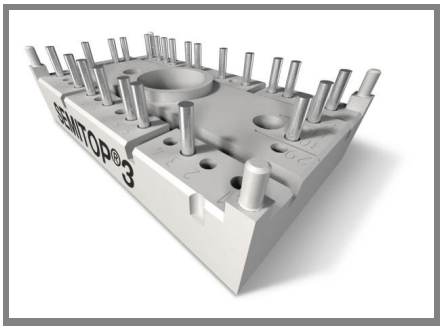
SK20GD066ET



SEMITOP® 3

IGBT Module

SK20GD066ET

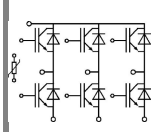
Target Data

Features

- "#$%&'( )*+,-.
- /.* +'0*1 $#2.(,.-
- 3*&((0&.+4*0 &.) ,+#5&(,#. (60#2-6),0*'('#%%*0 7#.)*) &52$,,2$ #8,)* '*0&$,' 9:";<
- =0*.'6 >?;= (*'6.#5#-@
- "AB (*'6.#5#-@ C D :
- >.(*-0&(*) E=" (*$%*0&(20* +*.+#0

Typical Applications*

- >.F*0(*0 2% (# GHI JKA
- =@%L $#(#0 %#1*0 M J D



GD-ET

Absolute Maximum Ratings	=+ N OP Q"H 2.5*++ #(6*01,+* +%*',4,*)		
Symbol	**Conditions**	**Values**	**Units**
IGBT			
K"RS	=↑ N OP Q"	GVV	K
>"	=↑ N WXP Q" =+ N OP Q"	IV	A
	=+ N XV Q"	OP	A
>"YZ	>"YZ N O 8 >".#$	MV	A
K?RS		[OV	K
(%+'	K"" N IGV K\ K?R] OV K\ K"RS ^ GVV K	=↑ N WPV Q" G	_+
Inverse Diode			
>C	=↑ N WXP Q" =+ N OP Q"	IW	A
	=+ N XV Q"	OM	A
>CYZ	>CYZ N O 8 >C.#$	MV	A
>CSZ	(% N WV $+\ 6&54 +,.* 1&F*	=↑ N WPV Q" `P	A
Module			
>(9YZS<			A
=F↑		aMV LLL bWXP	Q"
=+(-		aMV LLL bWOP	Q"
K,+#5	A"H W $,.L	OPVV	K

Characteristics	=+ N OP Q"H 2.5*++ #(6*01,+* +%*',4,*)				
Symbol	**Conditions**	**min.**	**typ.**	**max.**	**Units**
IGBT					
K?R9(6<	K?R N K"RH >" N VHO` $A	P	PHC	GHP	K
>"RS	K?R N V KH K"R N K"RS =↑ N OP Q"			VHVVWW	$A
	=↑ N WOP Q"				$A
>?RS	K"R N V KH K?R N OV K =↑ N OP Q"			IVV	.A
	=↑ N WOP Q"				.A
K"RV	=↑ N OP Q"		VH`	WHW	K
	=↑ N WPV Q"		VHC	W	K
0"R	K?R N WP K =↑ N OPQ"		OXHP	IXHP	$d
	=↑ N WPVQ"		MOHP	POHP	$d
K"R9+&(<	>".#$ N OV AH K?R N WP K =↑ N OPQ" '6,%5*FL		WHMP	WHCP	K
	=↑ N WOPQ" '6,%5*FL		WHGP	OHVP	K
"',*+	K"R N OPH K?R N V K 4 N W Z 3e		WHW		.C
"#*+			VHVXW		.C
"0*+			VHVIO		.C
f?	K?R N aXKLLLbWPK		OOP		."
()9#.<	Y?#. N WP d	K"" N IVVK	WG		.+
(0	),g)(N IIVV Ag_+	>" N OVA	WP		.+
R#.		=↑ N WPV Q"	VHIM		$h
()9##4<	Y?#44 N WP d	K?R N [WPK	WGG		.+
(4	),g)(N IIVV Ag_+		MV		.+
R#44			VHGI		$h
Y(69?a+<	%*0 >?;=		WH`P		igD

