

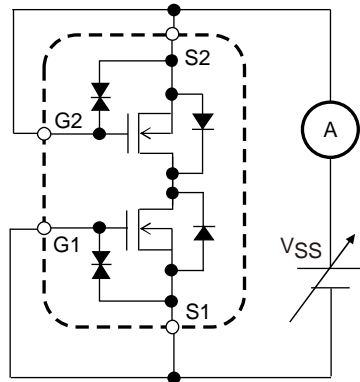
# EFC4621R

## Electrical Characteristics at $T_a = 25^{\circ}\text{C}$

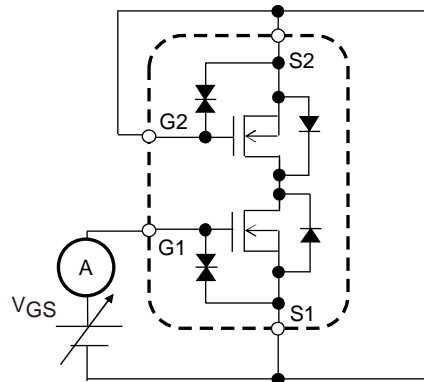
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Source to Source Breakdown Voltage	$V_{(BR)SSS}$	$I_S=1\text{mA}$ , $V_{GS}=0\text{V}$ Test Circuit 1	24			V
Zero-Gate Voltage Source Current	$I_{SSS}$	$V_{SS}=20\text{V}$ , $V_{GS}=0\text{V}$ Test Circuit 1			1	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8\text{V}$ , $V_{SS}=0\text{V}$ Test Circuit 2			$\pm 1$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{SS}=10\text{V}$ , $I_S=1\text{mA}$ Test Circuit 3	0.5		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{SS}=10\text{V}$ , $I_S=3\text{A}$ Test Circuit 4		7.3		S
Static Source to Source On-State Resistance	$R_{SS(on)1}$	$I_S=3\text{A}$ , $V_{GS}=4.5\text{V}$ Test Circuit 5	10.8	15.5	18	$\text{m}\Omega$
	$R_{SS(on)2}$	$I_S=3\text{A}$ , $V_{GS}=4.0\text{V}$ Test Circuit 5	11.1	16	19	$\text{m}\Omega$
	$R_{SS(on)3}$	$I_S=3\text{A}$ , $V_{GS}=3.7\text{V}$ Test Circuit 5	11.5	16.5	20	$\text{m}\Omega$
	$R_{SS(on)4}$	$I_S=3\text{A}$ , $V_{GS}=3.1\text{V}$ Test Circuit 5	12.5	18	23.5	$\text{m}\Omega$
	$R_{SS(on)5}$	$I_S=3\text{A}$ , $V_{GS}=2.5\text{V}$ Test Circuit 5	14.9	23	30	$\text{m}\Omega$
Turn-ON Delay Time	$t_{d(on)}$	$V_{SS}=10\text{V}$ , $V_{GS}=4.5\text{V}$ , $I_S=3\text{A}$ Test Circuit 7		340		ns
Rise Time	$t_r$			600		ns
Turn-OFF Delay Time	$t_{d(off)}$			26000		ns
Fall Time	$t_f$			28000		ns
Total Gate Charge	$Q_g$	$V_{SS}=10\text{V}$ , $V_{GS}=4.5\text{V}$ , $I_S=9\text{A}$ Test Circuit 8		29		nC
Forward Source to Source Voltage	$V_{F(S-S)}$	$I_S=3\text{A}$ , $V_{GS}=0\text{V}$ Test Circuit 6		0.77	1.2	V

