

SKM 195GB063DN



SEMITRANS™ 2N

Superfast NPT-IGBT Modules

SKM 195GB063DN

SKM 195GAL063DN

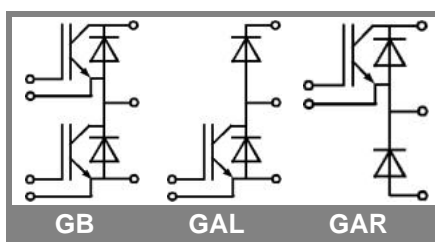
SKM 195GAR063DN

Features

- N channel, homogeneous Silicon structure (NPT - Non Punch-through IGBT)
- Low tail current with low temperature dependence
- High short circuit capability, self limiting
- Pos. temp.-coeff. of V_{CEsat}
- Low inductance case
- Fast & soft inverse CAL diodes
- Without hard mould
- Large clearance (10 mm) and creepage distances (20 mm)

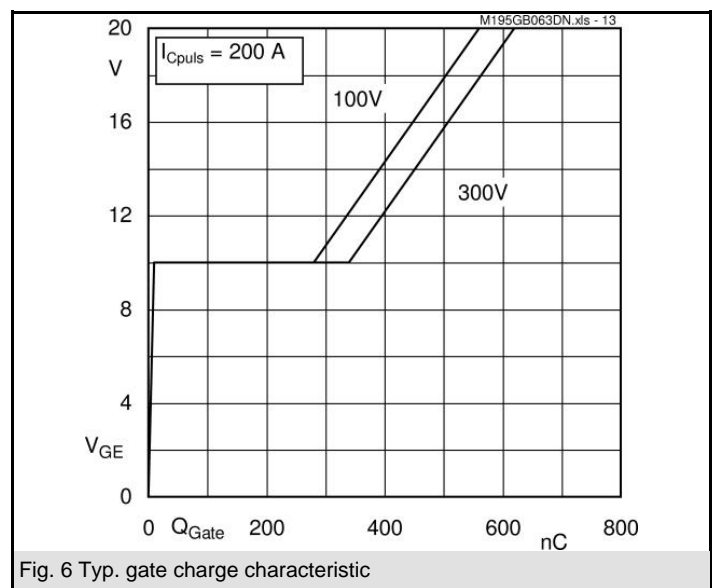
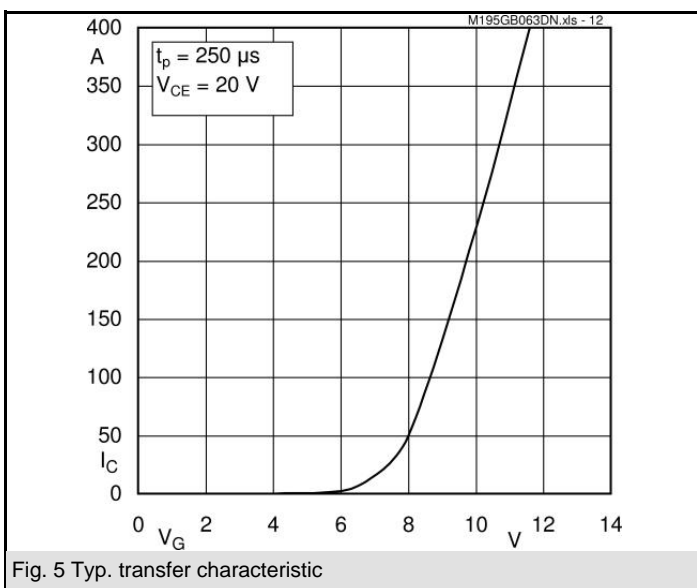
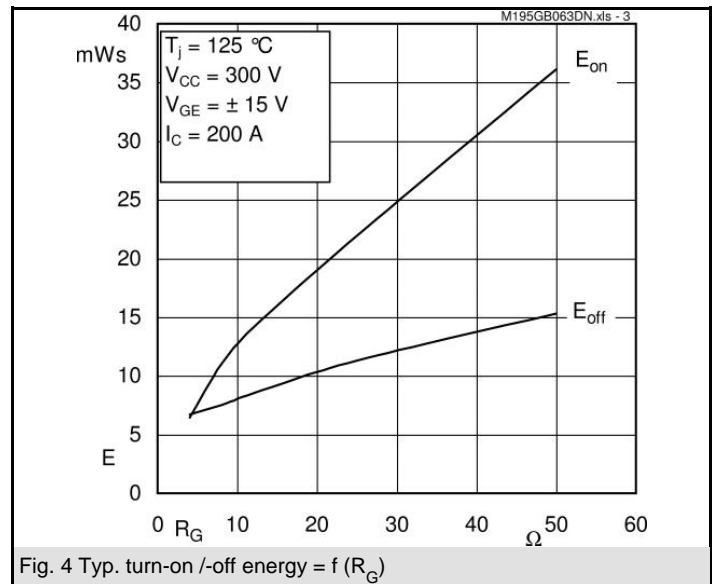
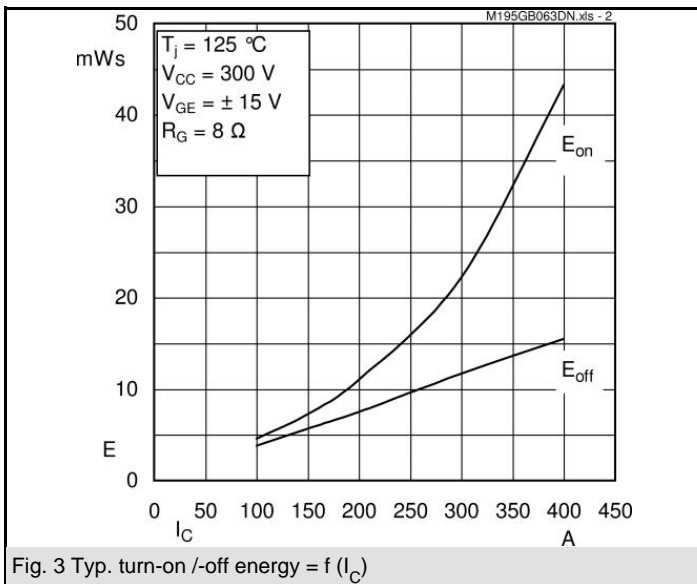
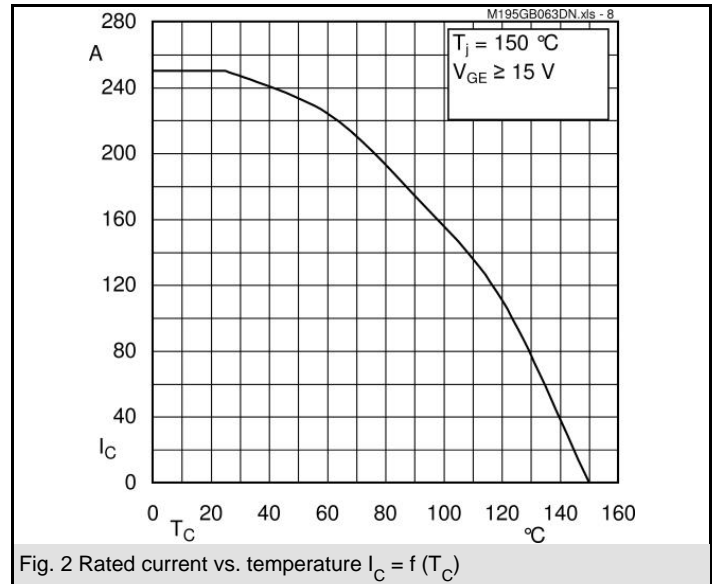
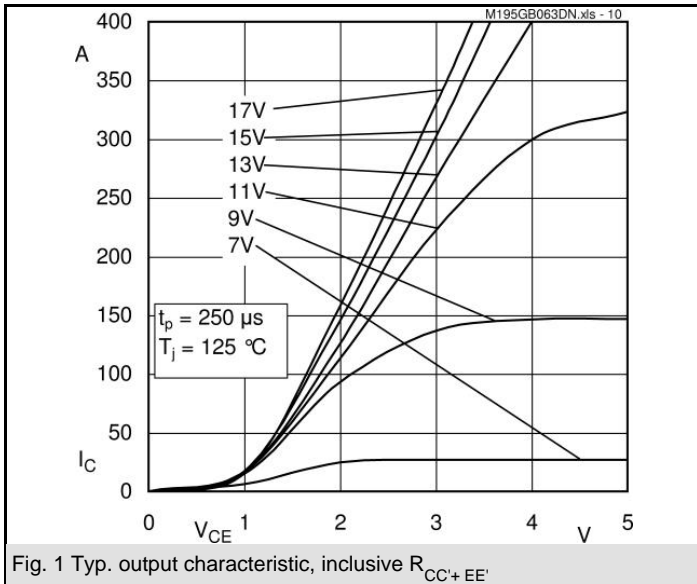
Typical Applications