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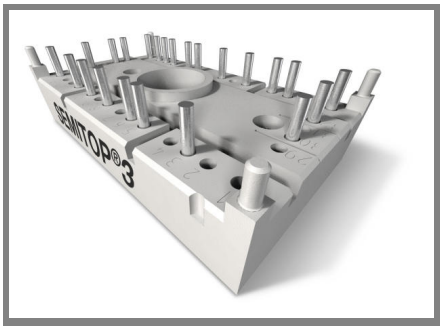


SEMITOP® 3

IGBT Module

SK20GD066ET

Target Data

Features

- "#$%&'( )*+,-.
- /.* +'0*1 $#2.(,.-
- 3*&((0&.+4*0 &.) ,+#5&(,#. (60#2-6),0*'('#%%*0 7#.)*) &52$,,2$ #8,)* '*0&$,' 9:";<
- =0*.'6 >?;= (*'6.#5#-@
- "AB (*'6.#5#-@ C D :
- >.(*-0&(*) E=" (*$%*0&(20* +*.+#0

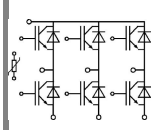
Typical Applications*

- >.F*0(*0 2% (# GHI JKA
- =@%L $#(#0 %#1*0 M J D

Characteristics					
Symbol	**Conditions**		**min.**	**typ.**	**max.**	**Units**
Inverse Diode						
K_C N K_R"	$\rangle_{C.\#\$}$ N 0V A\ $K_{?R}$ N V K	$=_{\uparrow}$ N OP Q" $'_{6,\%\%*FL}$		WHMP	WHX	K
		$=_{\uparrow}$ N WPV Q" $'_{6,\%\%*FL}$		WHMP	WHX	K
K_{CV}		$=_{\uparrow}$ N OP Q"		W	WHW	K
		$=_{\uparrow}$ N WPV Q"		VH`	W	K
θ_C		$=_{\uparrow}$ N OP Q"		OOHP	IV	$ d
		$=_{\uparrow}$ N WPV Q"		OXHP	IP	$ d
$\rangle_{YYZ}$	$\rangle_C$ N IV A	$=_{\uparrow}$ N WPV Q"		IO		A
f_{00}	),g)(N IIVV Ag_+			O		_"
R_{00}	K„„N IVVK			VHO		$h
$Y_{(69Ta+<:}$ | %*0),#)*			OHMG		igD
Z_+	(# 6*&(+,.J		OHOP		OHP	E$
1				IV		-
Temperature sensor						
Y_{WVV}	$=_+$ NWVVQ" $9Y_{OP}$NPJd<			M`I[Pj		d

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.



GD-ET

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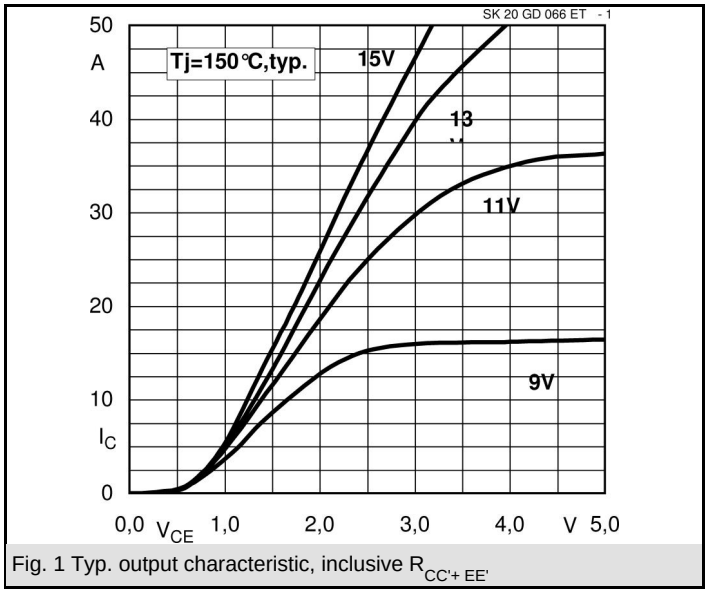

