Ordering number : ENA0324A

SANYO Semiconductors
DATA SHEET

An ON Semiconductor Company

N-Channel Silicon MOSFET

2SK4065 — General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS}(on)1$=4.6mΩ (typ.)
- 4V drive
- Input capacitance Ciss=12200pF (typ.)

Specifications

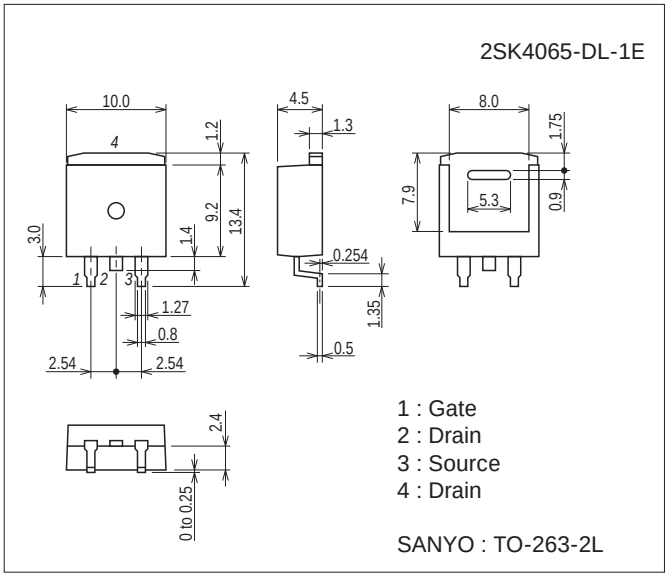
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		75	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		100	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	400	A
Allowable Power Dissipation	P_D		1.65	W
		Tc=25°C	90	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		−55 to +150	°C
Avalanche Energy (Single Pulse) *1	E_{AS}		735	mJ
Avalanche Current *2	I_{AV}		70	A

Note :*1 V_{DD}=30V, L=200μH, I_{AV}=70A (Fig.1)
*2 L≤200μH, single pulse

Package Dimensions

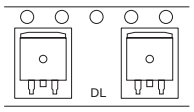
unit : mm (typ)
7535-001



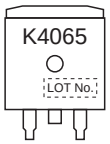
Product & Package Information

- Package : TO-263-2L
- JEITA, JEDEC : SC-83, TO-263
- Minimum Packing Quantity : 800 pcs./reel

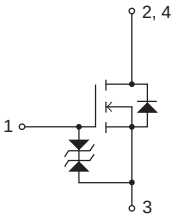
Packing Type: DL



Marking



Electrical Connection



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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	75			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=75V, V_{GS}=0V			1	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	1.2		2.6	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=50A	47	78		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)1	I_D=50A, V_{GS}=10V		4.6	6.0	mΩ
	R_{DS}(on)2	I_D=50A, V_{GS}=4V		5.7	8.0	mΩ
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		12200		pF
Output Capacitance	Coss			950		pF
Reverse Transfer Capacitance	Crss			730		pF
Turn-ON Delay Time	t_d(on)	See Fig.2		80		ns
Rise Time	t_r			460		ns
Turn-OFF Delay Time	t_d(off)			930		ns
Fall Time	t_f			640		ns
Total Gate Charge	Qg	V_{DS}=35V, V_{GS}=10V, I_D=100A		220		nC
Gate-to-Source Charge	Qgs			40		nC
Gate-to-Drain "Miller" Charge	Qgd			50		nC
Diode Forward Voltage	V_{SD}	I_S=100A, V_{GS}=0V		0.9	1.2	V

