Continued from preceding page.

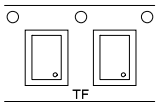
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Static Source to Source On-State Resistance	R_{SS}(on)1	I_S=4.5A, V_{GS}=4.5V Test Circuit 5	3.3	4.2	5.1	mΩ
	R_{SS}(on)2	I_S=4.5A, V_{GS}=4.0V Test Circuit 5	3.4	4.3	5.2	mΩ
	R_{SS}(on)3	I_S=4.5A, V_{GS}=3.8V Test Circuit 5	3.5	4.4	5.3	mΩ
	R_{SS}(on)4	I_S=4.5A, V_{GS}=3.1V Test Circuit 5	3.9	4.9	6.4	mΩ
	R_{SS}(on)5	I_S=4.5A, V_{GS}=2.5V Test Circuit 5	4.4	5.6	7.9	mΩ
Turn-ON Delay Time	t_d(on)	V_{SS}=10V, V_{GS}=4.5V, I_S=4.5A Test Circuit 6		30		ns
Rise Time	t_r			640		ns
Turn-OFF Delay Time	t_d(off)			11.8		μs
Fall Time	t_f			92		μs
Total Gate Charge	Qg	V_{SS}=10V, V_{GS}=4.5V, I_S=23A Test Circuit 7		27		nC
Forward Source to Source Voltage	$V_{F(S-S)}$	I_S=4.5A, V_{GS}=0V Test Circuit 8		0.76	1.2	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Ordering & Package Information

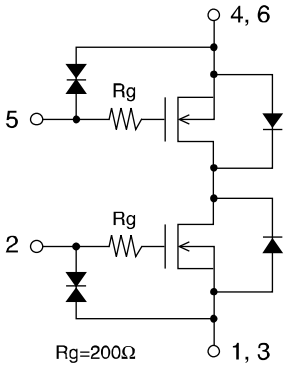
Device	Package	Shipping	note
EFC6612R-TF	EFCP	5,000 pcs. / reel	Pb-Free and Halogen Free

Packing Type: TF



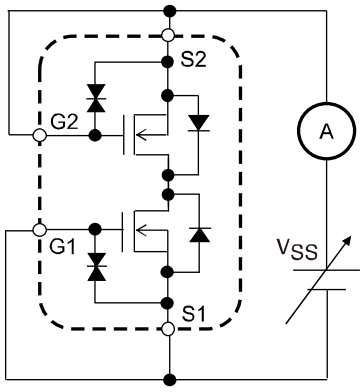
Marking

Electrical Connection

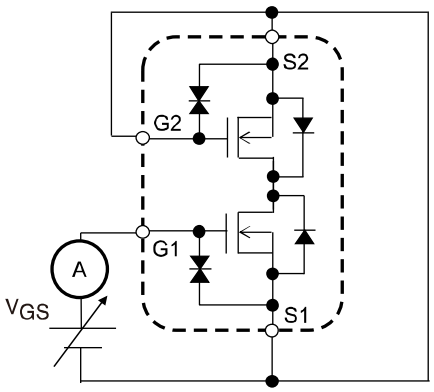


Test circuits are example of measuring FET1 side

Test Circuit 1
I_{SSS}

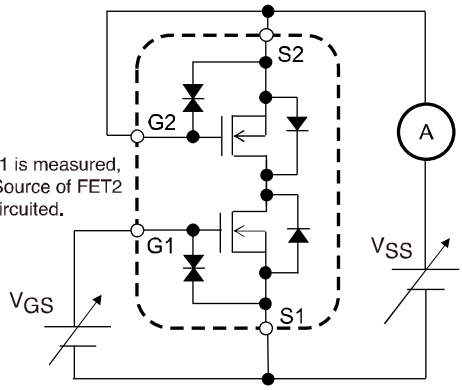


Test Circuit 2
I_{GSS}



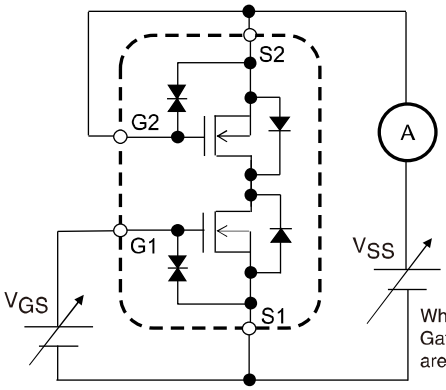
When FET1 is measured, Gate and Source of FET2 are short-circuited.

