



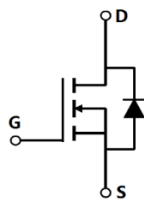
6)*026⁵ 026)(7 LV EDVHG RQ 2ULHQWDXQ6HPLFRQGXFWRU9< &RS\ULJI
5'6 21 ORZ JDWH FKDUJH IDVW VZLWFKLQJ DQG VRIW UHFYHU\
LV VSHFLDOO\ RSWLPLJHG IRU KLJK V\ VWHPV ZLWK JDWH GULYLQJ YR

- /RZ5'6 21)20
- ([WUHPHO\ ORZ VZLWFKLQJ ORVV
- ([FHOHQW UHOLDELOLW\ DQG XQLRUPLW\
-)DVW VZLWFKLQJ DQG VRIW UHFYHU\

- 6ZLWFKHG PRGH \SRZHU VXSSO
- 0RWU\YHU
- %DWU\UHFWRU
- '&-' & FRQYHUWRU
- Solar inverter
- 836 DQG HQHUJ\ LQYHUWHU

Parameter	Value	Unit
V _{DS, min} @ T _{j(max)}	100	V
I _{D, pulse}	390	A
R _{DS(ON), max} @ V _{GS} =10V	5	P
Q _g	91.7	nC

Product Name	Package	Marking
SFG10R05KF	TO2	SFG10R05K



Absolute Maximum Ratings at $T_j=25\text{ °C}$ & 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⁾ , $T_C=25\text{ °C}$	I_D	130	A
Pulsed drain current ²⁾ , $T_C=25\text{ °C}$	$I_{D, pulse}$	390	A
Continuous diode forward current ¹⁾ , $T_C=25\text{ °C}$	I_S	130	A
Diode pulsed current ²⁾ , $T_C=25\text{ °C}$	$I_{S, p}$		

