

## SK830321KL

## Silicon N-channel MOS FET

For Load-switching / For DC-DC Converter

### ■ Features

- Low Drain-source On-state Resistance:  $R_{DS(on)typ} = 24 \text{ m}\Omega$  ( $V_{GS} = 4.5 \text{ V}$ )
- Halogen-free / RoHS compliant  
(EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

### ■ Marking Symbol: 21

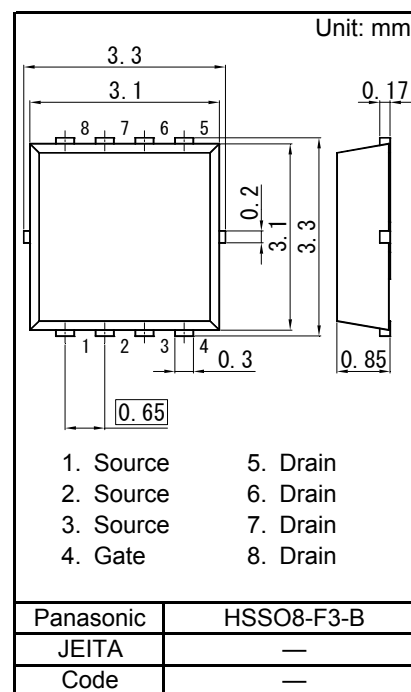
### ■ Packaging

Embossed type (Thermo-compression sealing) : 5 000 pcs / reel (standard)

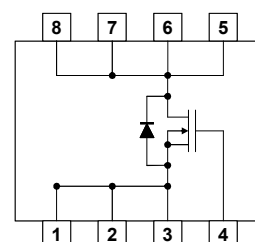
### ■ Absolute Maximum Ratings $T_a = 25 \text{ }^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	VDS	30	V
Gate to Source Voltage	VGS	$\pm 20$	
Drain Current	ID	$T_a = 25 \text{ }^\circ\text{C}, t = 10 \text{ s}^{*1}$	9
		$T_a = 25 \text{ }^\circ\text{C}, \text{DC}^{*1}$	7
		$T_c = 25 \text{ }^\circ\text{C}$	18
		Pulsed, $T_{ch} < 150 \text{ }^\circ\text{C}^{*2}$	27
Total Power Dissipation	PD	$T_a = 25 \text{ }^\circ\text{C}, \text{DC}^{*1}$	2
		$T_c = 25 \text{ }^\circ\text{C}$	13
Thermal Resistance	Channel to Ambient	$R_{th(ch-a)}$	62.5
	Channel to Case	$R_{th(ch-c)}$	9.2
Channel Temperature	Tch	150	$^\circ\text{C}$
Operating ambient temperature	Topr	-40 to +85	
Storage Temperature Range	Tstg	-55 to +150	
Avalanche Current (Single pulse) <sup>*3</sup>	IAR	4.5	A
Avalanche Energy (Single pulse) <sup>*3</sup>	EAR	2.5	mJ

Note \*1 Device mounted on a glass-epoxy board in Figure 1

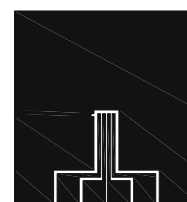
\*2 Pulse test: Ensure that the channel temperature does not exceed  $150 \text{ }^\circ\text{C}$ \*3  $V_{DD} = 24 \text{ V}$ ,  $V_{GS} = 10 \text{ to } 0 \text{ V}$ ,  $L = 0.1 \text{ mH}$ ,  $T_{ch} = 25 \text{ }^\circ\text{C}$  (initial)

### Internal Connection



### Pin Name

- |           |          |
|-----------|----------|
| 1. Source | 5. Drain |
| 2. Source | 6. Drain |
| 3. Source | 7. Drain |
| 4. Gate   | 8. Drain |



**Figure 1** FR4 Glass-Epoxy Board  
25.4 mm × 25.4 mm × 0.8 mm