Test circuits are example of measuring FET1 side

Test Circuit 1  
 $I_{SSS}$

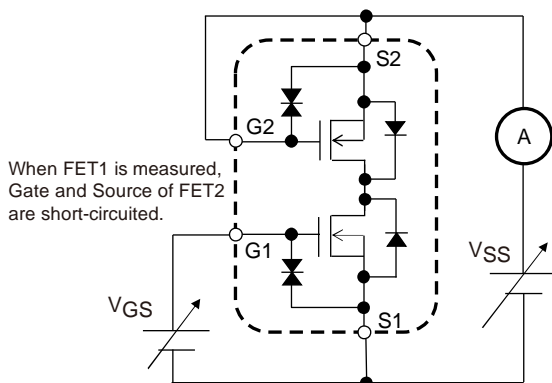


Test Circuit 2  
 $I_{GSS}$



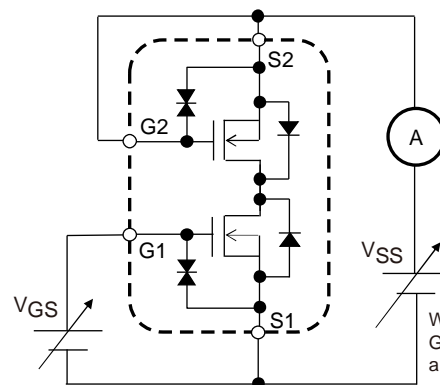
When FET1 is measured, Gate and Source of FET2 are short-circuited.

Test Circuit 3  
 $V_{GS(off)}$



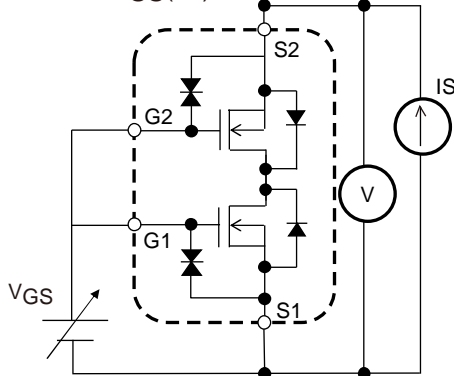
When FET1 is measured, Gate and Source of FET2 are short-circuited.

Test Circuit 4  
 $|y_{fs}|$

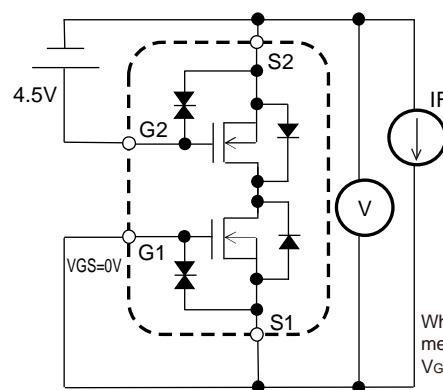


When FET1 is measured, Gate and Source of FET2 are short-circuited.

Test Circuit 5  
 $R_{SS(on)}$

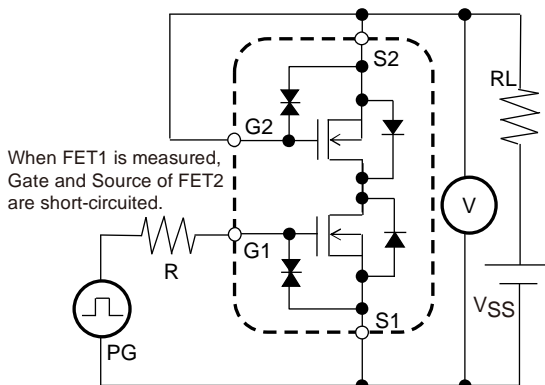


Test Circuit 6  
 $V_F(S-S)$



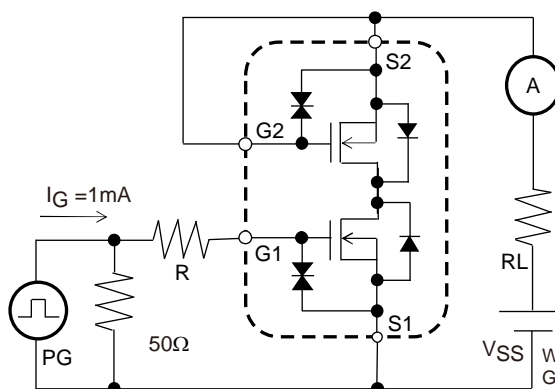
When FET1 is measured, +4.5V is added to  $V_{GS}$  of FET2.

