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	1500			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=1200V, V_{GS}=0V			100	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	2.5		3.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=20V, I_D=1A	0.7	1.4		S
Static Drain-to-Source On-State Resistance	R_{DS}(on)	I_D=1A, V_{GS}=10V		10	13	Ω
Input Capacitance	Ciss	V_{DS}=30V, f=1MHz		380		pF
Output Capacitance	Coss			70		pF
Reverse Transfer Capacitance	Crss			40		pF
Turn-ON Delay Time	t_d(on)	See Fig.2		12		ns
Rise Time	t_r			37		ns
Turn-OFF Delay Time	t_d(off)			152		ns
Fall Time	t_f			59		ns
Total Gate Charge	Qg	V_{DS}=200V, V_{GS}=10V, I_D=2A		37.5		nC
Gate-to-Source Charge	Qgs			2.7		nC
Gate-to-Drain “Miller” Charge	Qgd			20		nC
Diode Forward Voltage	V_{SD}	I_S=2A, V_{GS}=0V		0.88	1.2	V

Fig.1 Avalanche Resistance Test Circuit

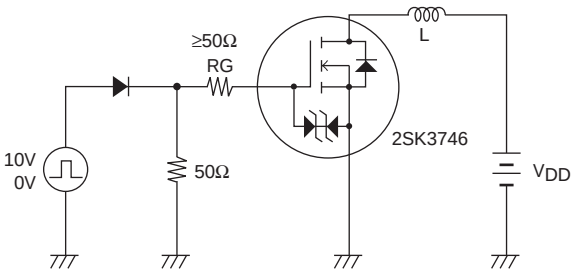
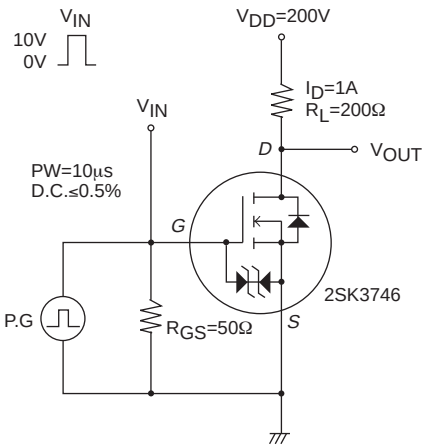
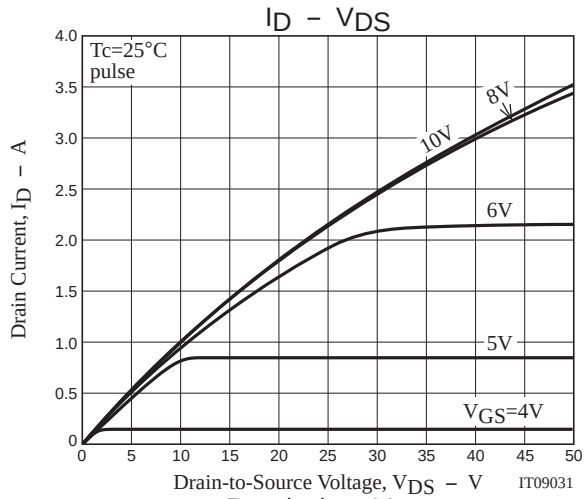


