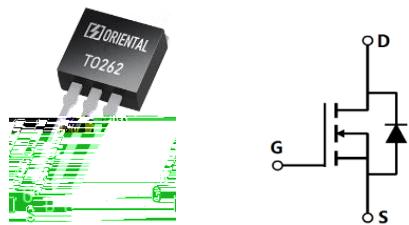


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Parameter	Value	Unit
$V_{DS, \min}$ @ $T_j(\max)$	100	V
I_D, pulse	390	A
$R_{DS(ON)}, \max$ @ $V_{GS}=10V$	5	
Q_g	91.7	nC

Product Name	Package	Marking
SFG10R05IF	TO262	SFG10R05I



Absolute Maximum Ratings at $T_j=25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	100	V
Gate-source voltage	V_{GS}	± 20	V
Continuous drain current ¹⁾ , $T_C=25^\circ\text{C}$	I_D	130	A
Pulsed drain current ²⁾ , $T_C=25^\circ\text{C}$	$I_{D, \text{pulse}}$	390	A
Continuous diode forward current ¹⁾ , $T_C=25^\circ\text{C}$	I_S	130	A
Diode pulsed current ²⁾ , $T_C=25^\circ\text{C}$	$I_{S, \text{pulse}}$	390	

Dynamic Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	C _{iss}		6388.6		pF	V _{GS} =0 V, V _{DS} =50 V, Hz
Output capacitance	C _{oss}		923.3		pF	
Reverse transfer capacitance	C _{rss}		1.4		pF	
Turn-on delay time	t _{d(on)}		30.9		ns	V _{GS} =10 V, V _{DS} =50 V, R _G I _D =25 A