Test Circuit 7  
 $t_d(on)$ ,  $t_r$ ,  $t_d(off)$ ,  $t_f$

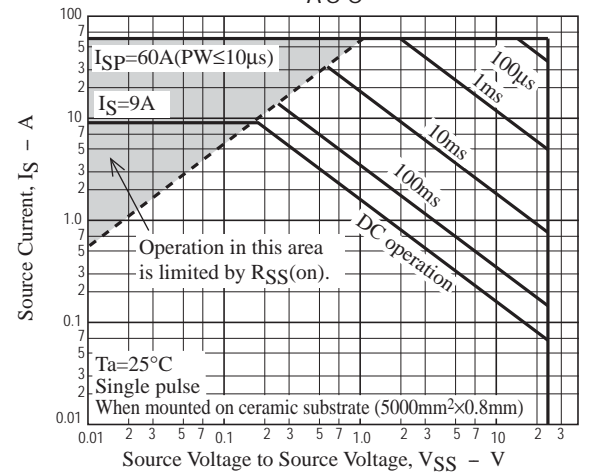
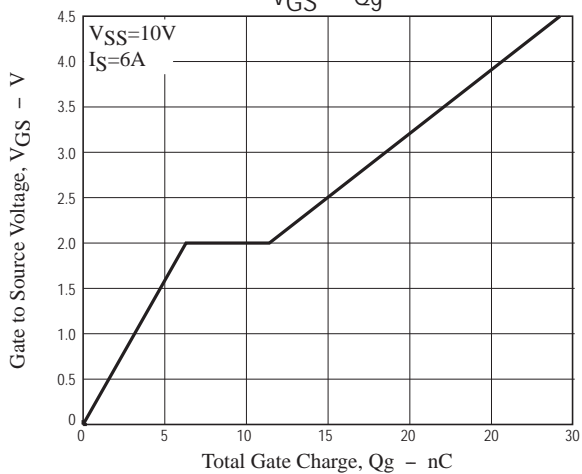
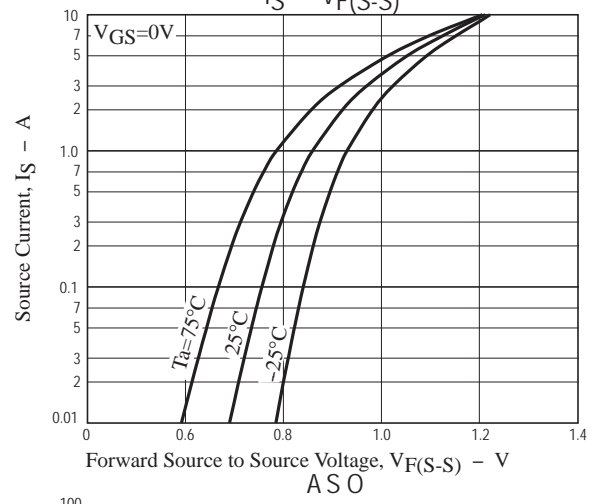
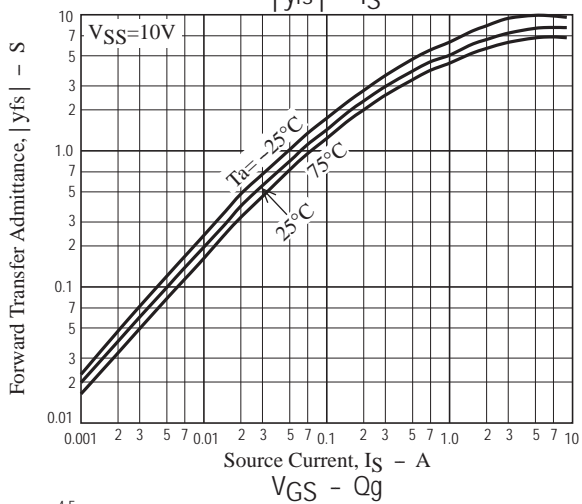
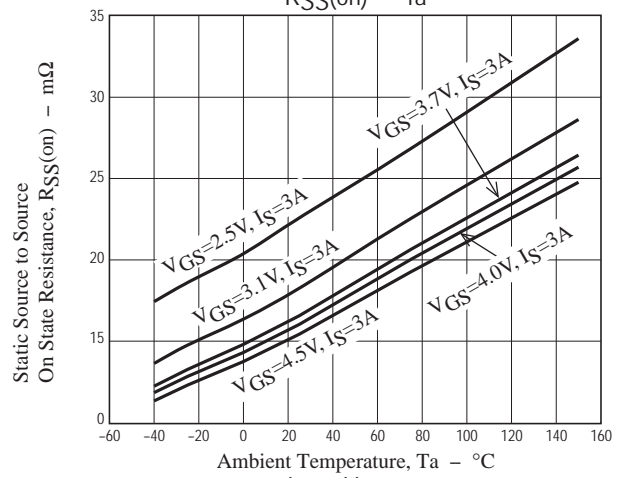
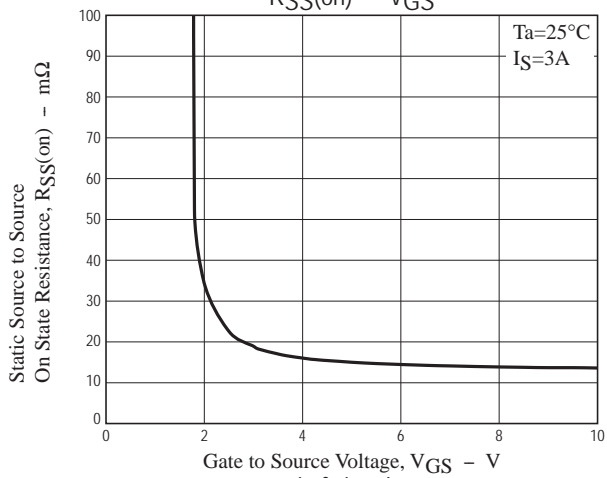
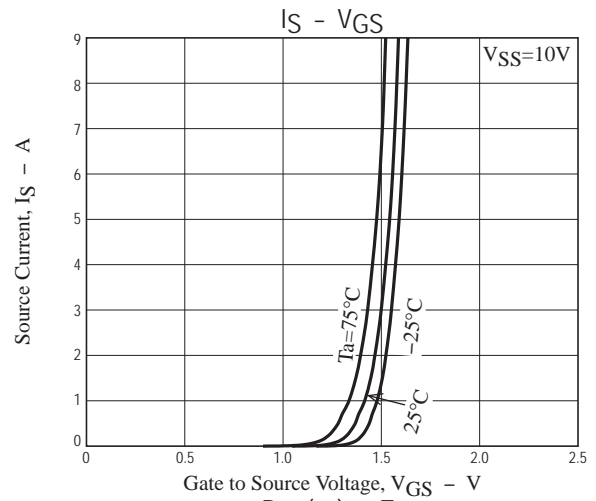
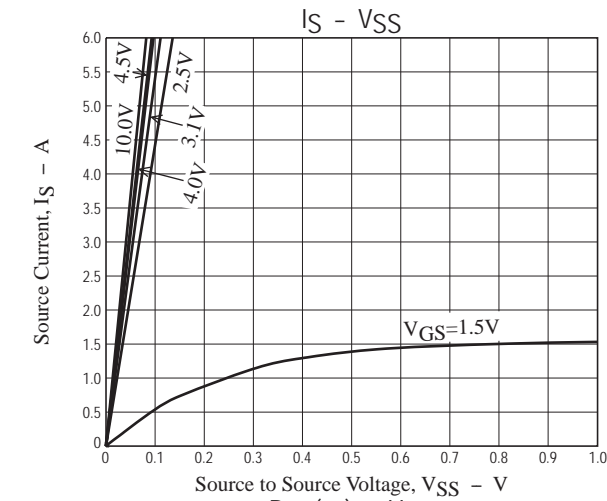