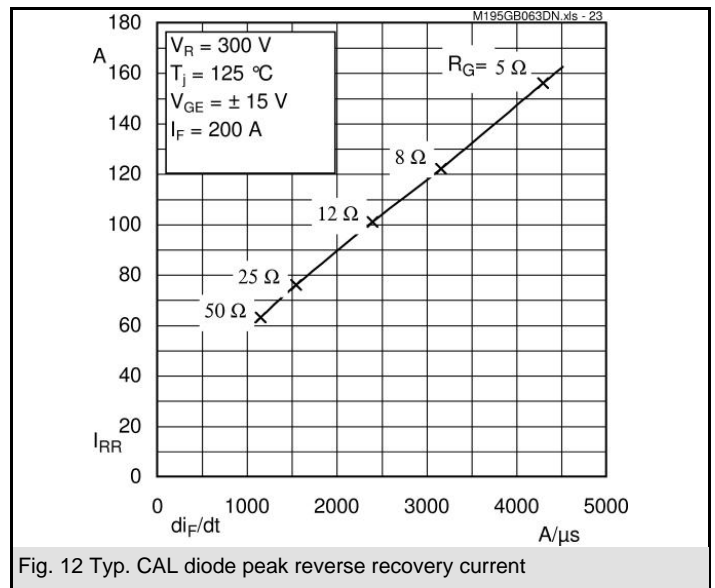
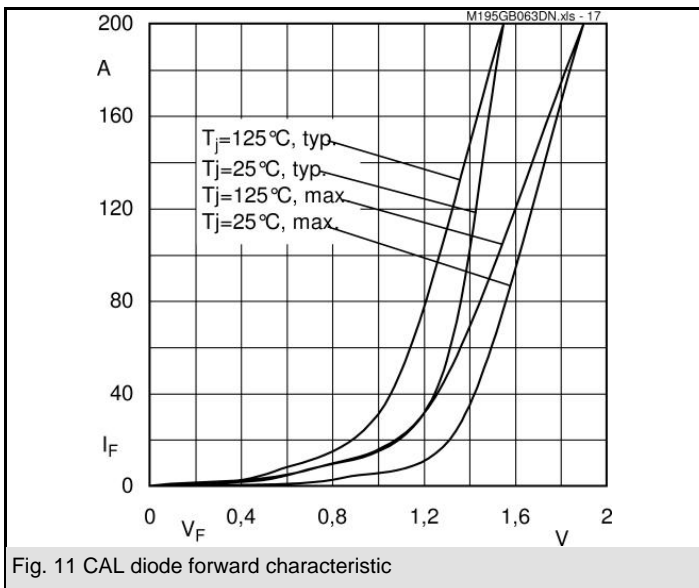
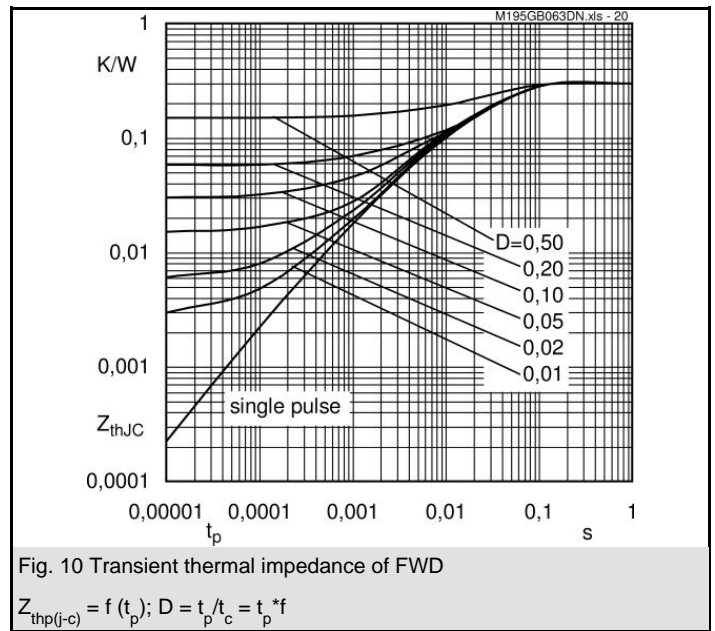
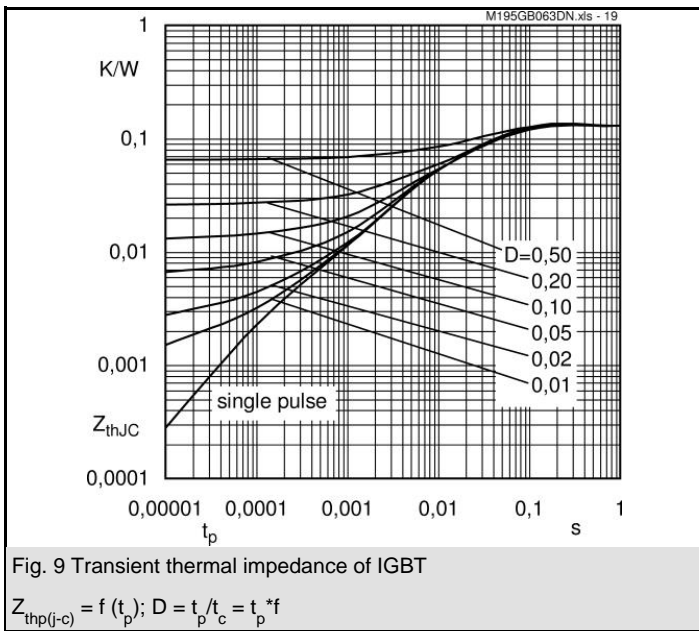
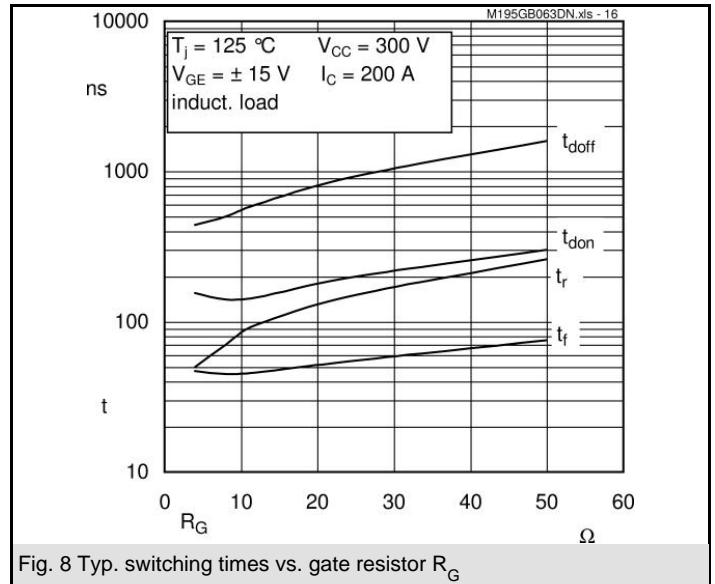