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



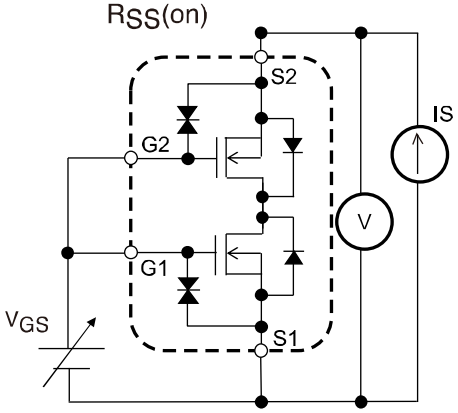
When FET1 is measured, Gate and Source of FET2 are short-circuited.

Test Circuit 4
g_{FS}

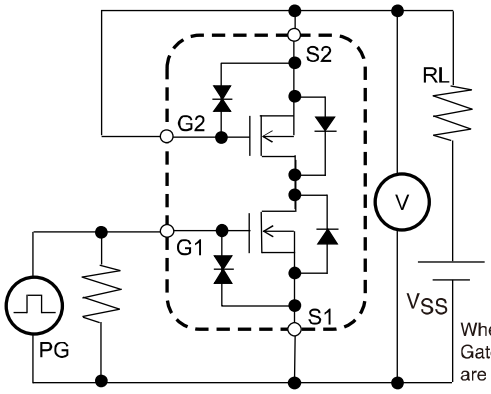


When FET1 is measured, Gate and Source of FET2 are short-circuited.

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

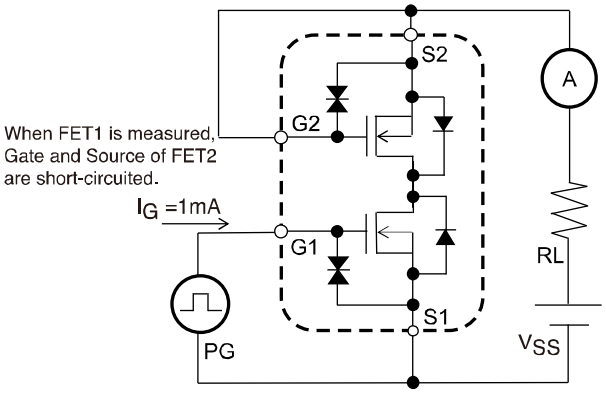


Test Circuit 6
$t_{d(on)}$, t_r, $t_{d(off)}$, t_f



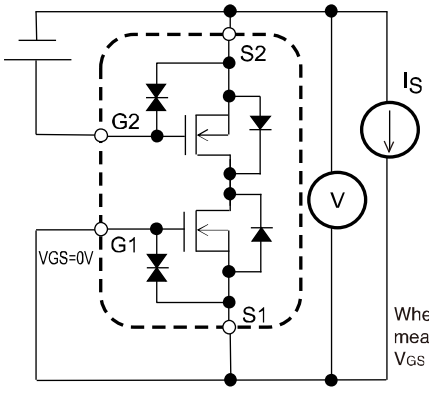
When FET1 is measured, Gate and Source of FET2 are short-circuited.

Test Circuit 7
Qg



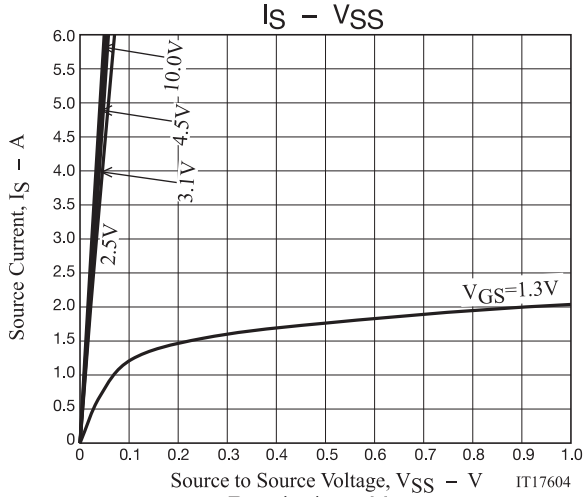
When FET1 is measured, Gate and Source of FET2 are short-circuited.