Fig. 1 Typ. output characteristic, inclusive $R_{CC'+EE'}$

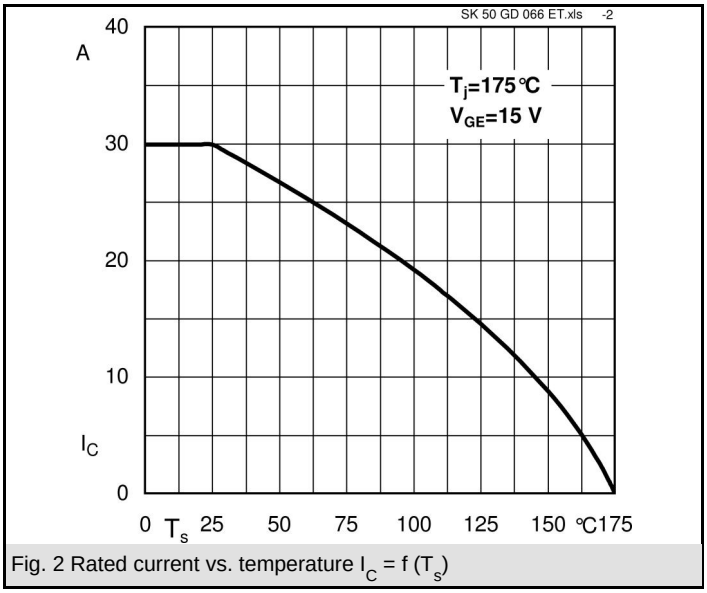

Fig. 2 Rated current vs. temperature $I_C = f(T_s)$

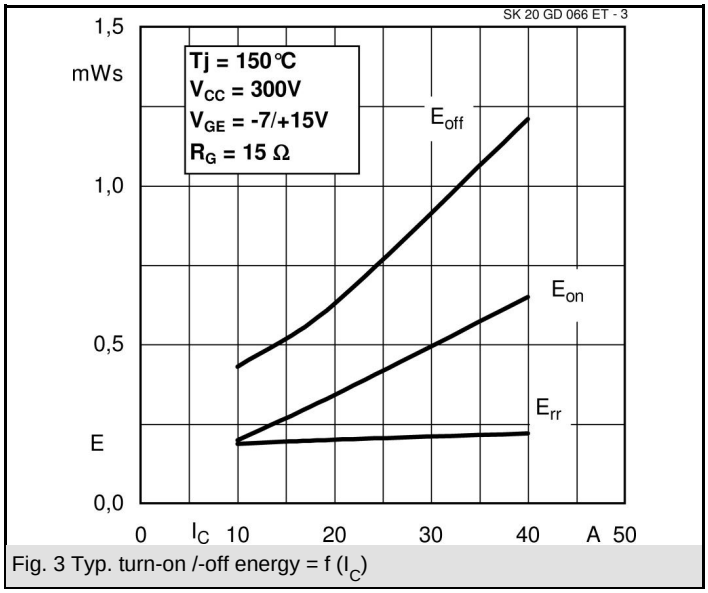

Fig. 3 Typ. turn-on /-off energy = f (I_C)

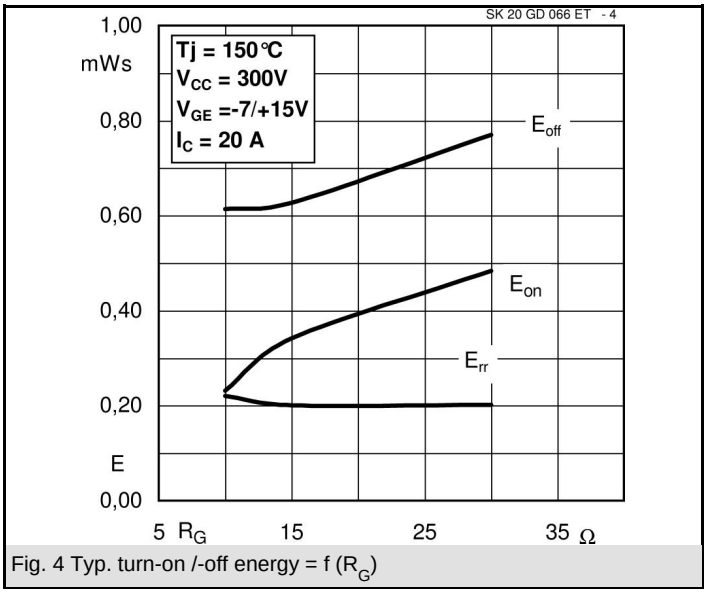

Fig. 4 Typ. turn-on /-off energy = f (R_G)

