

TOSHIBA**2SK2718**TOSHIBA Field Effect Transistor Silicon N Channel MOS Type (π -MOSIII)

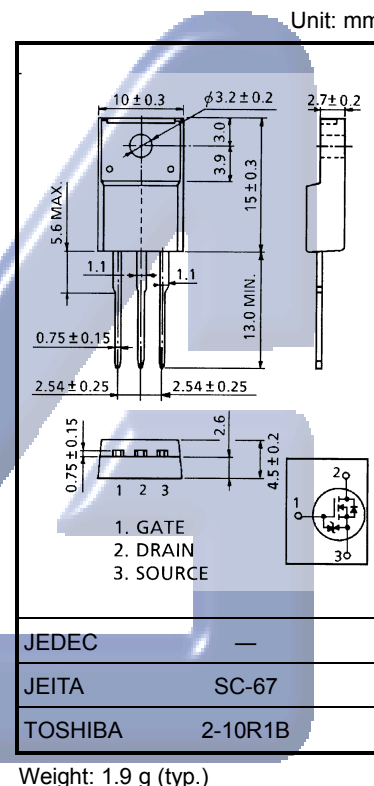
2SK2718

DC-DC Converter and Motor Drive Applications

- Low drain-source ON resistance : $R_{DS(ON)} = 5.6 \Omega$ (typ.)
- High forward transfer admittance : $|Y_{fs}| = 2.0 \text{ S}$ (typ.)
- Low leakage current : $I_{DSS} = 100 \mu\text{A}$ (max) ($V_{DS} = 720 \text{ V}$)
- Enhancement mode : $V_{th} = 2.0 \sim 4.0 \text{ V}$ ($V_{DS} = 10 \text{ V}$, $I_D = 1 \text{ mA}$)

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

Characteristics	Symbol	Rating	Unit
Drain-source voltage	V_{DSS}	900	V
Drain-gate voltage ($R_{GS} = 20 \text{ k}\Omega$)	V_{DGR}	900	V
Gate-source voltage	V_{GSS}	± 30	V
Drain current	DC (Note 1)	I_D	2.5
	Pulse (Note 1)	I_{DP}	7.5
Drain power dissipation ($T_c = 25^\circ\text{C}$)	P_D	40	W
Single pulse avalanche energy (Note 2)	E_{AS}	216	mJ
Avalanche current	I_{AR}	2.5	A
Repetitive avalanche energy (Note 3)	E_{AR}	4.0	mJ
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$



Weight: 1.9 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Thermal Characteristics

Characteristics	Symbol	Max	Unit
Thermal resistance, channel to case	$R_{th(ch-c)}$	3.125	$^\circ\text{C} / \text{W}$
Thermal resistance, channel to ambient	$R_{th(ch-a)}$	62.5	$^\circ\text{C} / \text{W}$

Note 1: Ensure that the channel temperature does not exceed 150°C .Note 2: $V_{DD} = 90 \text{ V}$, $T_{ch} = 25^\circ\text{C}$ (initial), $L = 63.4 \text{ mH}$, $R_G = 25 \Omega$, $I_{AR} = 2.5 \text{ A}$

Note 3: Repetitive rating: pulse width limited by maximum channel temperature

This transistor is an electrostatic-sensitive device.

Please handle with caution.