

No.3573

2SK1435

N-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

- · Low ON-state resistance.
- · Very high-speed switching.
- · Converters.

Fall Time

Diode Forward Voltage

· Micaless package facilitating easy mounting.

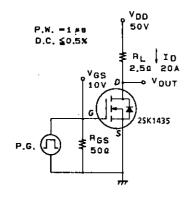
Absolute Maximum Ratings at Ta = 25°C unit						
Drain to Source Voltage	V_{DSS}	·		100	V	
Gate to Source Voltage	V_{GSS}			±20	v	
Drain Current(DC)	ID			30	Α	
Drain Current(Pulse)	I_{DP}	$PW \le 10 \mu s$, duty cycle $\le 1\%$		120	Α	
Allowable Power Dissipation	P_{D}	$Te = 25^{\circ}C$		60	W	
	•			3.0	W	
Channel Temperature	Tch			150	$^{\circ}\mathrm{C}$	
Storage Temperature	Tstg	3	_ 55 to ⊣	- 150	°C	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
Electrical Characteristics at Ta	=25°C	A 34	min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DS}$	$_{\rm S}I_{\rm D}=1$ mA, $V_{\rm GS}=0$	100			V
Zero Gate Voltage Drain Currer	$_{ m nt}$ ${ m I}_{ m DSS}$	$V_{GS} = 100 V, V_{DS} = 0$			100	μ A
Gate to Source Leakage Curren	$_{ m I_{GSS}}$	$V_{GS} = \pm 20V, V_{DS} = 0$			±100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V,I_{D}=1mA$	1.5		2.5	v
Forward Transfer Admittance		$V_{DS} = 10V, I_{D} = 20A$	13	22		S
Static Drain to Source	$R_{DS(on)}$	$I_D = 20A, V_{GS} = 10V$		0.040	0.055	Ω
on State Resistance						
Input Capacitance	Ciss	$V_{DS} = 20V, f = 1MHz$		2400		pF
Output Capacitance	Coss	$V_{DS} = 20V, f = 1MHz$		700		pF
Reverse Transfer Capacitance	Crss	$V_{DS} = 20V, f = 1MHz$		200		$\bar{\mathbf{p}}\mathbf{F}$
Turn-ON Delay Time	$t_{d(on)}$	r		30		ns
Rise Time	tr	$I_{\rm D} = 20 {\rm A, V_{GS}} = 10 {\rm V}$		90		ns
Turn-OFF Delay Time	${ m t_{d(off)}}$	$V_{DD} = 50V, R_{GS} = 50\Omega$		320		ns

(Note) Be careful in handling the 2SK1435 because it has no protection diode between gate and source.

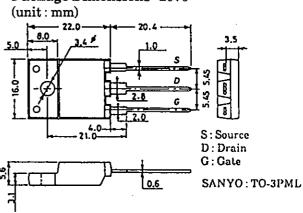
 $I_S = 30A, V_{GS} = 0$

 \bar{V}_{SD}

Switching Time Test Circuit



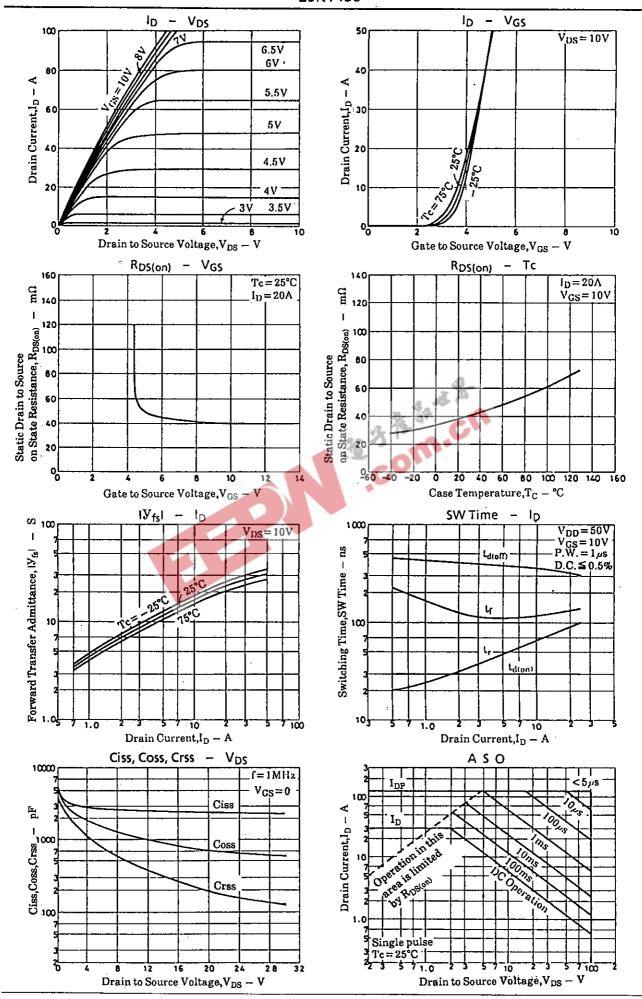
Package Dimensions 2076

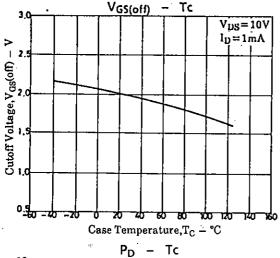


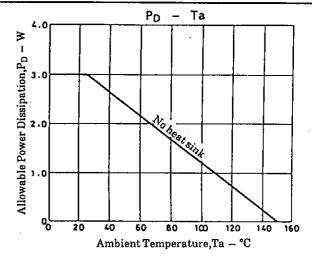
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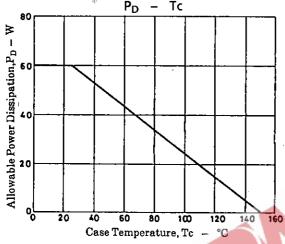
ns

V











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