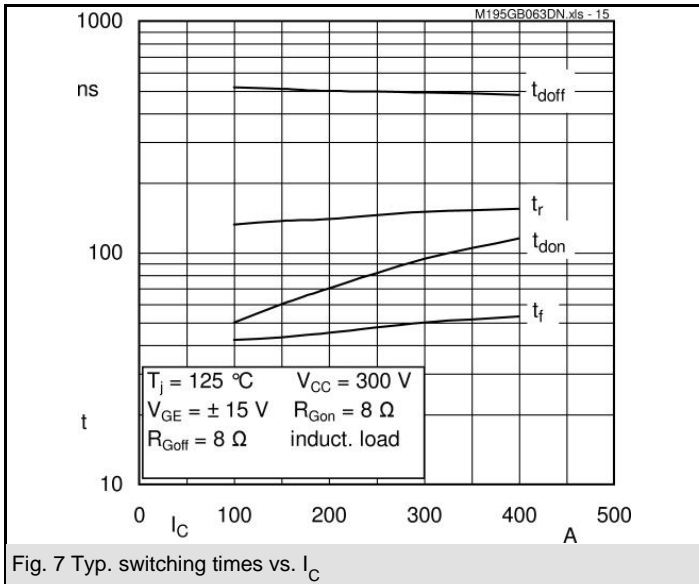
- Switching (not for linear use)
- Switched mode power supplies
- AC inverter drives
- UPS uninterruptable power supplies