Fig.1 Avalanche Resistance Test Circuit

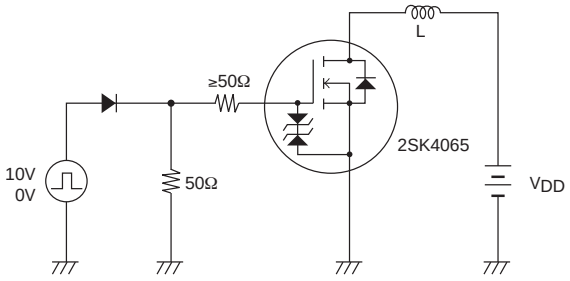
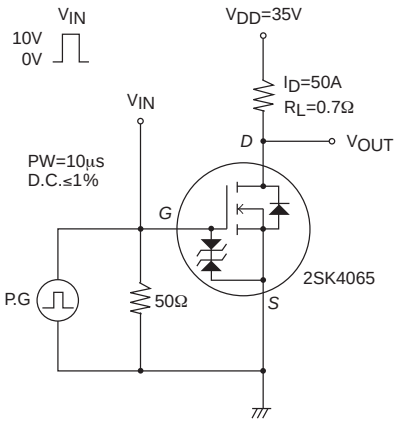


Fig.2 Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
2SK4065-DL-1E	TO-263-2L	800pcs./reel	Pb Free

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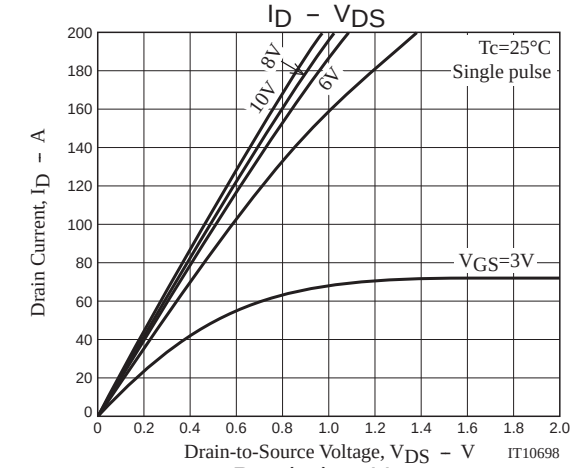