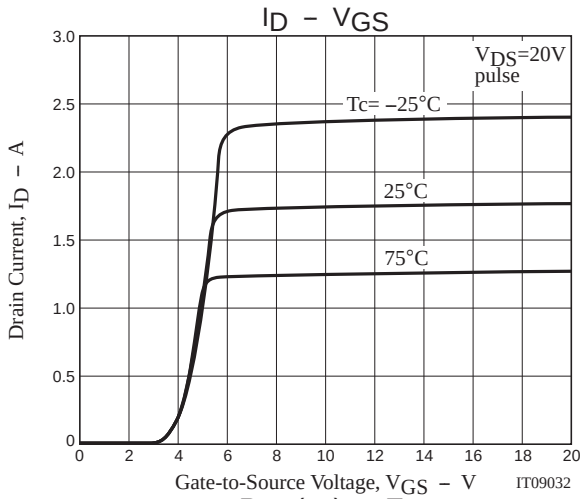
Fig.2 Switching Time Test Circuit

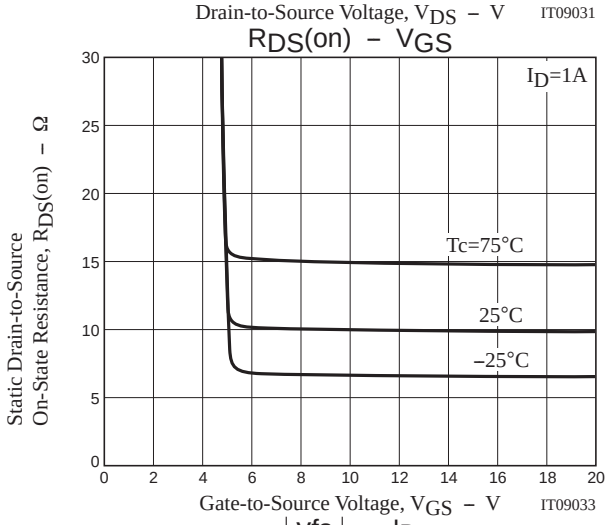


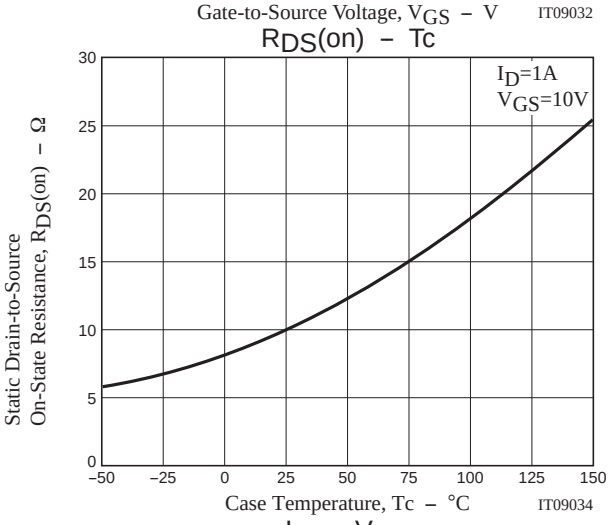
Ordering Information

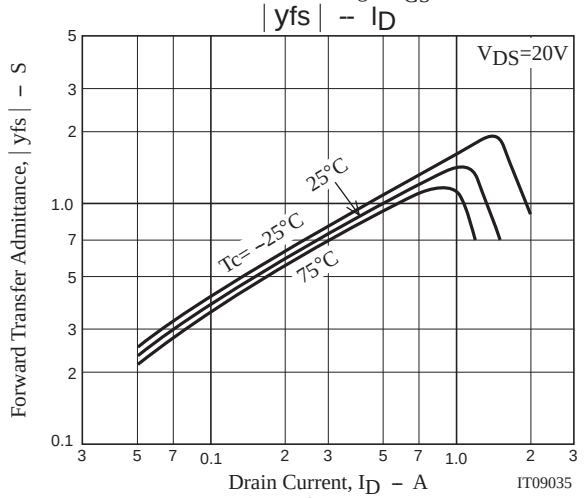
Device	Package	Shipping	memo
2SK3746-1E	TO-3P-3L	30pcs./magazine	Pb Free