SFG10R05IF

Enhancement Mode N-Channel Power MOSFET



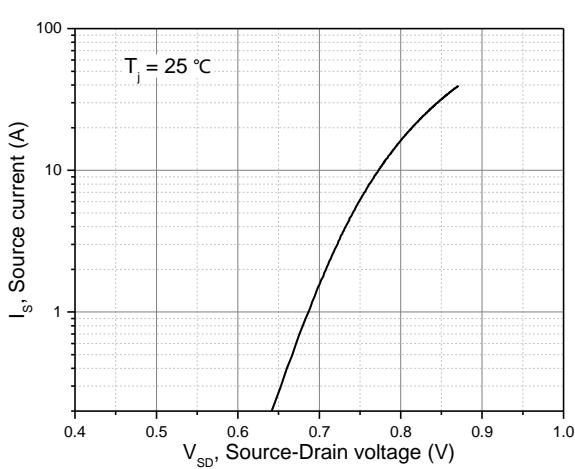


Figure 7. Forward characteristic of body diode

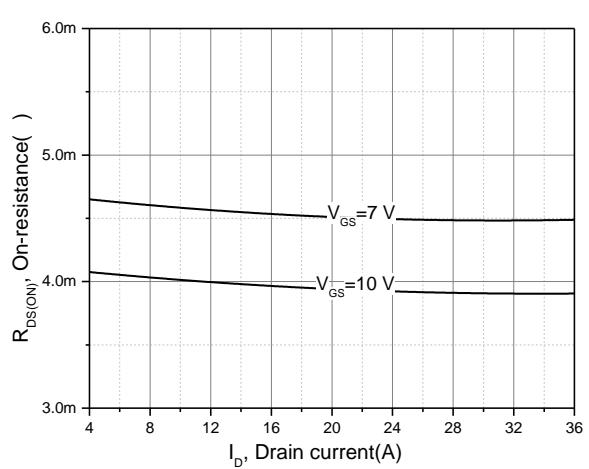


Figure 8. Drain-source on-state resistance

Figure 9. Safe operation area T_c=25 °C

Test circuits and waveforms

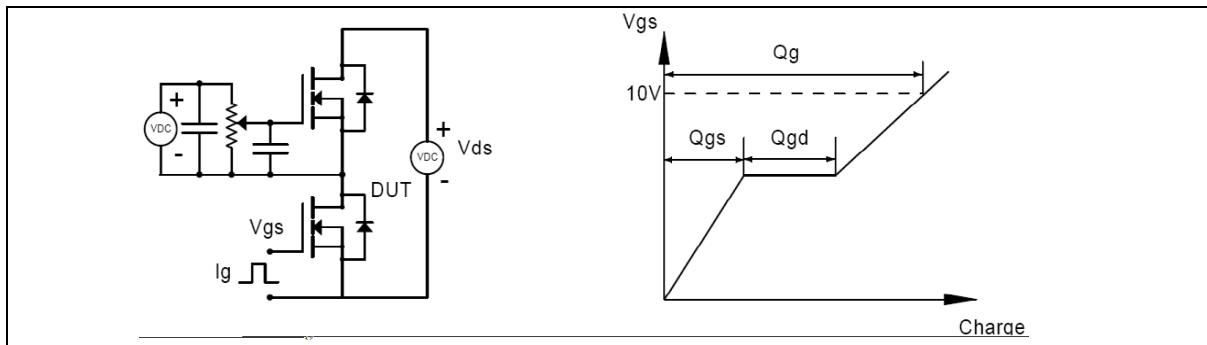


Figure 1. Gate charge test circuit & waveform

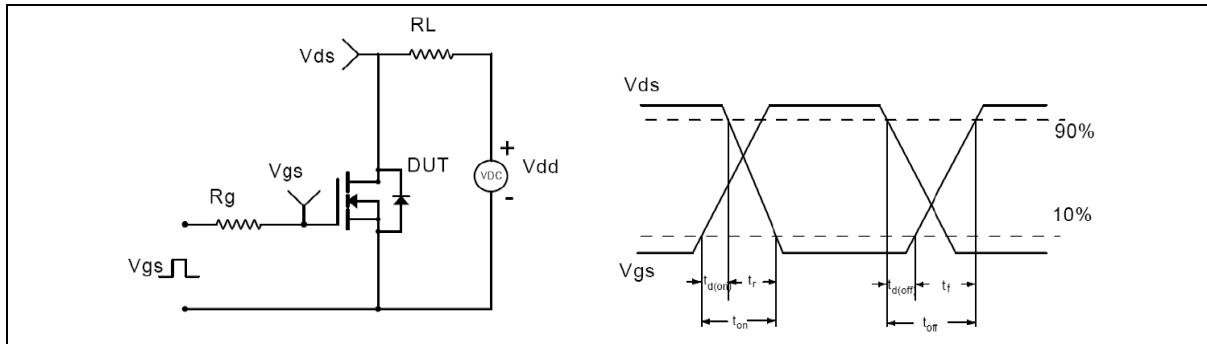


Figure 2. Switching time test circuit & waveforms

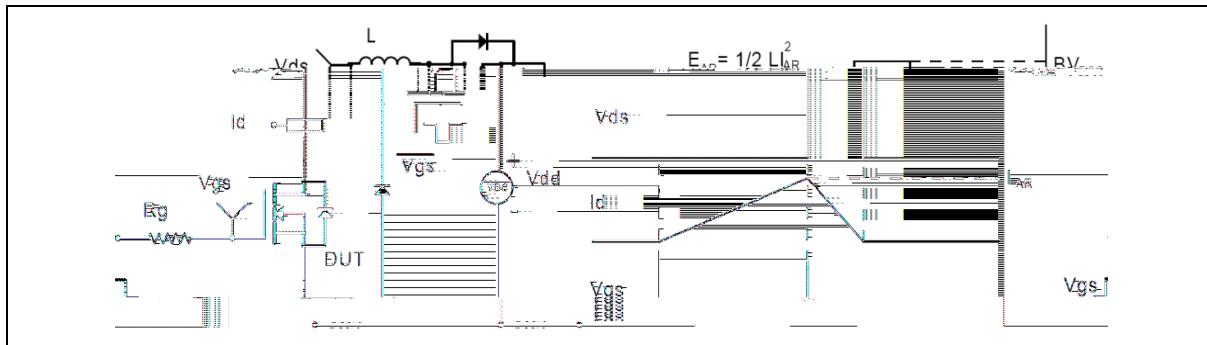


Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms

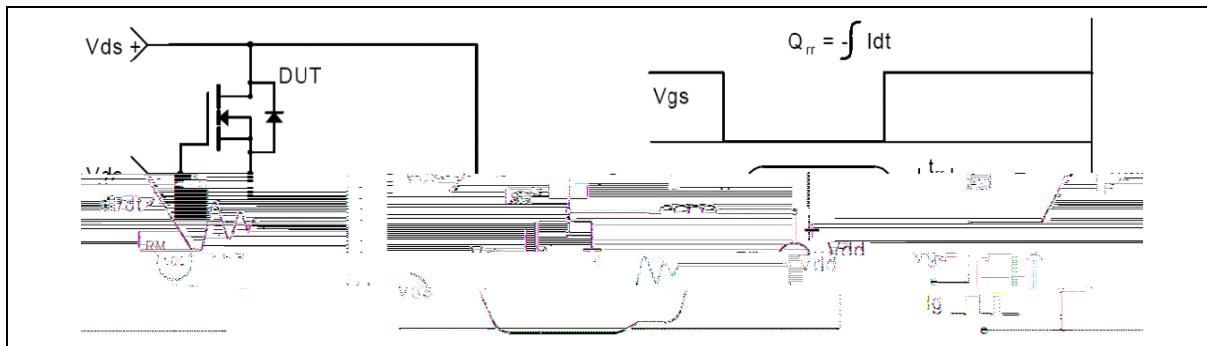
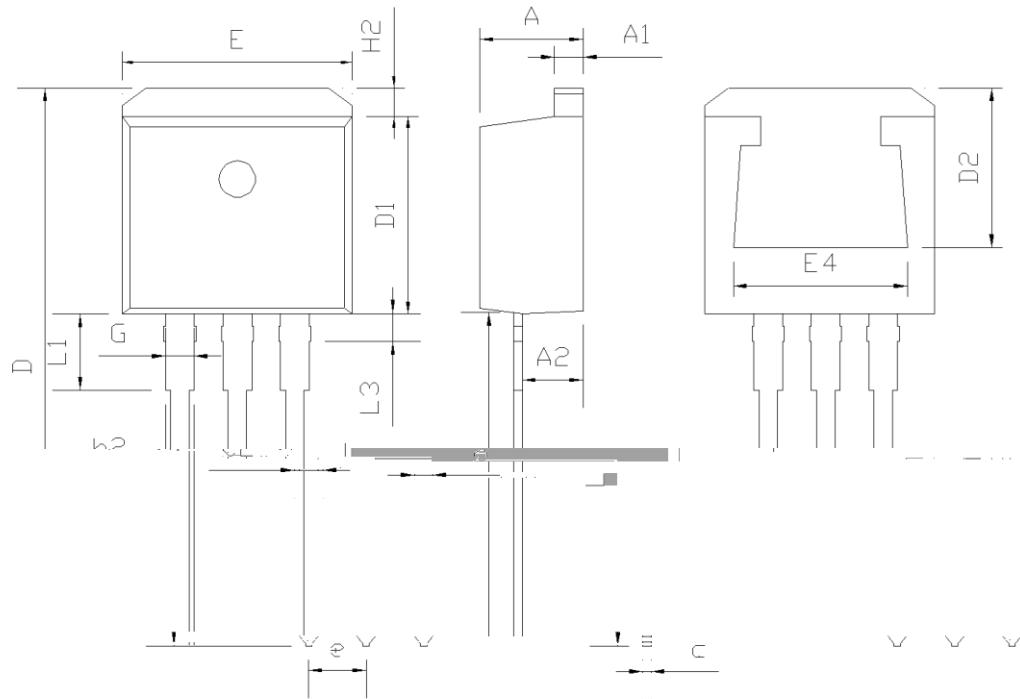


Figure 4. Diode reverse recovery test circuit & waveforms

Package Information



Symbol	mm		
	Min	Nom	Max
A	4.37	4.57	4.77
A1	1.22	1.27	1.42
A2	2.49	2.69	2.89
b	0.71	0.81	0.96
b2	1.17	1.27	1.42
c	0.28	0.38	0.53
D	23.20	23.70	24.02
D1	8.50	8.70	8.90
D2	6.00	-	-
E	9.86	10.16	10.36
E4	7.06	-	-
e	2.54BSC		
H2	-	-	1.50
L	13.33	13.73	14.13
L1	3.50	3.75	4.00
L3	1.28	1.43	1.58
G	1.25	1.35	1.50

Version 1: TO262-C package outline dimension

Ordering Information

Package Type	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Carton Box	Units/Carton Box
TO262-C	50	20	1000	6	6000

Product Information

Product	Package	Pb Free	RoHS	Halogen Free
SFG10R05IF	TO262	yes	yes	yes