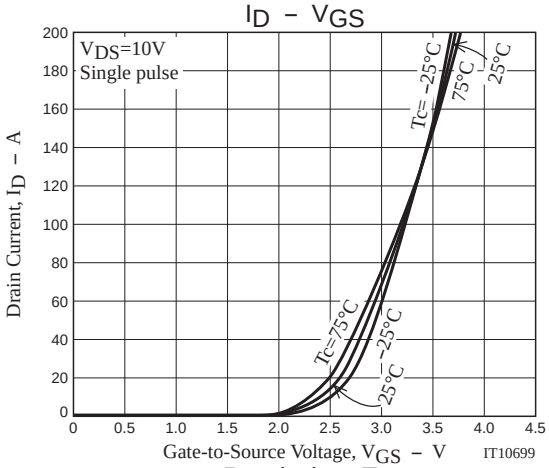

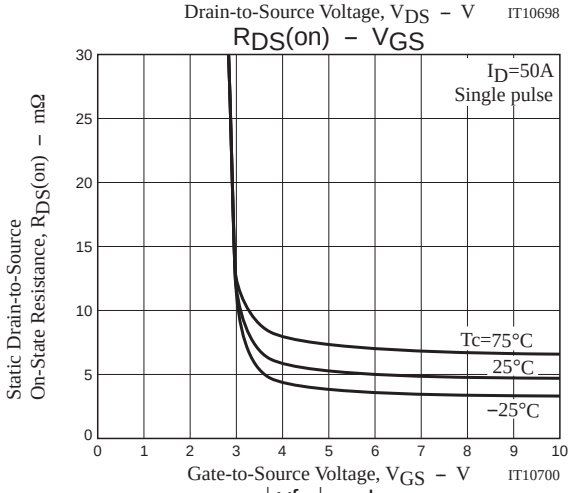

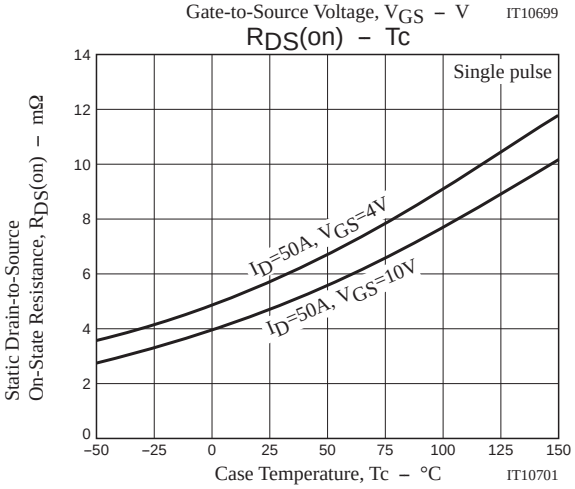

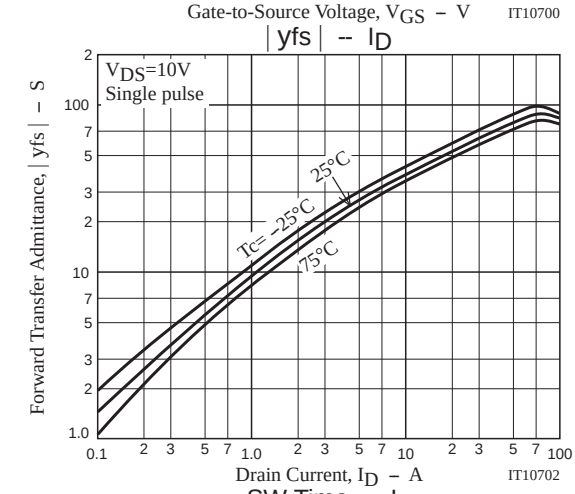

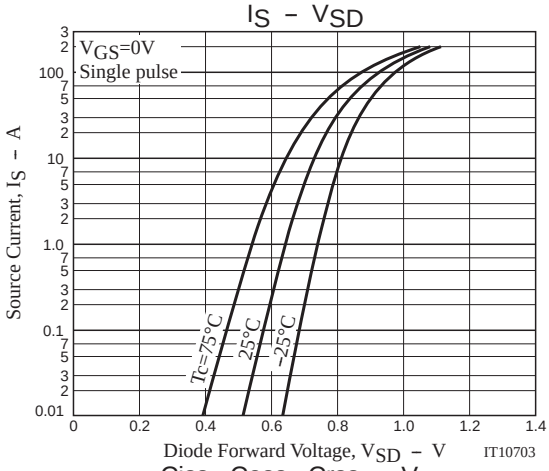

