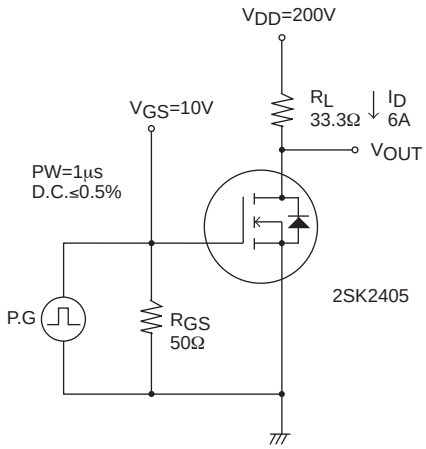
Package Dimensions

unit : mm(typ)

7001-003



Switching Time Test Circuit



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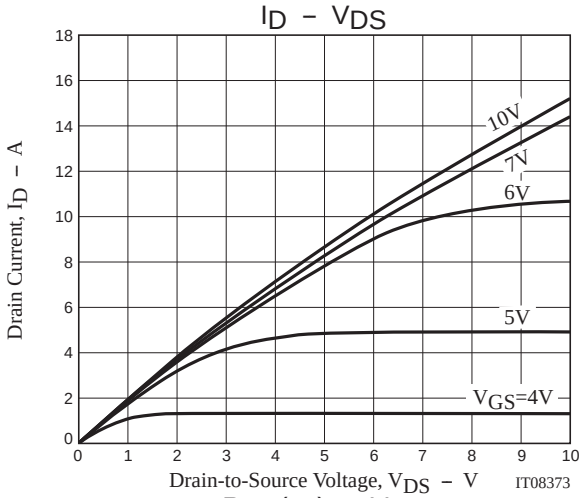