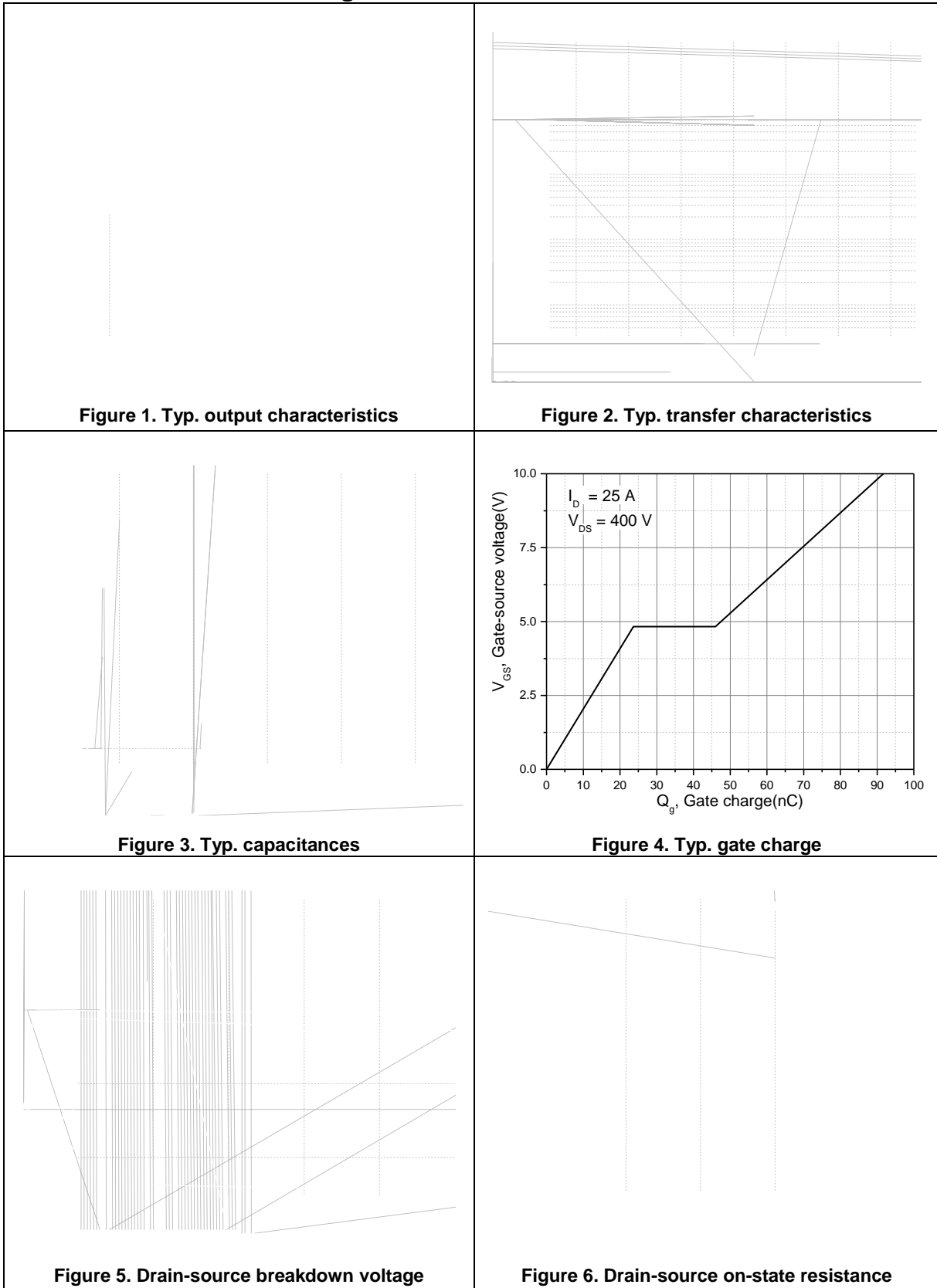
Dynamic Characteristics


Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	C_{iss}		6388.6		pF	$V_{GS}=0\text{ V}$, $V_{DS}=50\text{ V}$, $f=1\text{ kHz}$
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	$V_{GS}=10\text{ V}$, $V_{DS}=50\text{ V}$, R_G $I_D=25\text{ A}$
Rise time	t_r		10.0		ns	
Turn-off delay time	$t_{d(off)}$		66.8		ns	
Fall time	t_f		12.5		ns	

Gate Charge Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Total gate charge	Q_g		91.7		nC	
Gate-source charge	Q_{gs}		23.7		nC	$V_{GS}=10\text{ V}$, $V_{DS}=50\text{ V}$, $I_D=25\text{ A}$

Electrical Characteristics Diagrams



SFG10R05KF
Enhancement Mode N-Channel Power MOSFET 

Package Information

Symbol	Min	mm Nom
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Ordering Information

Package Type	Units/ Reel	Reels/ Inner Box	Units/ Inner Box	Inner Boxes/ Carton Box	Units/ Carton Box
TO263-C	800	1	800	5	4000

Product Information

Product	Package	Pb Free	RoHS	Halogen Free
SFG10R05KF	TO263	yes	yes	yes

7KH LQIRUPDWLRQ JLYHQ LQ WKLW GRFXPHQW VKDOO LQ QR H
FRQGLWURQV DUDFWHULVWLFV DQ\WKH\ DPHVSHFVRU KLQWV JLYHQ
W\SLFDO YDORJHV LQWDOGRU DQ\ LQIRUPDWLRQ UHJDUGLQJ WKH
2ULHQWDO 6HPLFRQGXFWRU DQ\ DQG DOO ZDUUDQWLHV DQG
LQFOXGLQJ ZLWKZD\W DQ\WDOV LQ DPHQW RI LQWHOOFHWXDO S
DQ\ WKLUG SDUW\

)RU IXUWKHU LQIRUPDWLRQ RQ WHFKQRORJ\ GHOLYHU\ WHUP
FRQWDEWLWDO 6HPLFRQGXFWRU DQ\WDOV LQWDOVHPL FRP

