



2SK2403 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Built-in FRD.
- 10V drive.

Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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		3	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	12	A
Allowable Power Dissipation	P_D		1.65	W
		$T_c=25^\circ\text{C}$	50	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0\text{V}$	450			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=450\text{V}$, $V_{GS}=0\text{V}$			1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 30\text{V}$, $V_{DS}=0\text{V}$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $I_D=1.5\text{A}$	0.8	1.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=1.5\text{A}$, $V_{GS}=10\text{V}$		2.4	3.2	Ω
Input Capacitance	C_{iss}	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		380		pF
Output Capacitance	C_{oss}	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		60		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20\text{V}$, $f=1\text{MHz}$		20		pF

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2SK2403

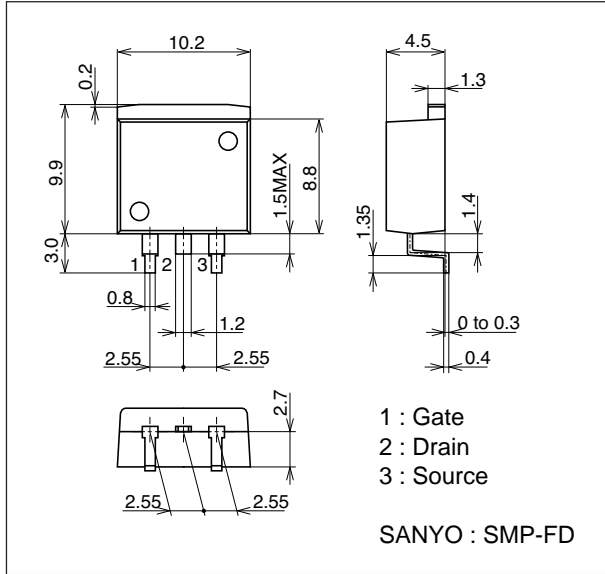
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		10		ns
Rise Time	t_r	See specified Test Circuit.		20		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		75		ns
Fall Time	t_f	See specified Test Circuit.		30		ns
Diode Forward Voltage	V_{SD}	$I_S=3A, V_{GS}=0V$			1.5	V
Diode Reverse Recovery Time	t_{rr}	$I_S=3A, di/dt=100A/\mu s$		100	130	ns

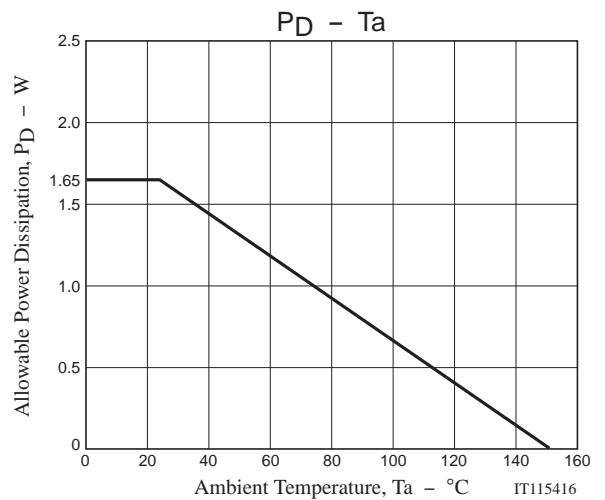
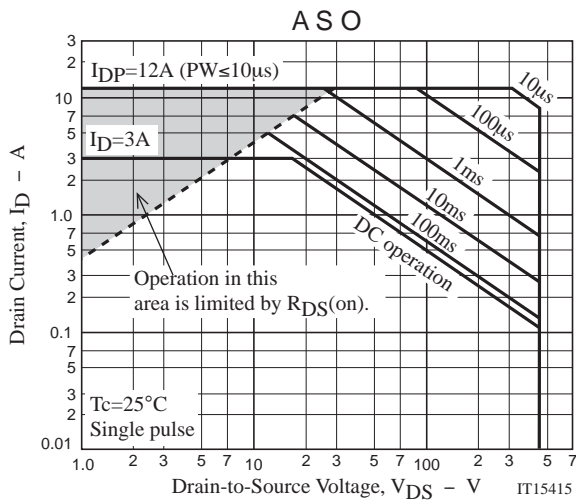
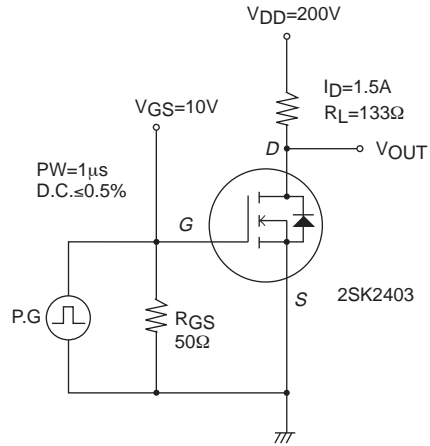
Package Dimensions

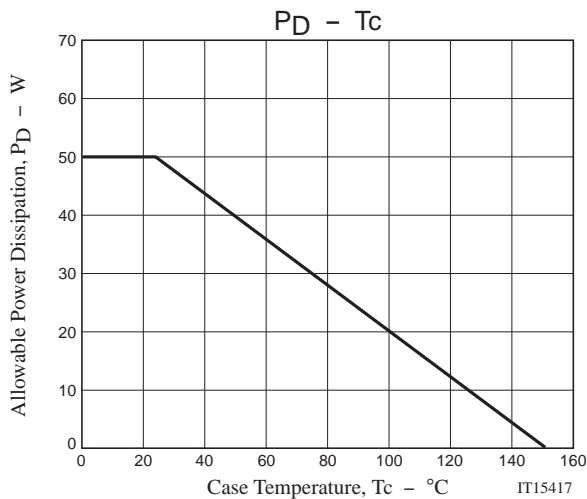
unit : mm (typ)

7001-003



Switching Time Test Circuit





Note on usage : Since the 2SK2403 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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