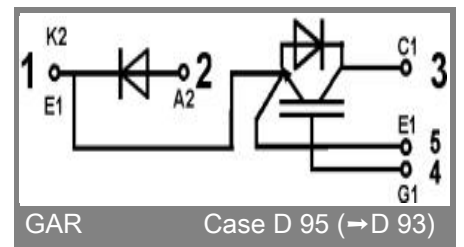
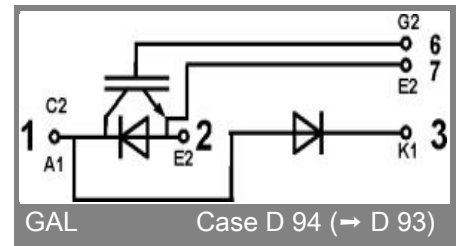
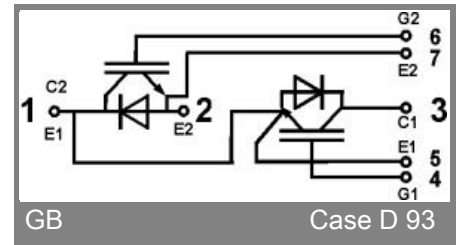
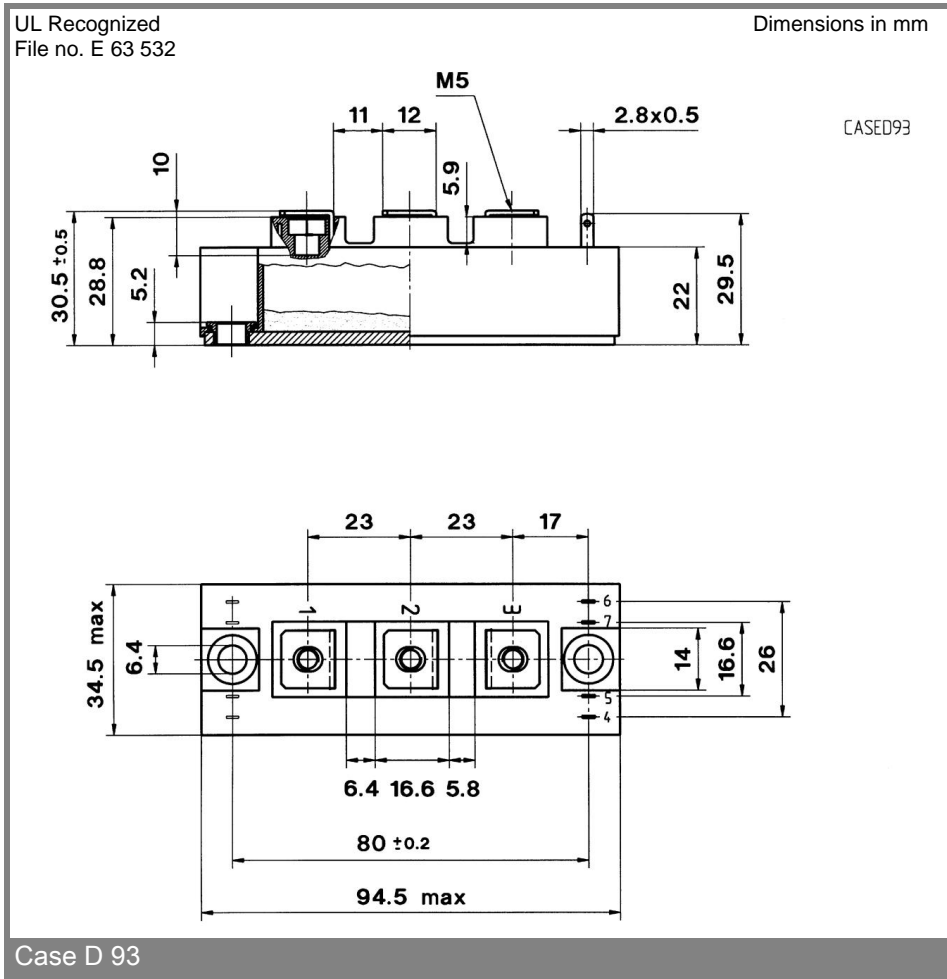
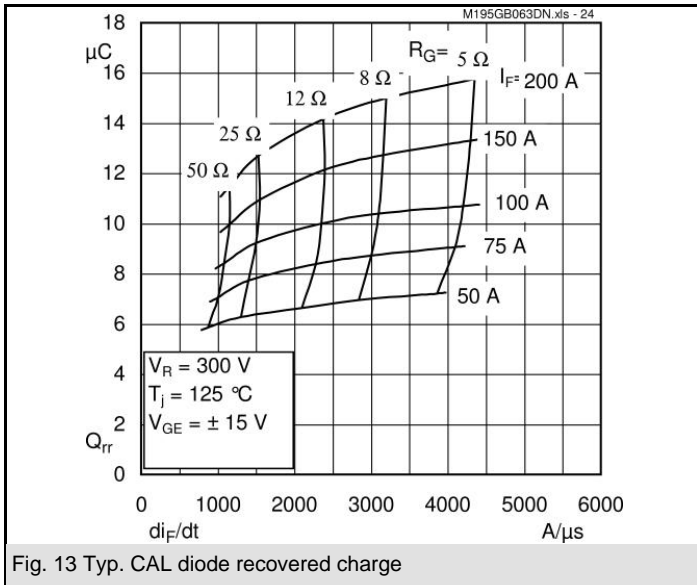
Absolute Maximum Ratings		$T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
IGBT			
V_{CES}		600	V
I_C	$T_c = 25\text{ (85) }^\circ\text{C}$	250 (190)	A
I_{CRM}	$t_p = 1\text{ ms}$	400	A
V_{GES}		± 20	V
T_{vj} (T_{stg})	$T_{OPERATION} \leq T_{stg}$	- 40 ... + 150 (125)	$^\circ\text{C}$
V_{isol}	AC, 1 min.	2500	V
Inverse diode			
I_F	$T_c = 25\text{ (80) }^\circ\text{C}$	200 (140)	A
I_{FRM}	$t_p = 1\text{ ms}$	400	A
I_{FSM}	$t_p = 10\text{ ms}$; sin.; $T_j = 150\text{ }^\circ\text{C}$	1400	A