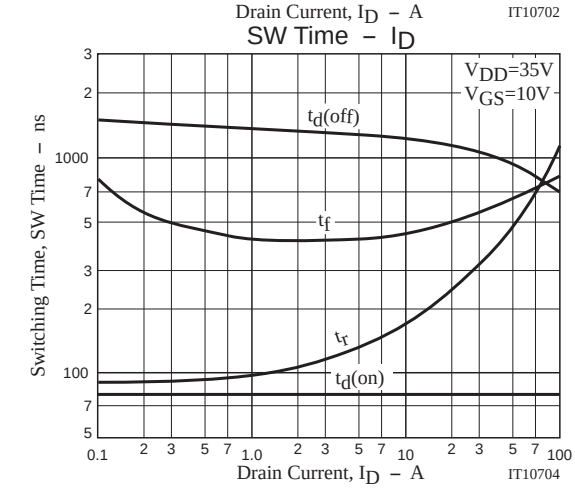

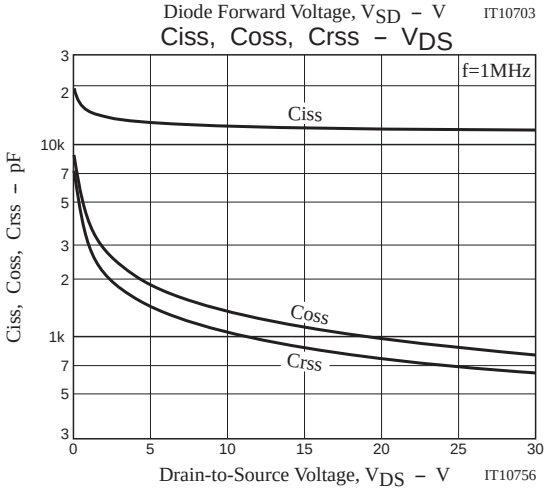

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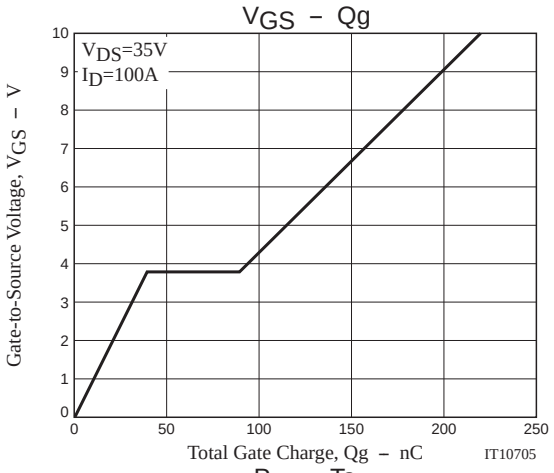