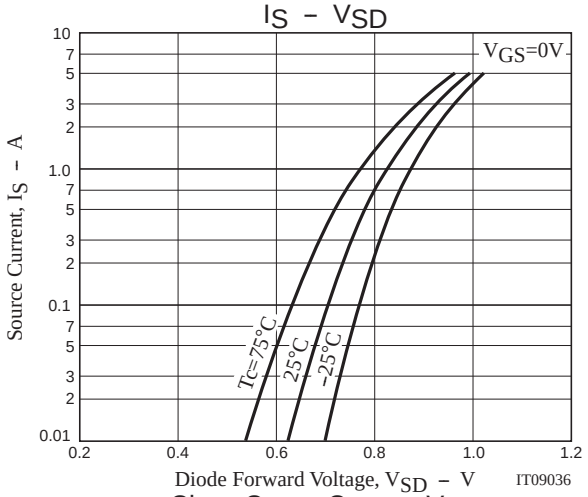


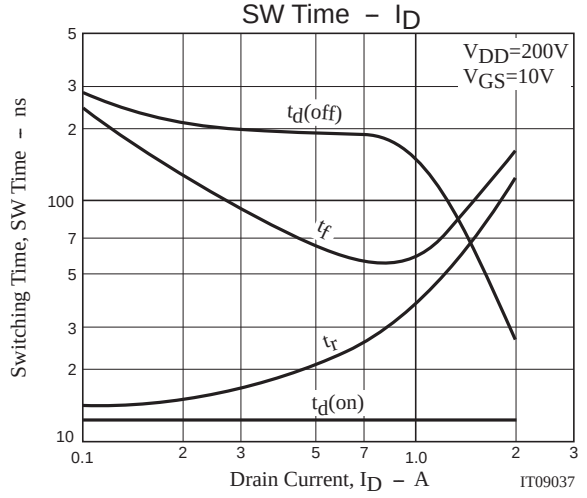


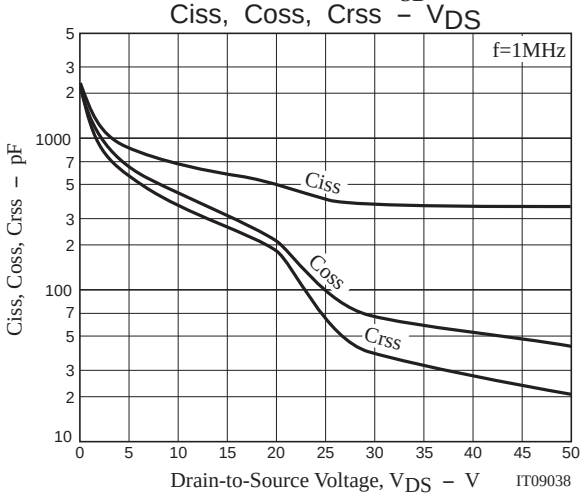


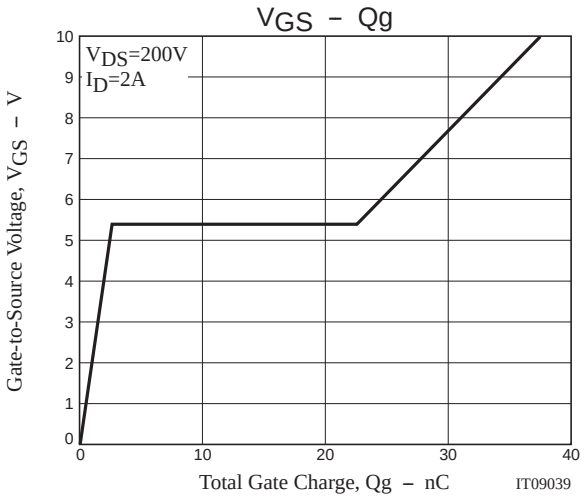


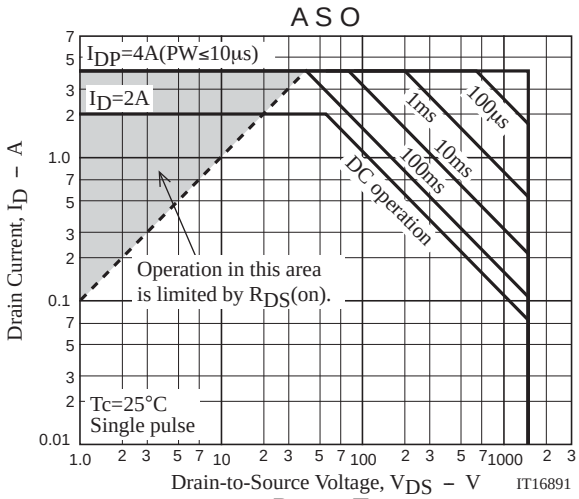


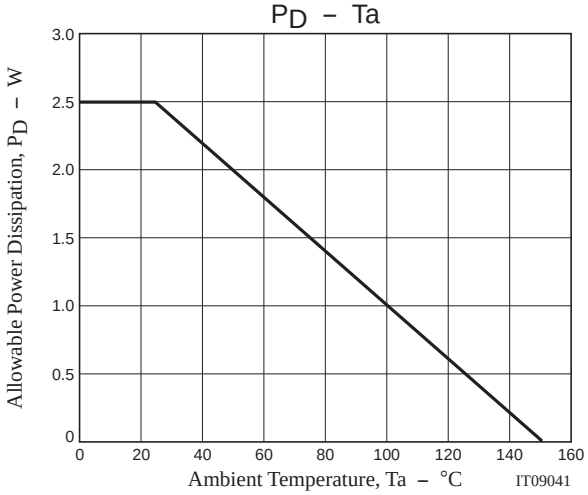


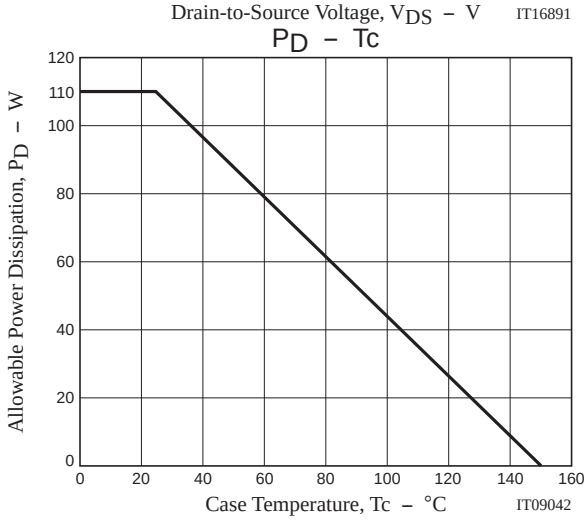












Magazine Specification

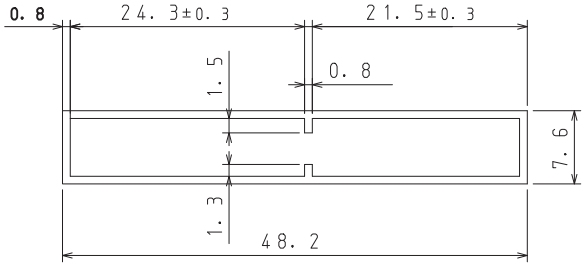
2SK3746-1E

1. Packing Format

Package Name	Maximum Number of devices contained (pcs)			Packing format	
	Magazine	Inner box	Outer box	Inner BOX	Outer BOX
TO-3P-3L	30	450	1800	SPD-0V0001 15 magazines contained Dimensions:mm(external) 568×150×55	SPD-LV0010 4 inner boxes contained Dimensions:mm(external) 590x225x178

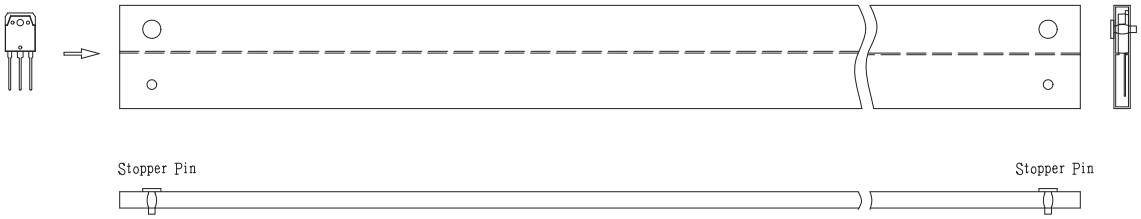
2. Magazine dimensions

(unit:mm)