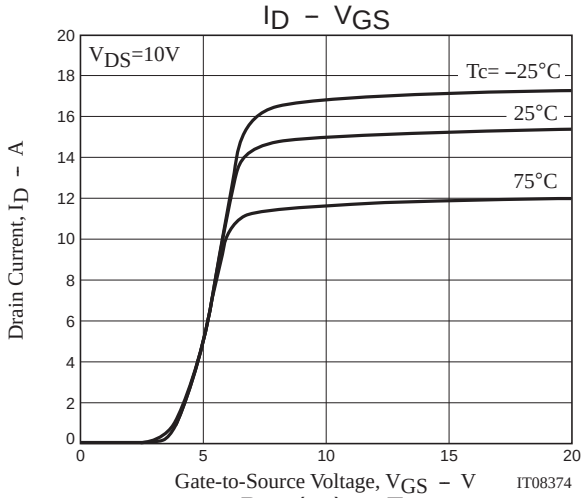

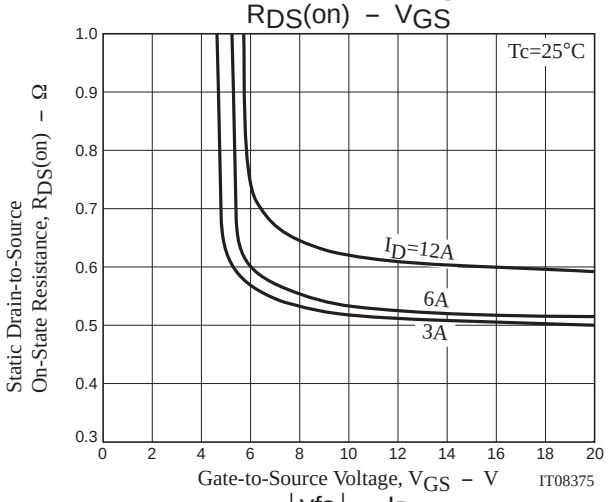

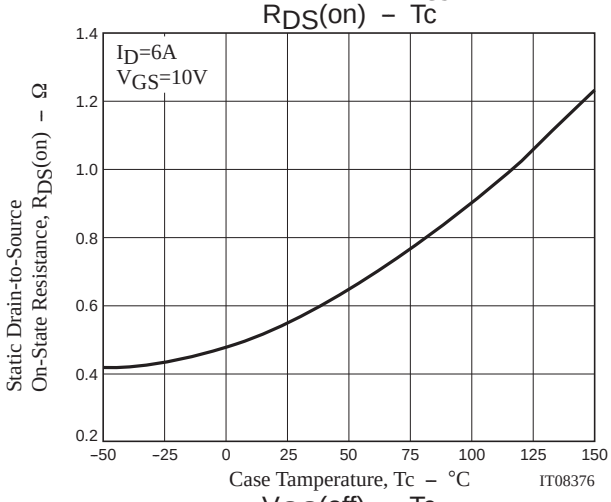

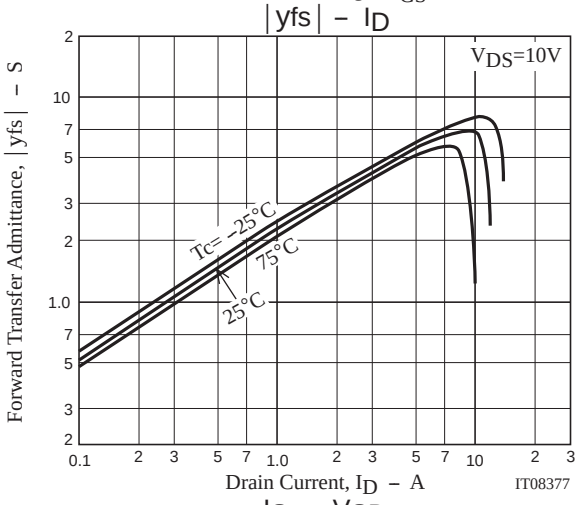

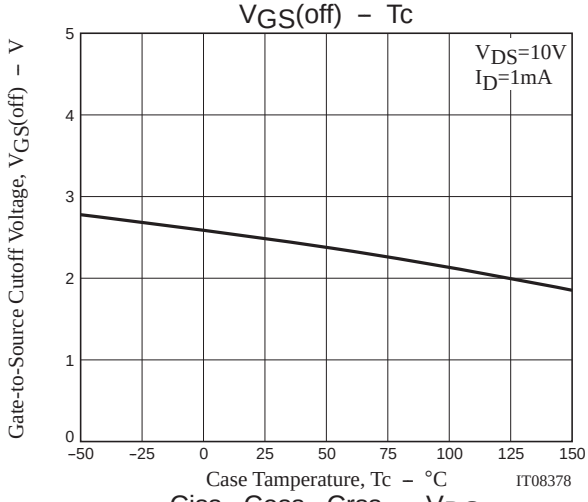

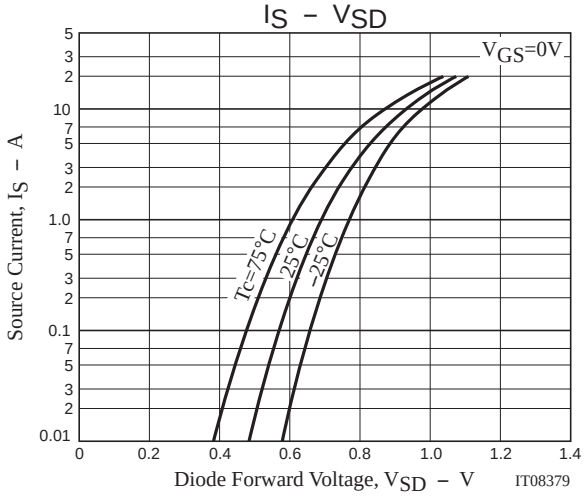

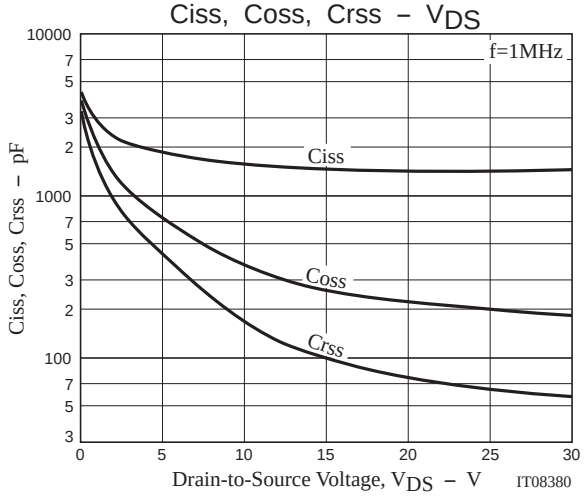

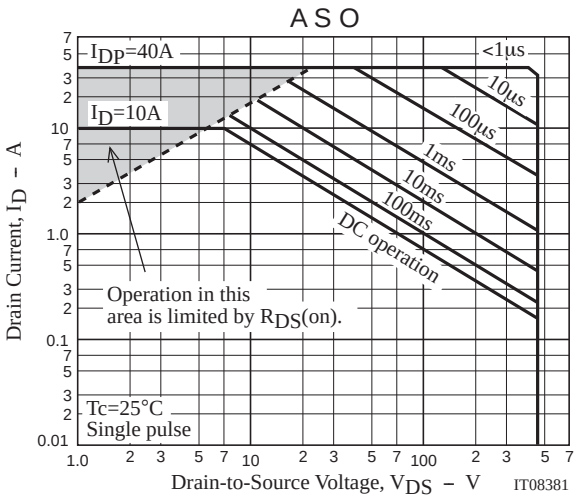

