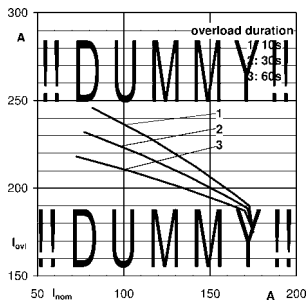


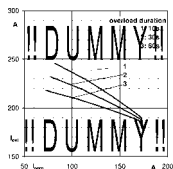


Superfast NPT-IGBT Modules

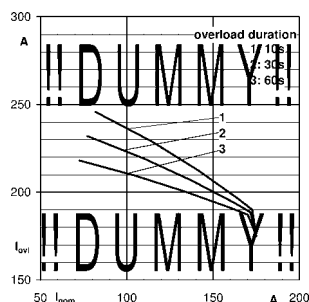
SKiM 350GD063DM

Absolute Maximum Ratings			
Symbol	Conditions	Values	Unit
IGBT			
V_{CES}		600	V
I_C	$T_j = 150\text{ °C}$	$T_c = 25\text{ °C}$	A
		$T_c = 75\text{ °C}$	A
I_{CRM}	$I_{CRM} = 2 \times I_{Cnom}$	800	A
V_{GES}		-20 ... 20	V
t_{psc}	$V_{CC} = 300\text{ V}$ $V_{GE} \leq 20\text{ V}$ $T_j = 125\text{ °C}$ $V_{CES} \leq 600\text{ V}$	10	μs
T_j		-40 ... 150	°C
Inverse diode			
I_F	$T_j = 150\text{ °C}$	$T_c = 25\text{ °C}$	A
		$T_c = 80\text{ °C}$	A
I_{FRM}	$I_{FRM} = 2 \times I_{Fnom}$	800	A
I_{FSM}	$t_p = 10\text{ ms}$, half sine wave, $T_j = 25\text{ °C}$		A
T_j		-40 ... 150	°C
Module			
$I_{t(RMS)}$		400	A
T_{stg}		-40 ... 125	°C
V_{isol}	AC sinus 50Hz, $t = 60\text{ s}$	2500	V

Characteristics					
Symbol	Conditions	min.	typ.	max.	Unit
IGBT					
$V_{CE(sat)}$	$I_{Cnom} = 400\text{ A}$ $V_{GE} = 15\text{ V}$ chipselevel	$T_j = 25\text{ °C}$			V
		$T_j = 125\text{ °C}$			V
V_{CE0}		$T_j = 25\text{ °C}$			V
		$T_j = 125\text{ °C}$			V
r_{CE}	$V_{GE} = 15\text{ V}$	$T_j = 25\text{ °C}$			m Ω
		$T_j = 125\text{ °C}$			m Ω
$V_{GE(th)}$	$V_{GE} = V_{CE}$, $I_C = 8\text{ mA}$	4.5	5.5	6.5	V
I_{CES}	$V_{GE} = 0\text{ V}$ $V_{CE} = 600\text{ V}$	$T_j = 25\text{ °C}$	0.15	0.45	mA
					mA
C_{ies}	$V_{CE} = 25\text{ V}$ $V_{GE} = 0\text{ V}$	$f = 1\text{ MHz}$	18		nF
C_{oes}		$f = 1\text{ MHz}$			nF
C_{res}		$f = 1\text{ MHz}$	1.6		nF
Q_G	$V_{GE} = -8\text{ V} \dots +20\text{ V}$				nC
R_{Gint}	$T_j = 25\text{ °C}$		2.5		Ω
$t_{d(on)}$	$V_{CC} = 300\text{ V}$		180		ns
t_r	$I_{Cnom} = 400\text{ A}$		49		ns
E_{on}	$T_j = 125\text{ °C}$				mJ
$t_{d(off)}$			285		ns
t_f			41		ns
E_{off}					mJ
$R_{th(j-c)}$	per IGBT, j - s				K/W



SKiM 350GD063DM



Superfast NPT-IGBT Modules

SKiM 350GD063DM



Characteristics

Symbol	Conditions	min.	typ.	max.	Unit
Inverse diode					
$V_F = V_{EC}$	$I_{Fnom} = 400\text{ A}$ $V_{GE} = 0\text{ V}$ chiplevel				
	$T_j = 25\text{ °C}$		1.5	1.7	V
	$T_j = 125\text{ °C}$		1.5		V
V_{F0}					
	$T_j = 25\text{ °C}$	0.95	1.05	1.2	V
	$T_j = 125\text{ °C}$		0.9		V
r_F					
	$T_j = 25\text{ °C}$	0.5	1.0	1.3	mΩ
	$T_j = 125\text{ °C}$	0.0	1.5	1.3	mΩ
I_{RRM}					A
Q_{rr}	$V_{GE} = -15\text{ V}$				μC
E_{rr}	$V_{CC} = 300\text{ V}$				mJ
$R_{th(j-c)D}$	per diode				K/W
Module					
L_{CE}				15	nH
$R_{CC'+EE'}$	terminal-chip				mΩ
					mΩ
$R_{th(c-s)}$					K/W
M_s					Nm
M_t	to terminals M6				Nm
w					g
Temperature sensor					
R_{100}			100 ±3%		kΩ
$B_{100/125}$			4050		K