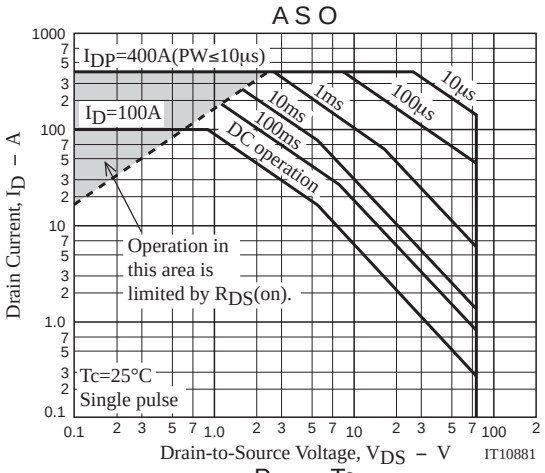

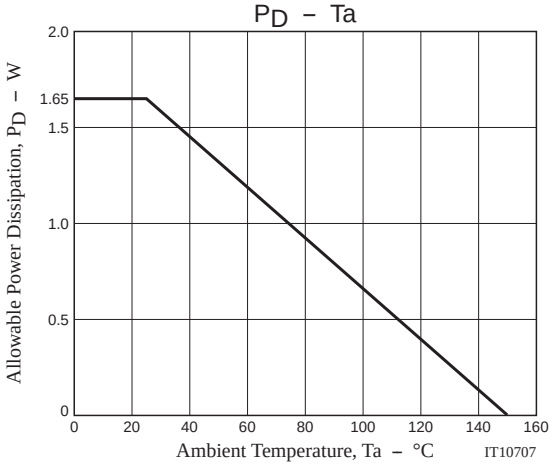

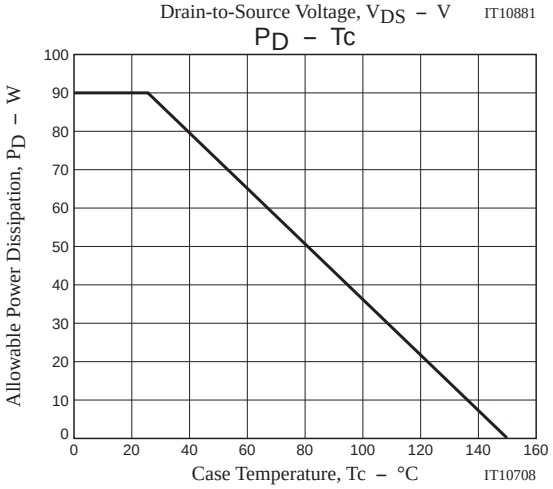

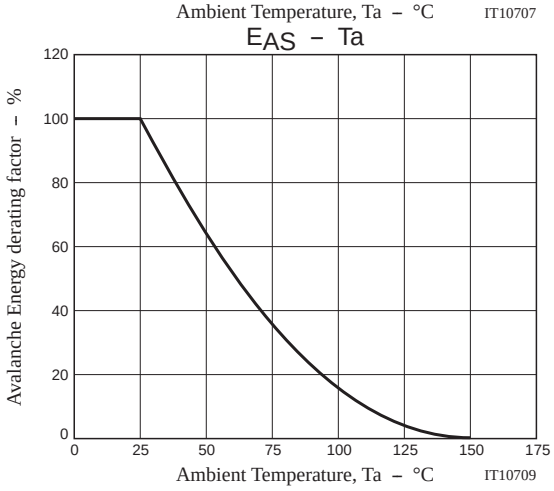

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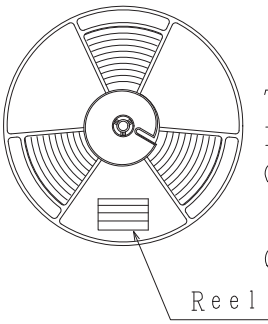
Taping Specification

2SK4065-DL-1E

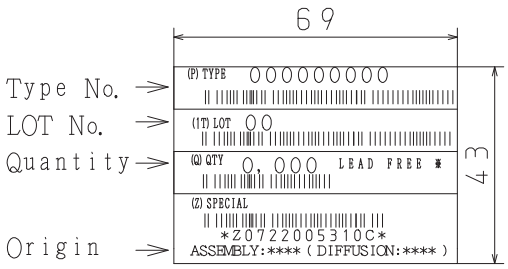
1. Packing Format

Package Name	Maximum Number of devices contained (pcs)			Packing format	
	Reel	Inner box	Outer box	Inner BOX	Outer BOX
TO-263-2L	800	1600	6400	SPD-0V0011 2 reel contained Dimensions:mm (external) 351×340×68	SPD-0V0009 4 inner boxes contained Dimensions:mm (external) 390×370×318

Packing method

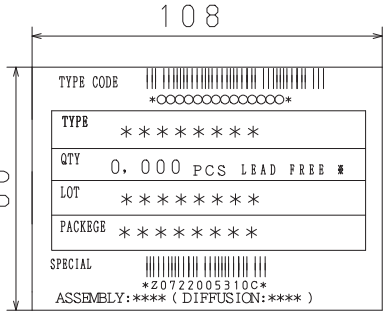


Reel label, Inner box label (unit:mm)



Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.