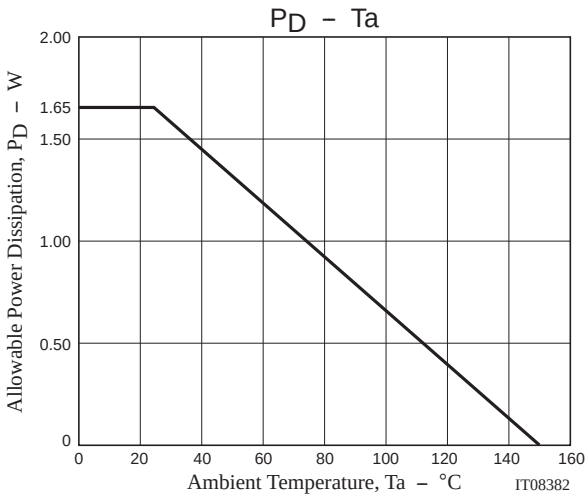

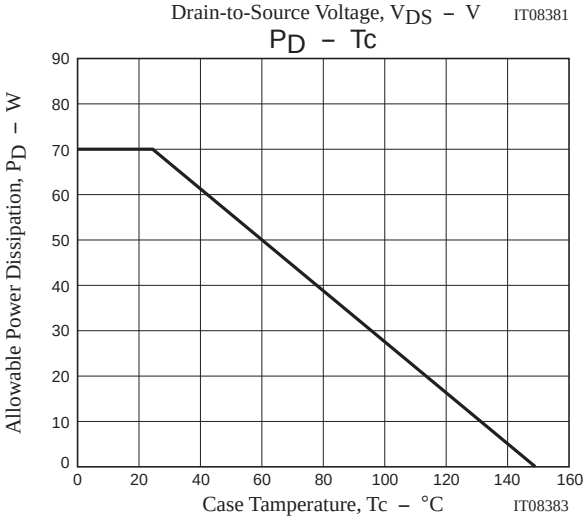

Note on usage : Since the 2SK2405 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

This catalog provides information as of March, 2010. Specifications and information herein are subject to change without notice.