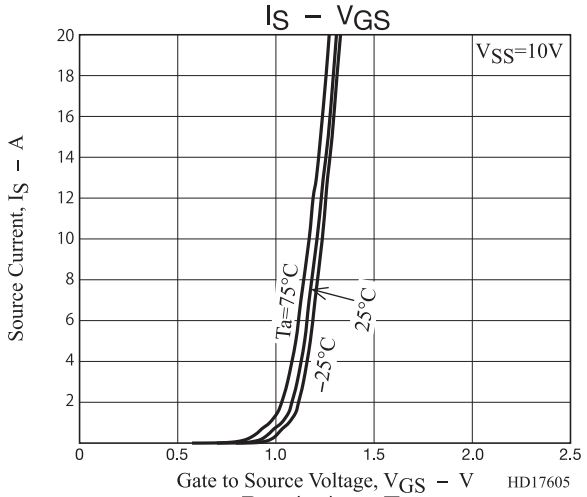
Test Circuit 8
$V_{F(S-S)}$

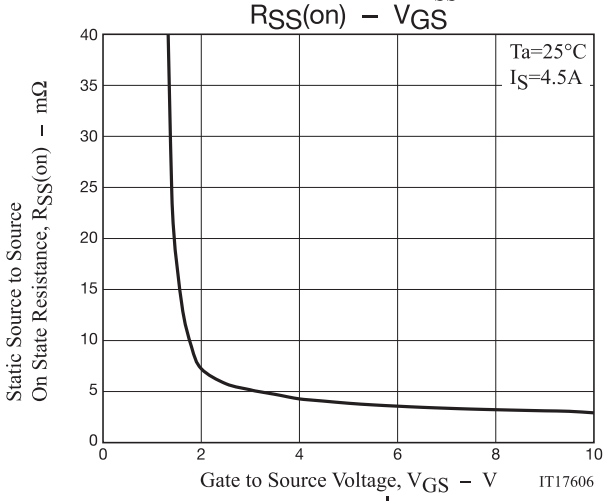


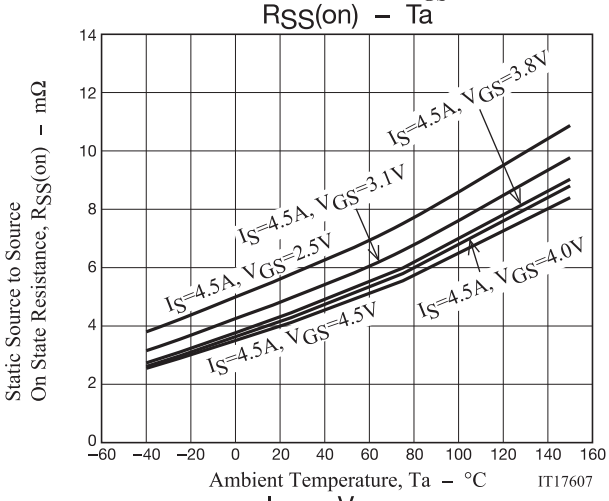
When FET1 is measured,+4.5V is added to V_{GS} of FET2.

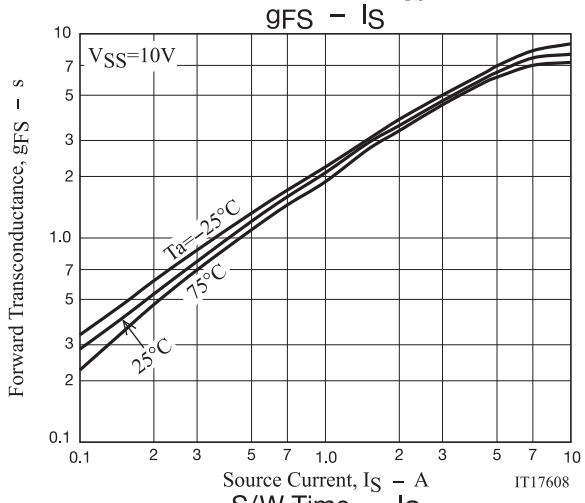
When FET2 is measured, the position of FET1 and FET2 is switched.