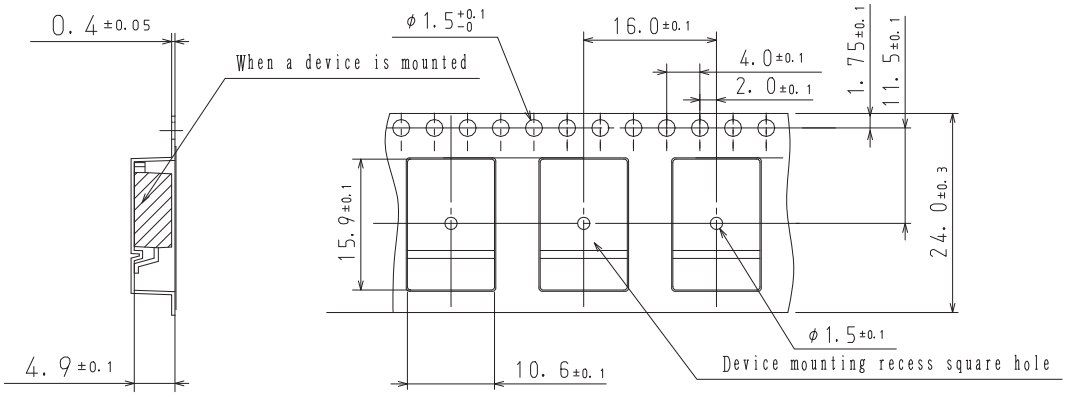


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

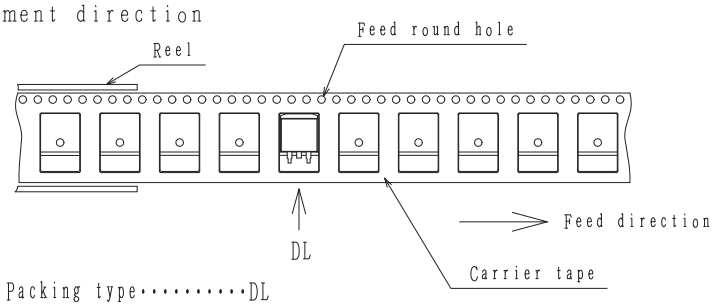
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction



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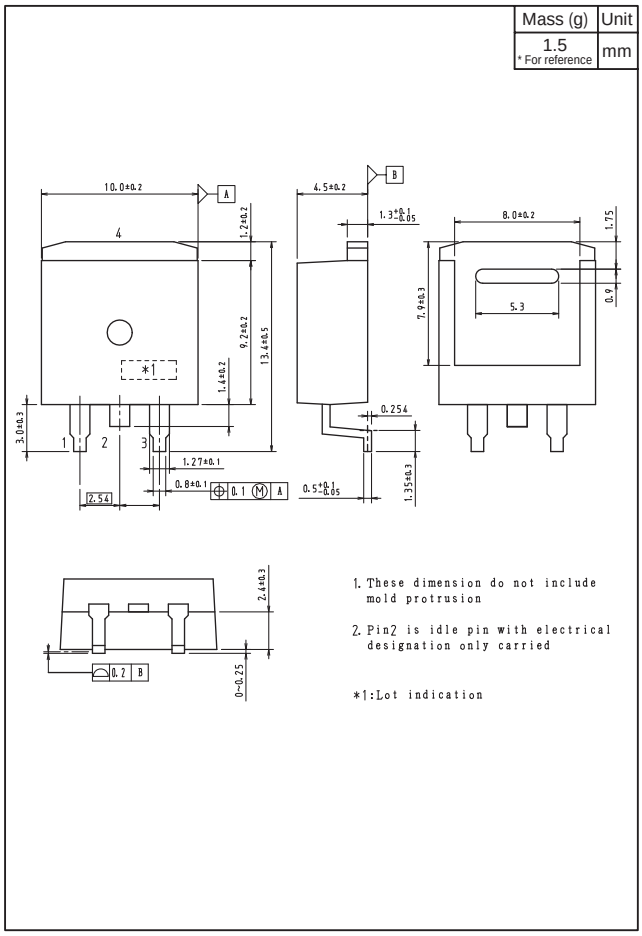
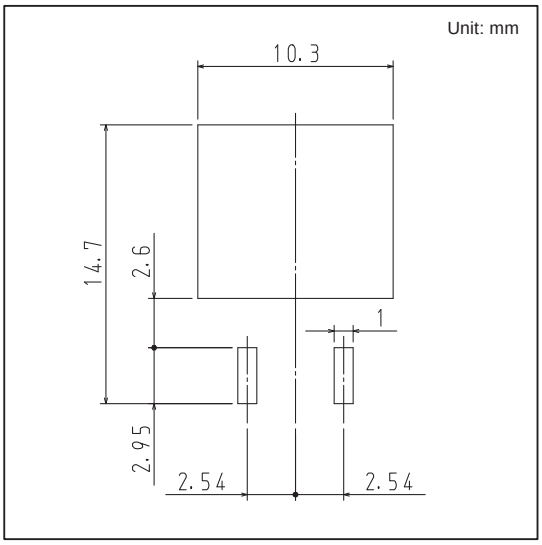
Outline Drawing

2SK4065-DL-1E



Land Pattern Example



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Note on usage : Since the 2SK4065 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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