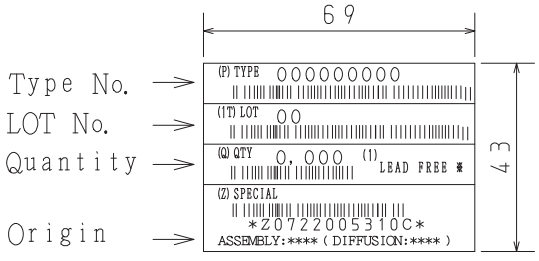


Tolerance=±0.2mm
Thickness=0.8±0.2mm
Length =508.0±1mm
Material =PVC or PET
(Antistatic treatment)

3. Storage method to magazine

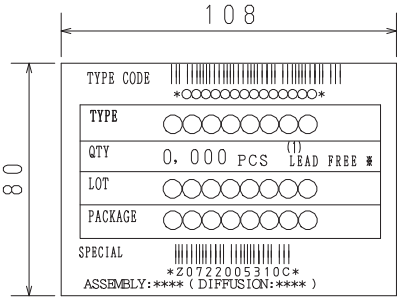


4. Inner box label (unit:mm)



5. Outer box label (unit:mm)

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

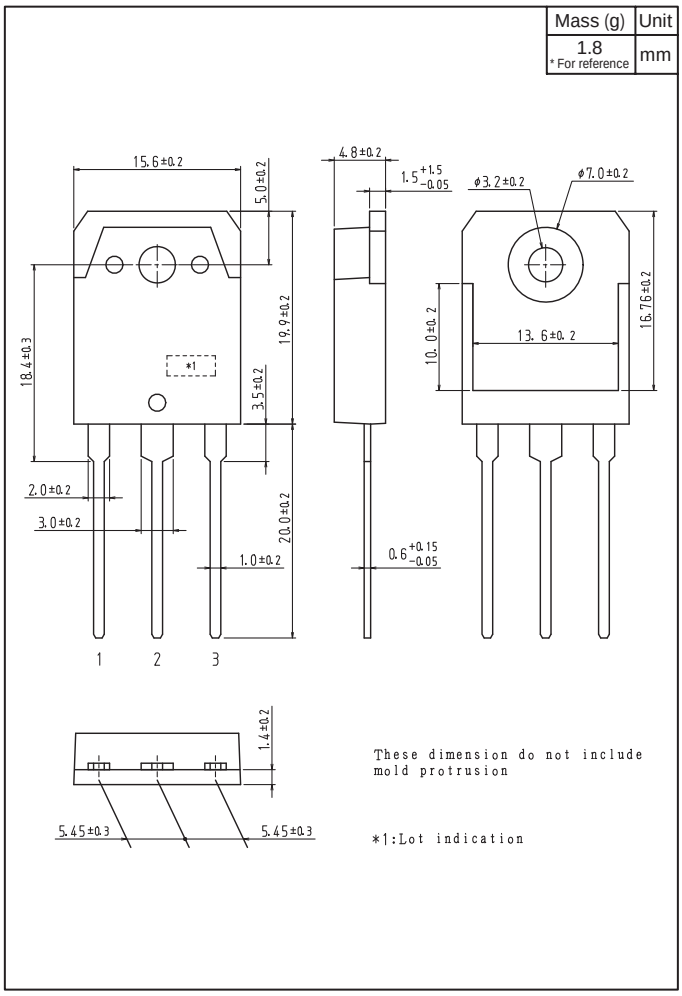


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A

Outline Drawing

2SK3746-1E



Note on usage : Since the 2SK3746 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.