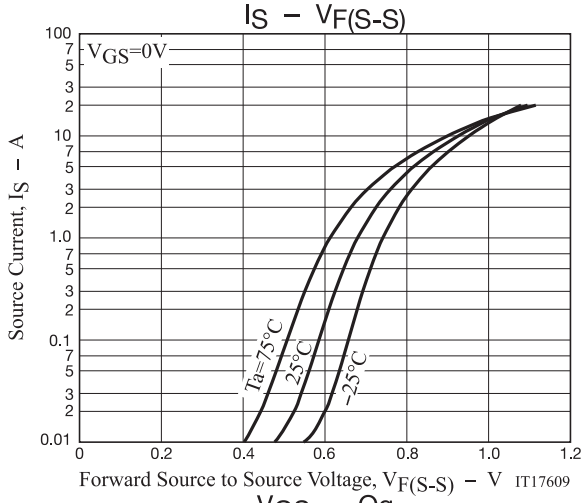


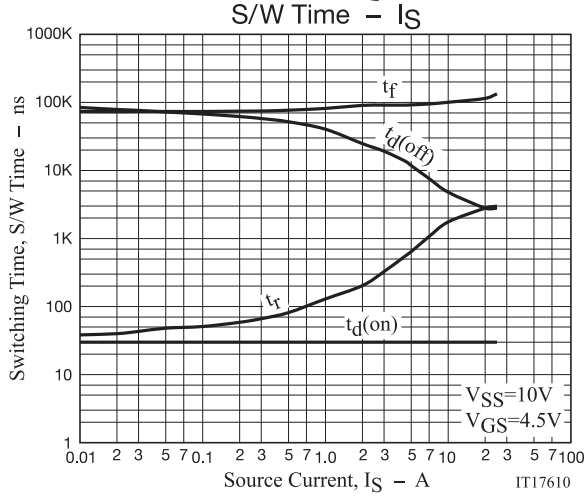


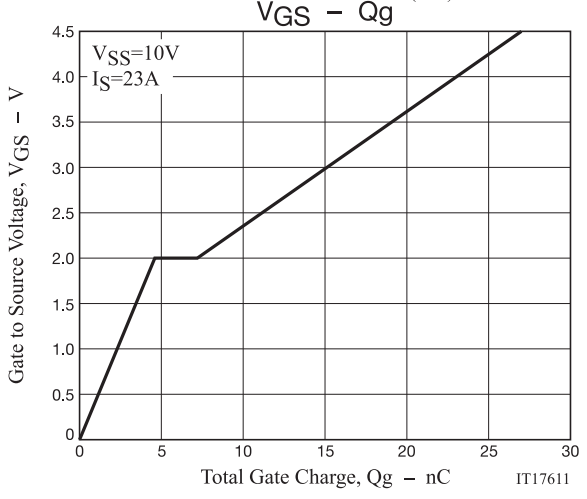


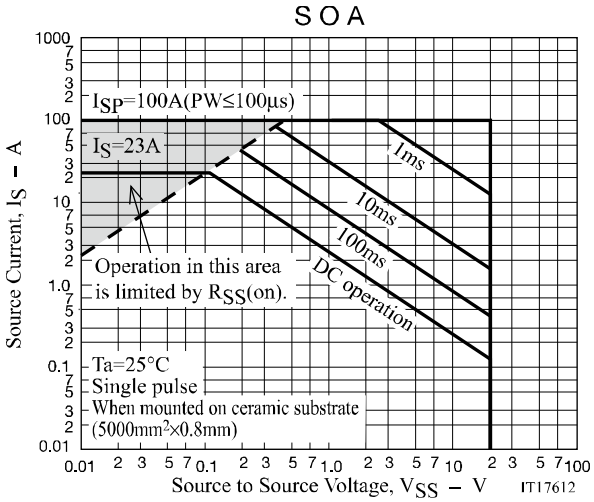


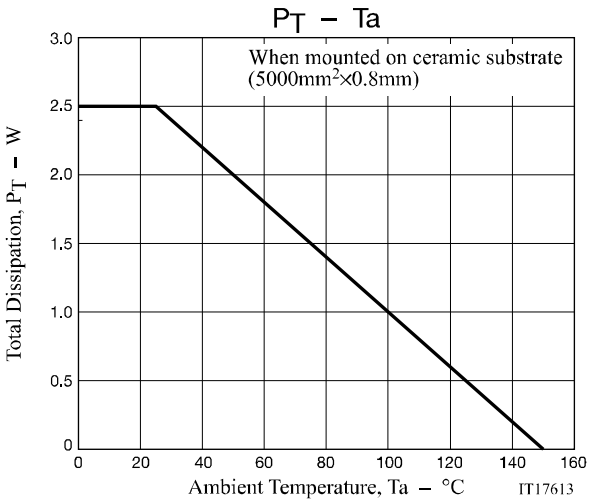


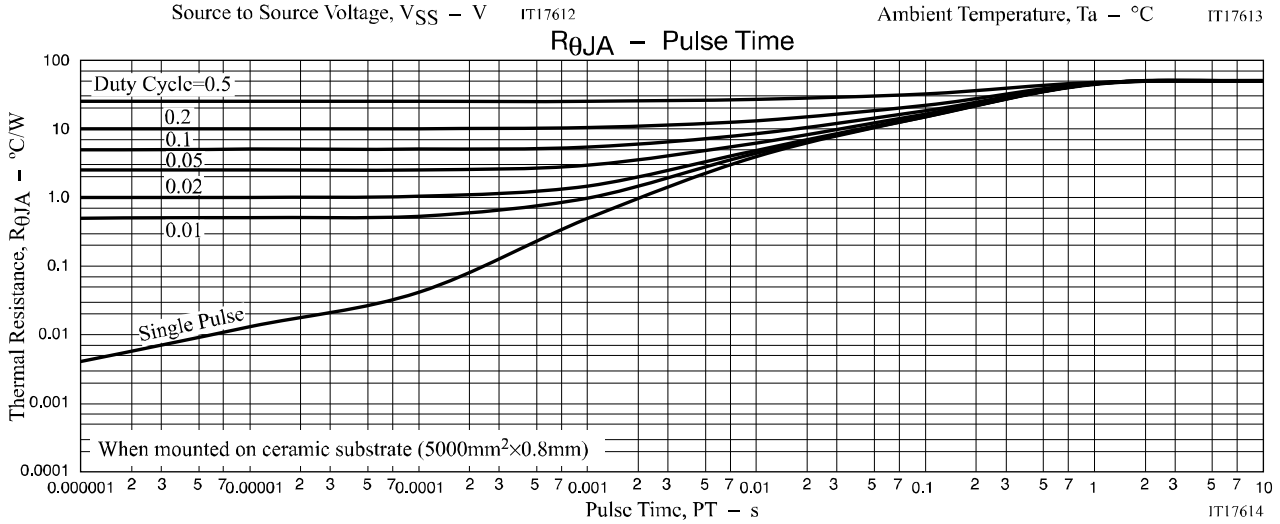










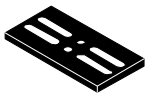


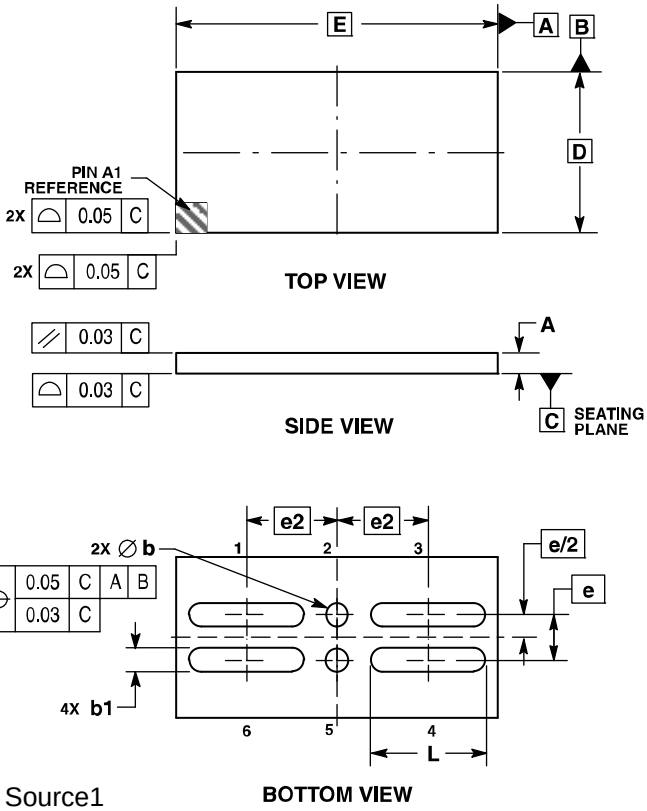
Package Dimensions

EFC6612R-TF

CSP6, 1.77×3.54 / EFCP3517-6DGH-020

CASE 568AL
ISSUE O
unit : mm

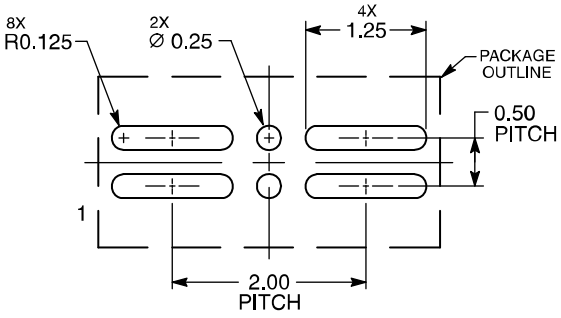




NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.

DIM	MILLIMETERS MIN	MAX
A	—	0.22
b	0.22	0.28
b1	0.22	0.28
D	1.77 BSC	
E	3.54 BSC	
e	0.50 BSC	
e2	1.00 BSC	
L	1.22	1.28

RECOMMENDED SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

*For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

1: Source1
2: Gate1
3: Source1
4: Source2
5: Gate2
6: Source2

Note on usage : Since the EFC6612R is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.