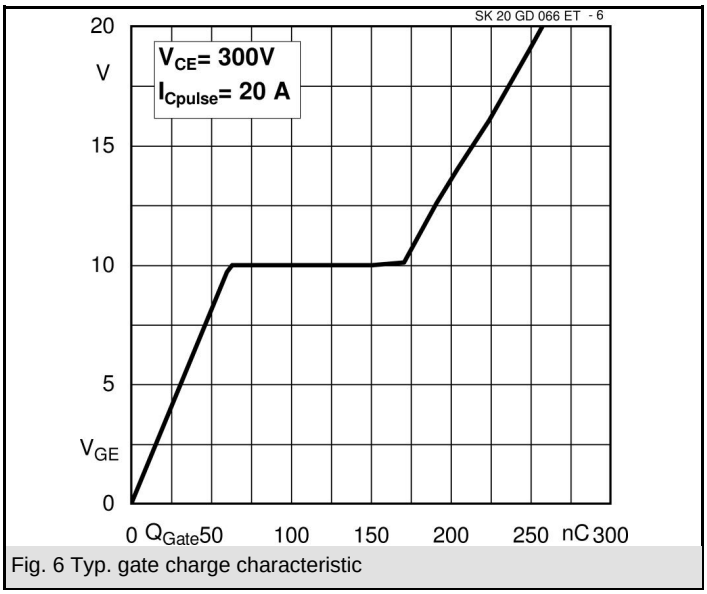

Fig. 6 Typ. gate charge characteristic

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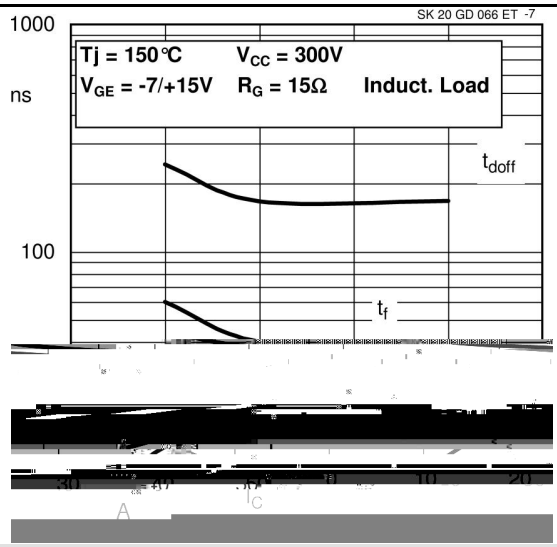