Characteristics		$T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT					
$V_{GE(th)}$	$V_{GE} = V_{CE}$; $I_C = 4\text{ mA}$	4,5	5,5	6,5	V
I_{CES}	$V_{GE} = 0$; $V_{CE} = V_{CES}$; $T_j = 25\text{ (125) }^\circ\text{C}$		0,2	0,6	mA
$V_{CE(TO)}$	$T_j = 25\text{ (125) }^\circ\text{C}$		1,05 (1)		V
r_{CE}	$V_{GE} = 15\text{ V}$; $T_j = 25\text{ (125) }^\circ\text{C}$		5,25 (7)		m Ω
$V_{CE(sat)}$	$I_C = 200\text{ A}$; $V_{GE} = 15\text{ V}$; chip level		2,1 (2,4)	2,5 (2,8)	V
C_{ies}	under following conditions		11,2		nF
C_{oes}	$V_{GE} = 0$; $V_{CE} = 25\text{ V}$; $f = 1\text{ MHz}$		1,25		nF
C_{res}			0,75		nF
L_{CE}				25	nH
$R_{CC'+EE'}$	res.; terminal-chip $T_c = 25\text{ (125) }^\circ\text{C}$		0,75 (1)		m Ω
$t_{d(on)}$	$V_{CC} = 300\text{ V}$; $I_C = 200\text{ A}$		120		ns
t_r	$R_{Gon} = R_{Goff} = 8\text{ }^\circ\Omega$; $T_j = 125\text{ }^\circ\text{C}$		85		ns
$t_{d(off)}$	$V_{GE} = \pm 15\text{ V}$		460		ns
t_f			50		ns
$E_{on} (E_{off})$			11,5 (7,5)		mJ
Inverse diode					
$V_F = V_{EC}$	$I_F = 150\text{ A}$; $V_{GE} = 0\text{ V}$; $T_j = 25\text{ (125) }^\circ\text{C}$		1,45 (1,35)	1,7	V
$V_{(TO)}$	$T_j = 25\text{ (125) }^\circ\text{C}$			0,9	V
r_T	$T_j = 25\text{ (125) }^\circ\text{C}$		4	5,5	m Ω
I_{RRM}	$I_F = 200\text{ A}$; $T_j = 125\text{ () }^\circ\text{C}$		75		A
Q_{rr}	$di/dt = A/\mu\text{s}$		13		μC
E_{rr}	$V_{GE} = V$				mJ
Thermal characteristics					
$R_{th(j-c)}$	per IGBT			0,13	K/W
$R_{th(j-c)D}$	per Inverse Diode			0,3	K/W
$R_{th(c-s)}$	per module			0,05	K/W
Mechanical data					
M_s	to heatsink M6	3		5	Nm
M_t	to terminals M5	2,5		5	Nm
w				160	g





SKM 195GB063DN



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

This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

This datasheet has been downloaded from:

www.EEworld.com.cn

Free Download

Daily Updated Database

100% Free Datasheet Search Site

100% Free IC Replacement Search Site

Convenient Electronic Dictionary

Fast Search System

www.EEworld.com.cn