When FET1 is measured, Gate and Source of FET2 are short-circuited.

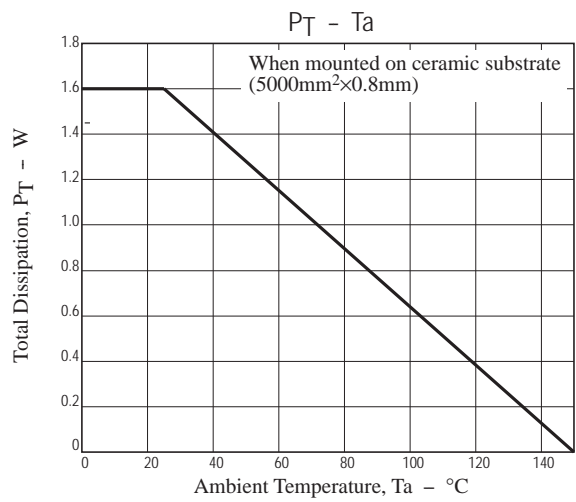
Test Circuit 8  
 $Q_g$



When FET1 is measured, Gate and Source of FET2 are short-circuited.



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1- 1 .Carrier Tape Size (unit:mm)



The diagram illustrates a punched tape with a series of circular holes. A label 'Reel' with a downward arrow points to the top edge of the tape. Below the tape, a label 'Carrier tape' with an upward arrow points to the bottom edge. An arrow at the bottom right indicates the 'Direction of unreeing' to the right. An 'Index mark' is shown as a specific hole in the tape, with a line pointing to it from the label.