Fig. 7 Typ. switching times vs. I_C

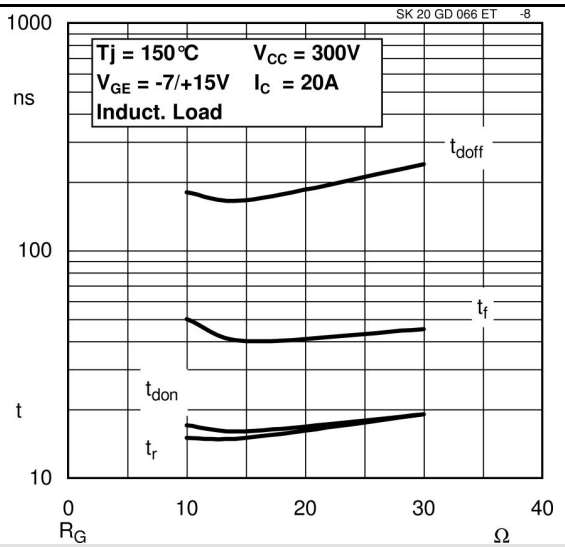

Fig. 8 Typ. switching times vs. gate resistor R_G

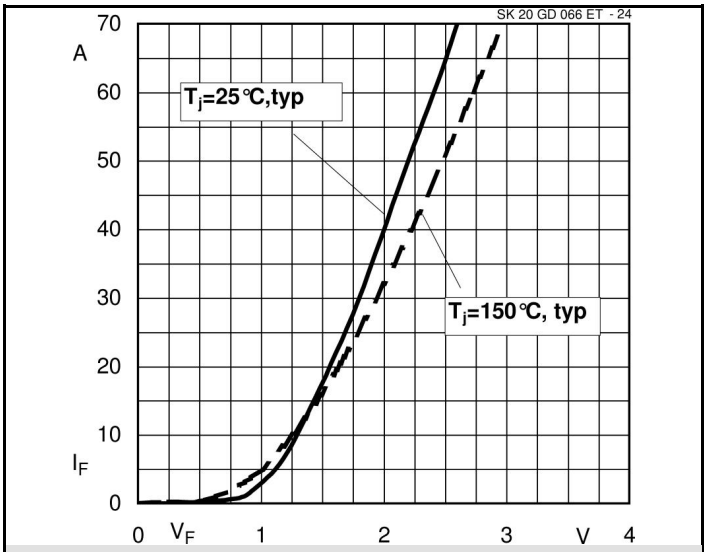

Fig. 10 CAL diode forward characteristic

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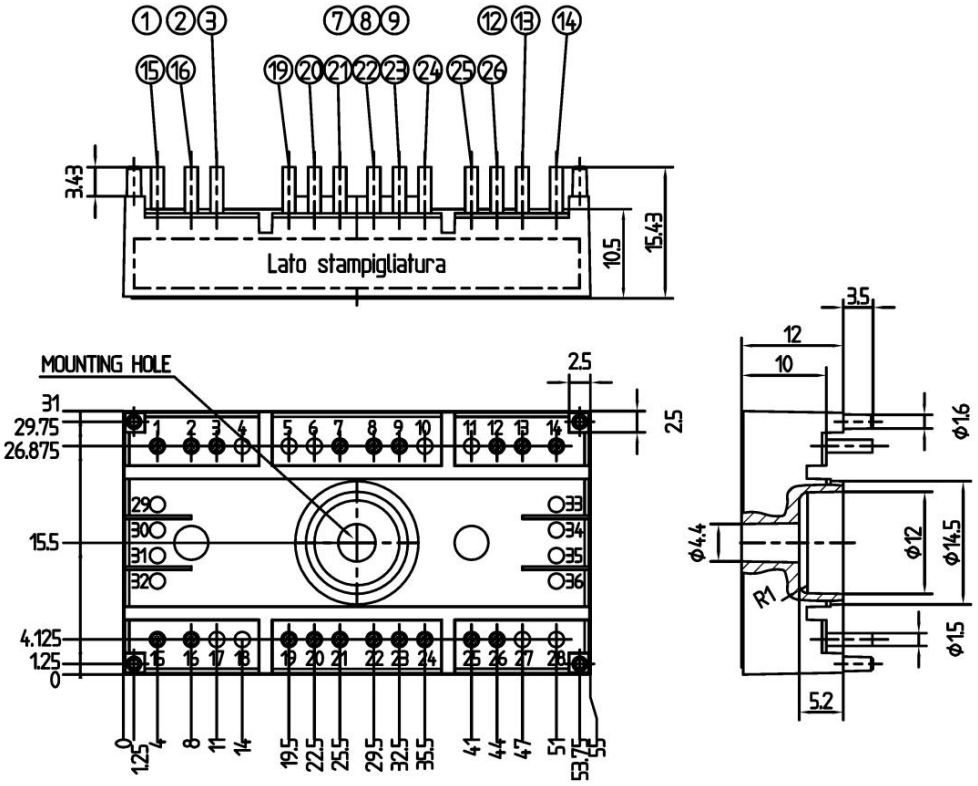
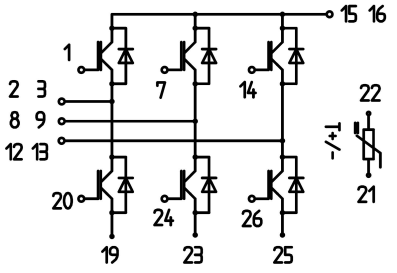
UL recognized file no. E63 532



"&+* =P0 9S2--*+(*) 6#5*),&$*(*0H,.(6* k";H 4#0 +#5)*0 %,.+ &.) %5&+(,' $#2.(,.- %,.+l 0$ $<



"&+* = P0 ? : aR=

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