Packing type..... TR

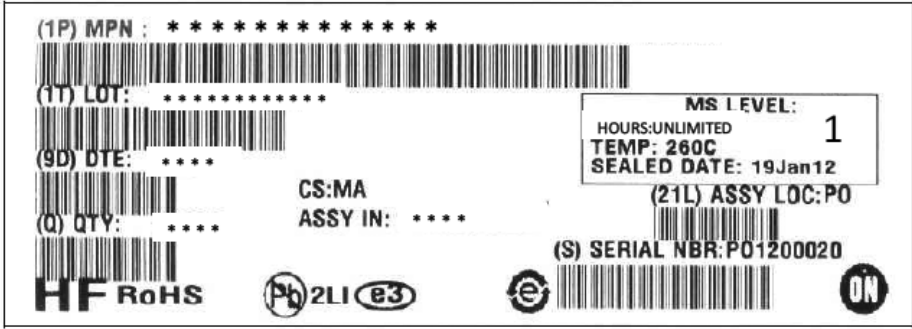
The diagram illustrates the winding process for a tape. It shows a sequence of components (represented by circles) and tape segments (represented by rectangles) being wound onto a core. The process starts at the "Winding start" and ends at the "Winding end". The components are grouped into a "Components" section. The tape segments are divided into "No Components" sections and a "Top cover tape" section. The minimum length for the "No Components" section is 160, and for the "Top cover tape" section is 100. The total minimum length for the entire process is 400. The direction of unreeling is indicated by an arrow pointing to the right.

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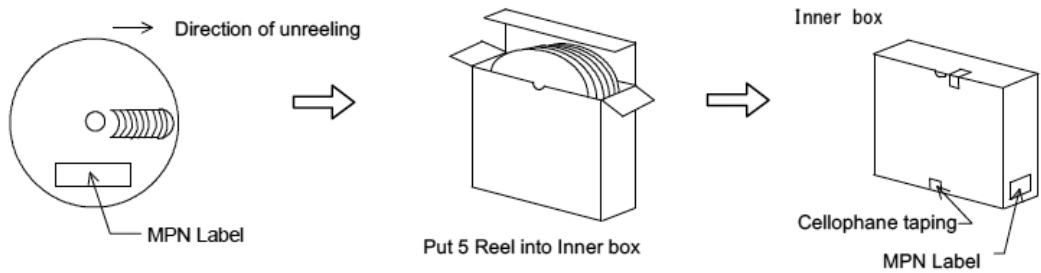
Packing Format

Carrier Tape code	Package code	Maximum Number of devices contained. (pcs.)			Packing Format	
		Reel	Inner box		Inner box BOX(C-1)	
2020X04	EFCP1818-4CE-022	5,000	25,000		5reels contained. Dimensions:mm 183×72×185	

MPN Label



Packing Method



**EFC4621R**

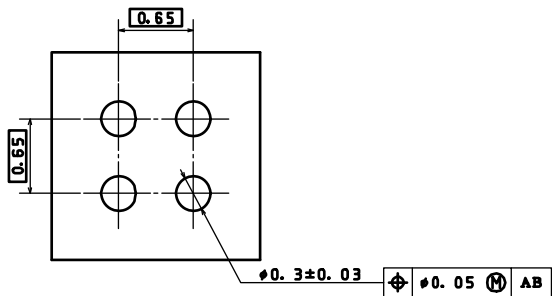
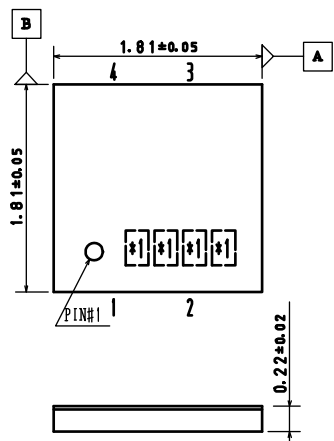
## Outline Drawing

EFC4621R-TR

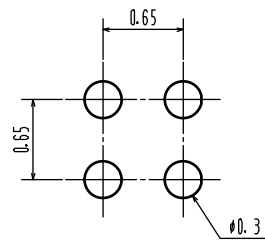
## Land Pattern Example

Mass (g)	Unit
0.0017 * For reference	mm

Unit: mm



\*1:Lot indication



Note on usage : Since the EFC4621R is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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