

SEMiX 553GD128Dc



SPT IGBT Modules

SEMiX 553GD128Dc

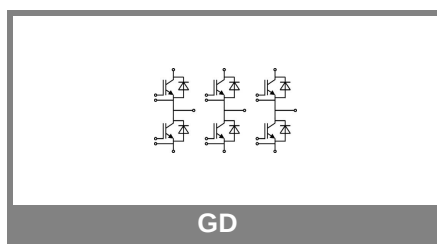
Preliminary Data

Features

- Homogeneous Si
- SPT = Soft-Punch-Through technology
- $V_{CE(sat)}$ with positive temperature coefficient
- High short circuit capability

Typical Applications

- AC inverter drives
- UPS
- Electronic welders up to 20 kHz



0711 供应商

Absolute Maximum Ratings		T _{case} = 25°C, unless otherwise specified		
Symbol	Conditions	Values		Units
IGBT				
V _{CES}	T _j = 25 °C	1200		V
I _C	T _j = 150 °C	T _{case} = 25 °C	535	A
		T _{case} = 80 °C	380	A
I _{CRM}	I _{CRM} =2xI _{Cnom}	600		A
V _{GES}		±20		V
t _{psc}	V _{CC} = 600 V; V _{GE} ≤ 20 V; T _j = 125 °C V _{CES} < 1200 V	10		µs
Inverse Diode				
I _F	T _j = 150 °C	T _{case} = 25 °C	420	A
		T _{case} = 80 °C	285	A
I _{FRM}	I _{FRM} =2xI _{Fnom}	600		A
I _{FSM}	t _p = 10 ms; sin. T _j = 25 °C	2300		A
Module				
I _{t(RMS)}		600		A
T _{vj}		-40 ... + 150		°C
T _{stg}		-40 ... + 125		°C
V _{isol}	AC, 1 min.	4000		V

Characteristics		T _{case} = 25°C, unless otherwise specified				
Symbol	Conditions	min.	typ.	max.	Units	
IGBT						
V _{GE(th)}	V _{GE} = V _{CE} , I _C = 12 mA	4,5	5	6,5	V	
I _{CES}	V _{GE} = 0 V, V _{CE} = V _{CES} T _j = 25 °C			0,3	mA	
V _{CE0}	T _j = 25 °C T _j = 125 °C		1 0,9	1,15 1,05	V V	
r _{CE}	V _{GE} = 15 V T _j = 25°C T _j = 125°C		3 4	4 5	mΩ mΩ	
V _{CE(sat)}	I _{Cnom} = 300 A, V _{GE} = 15 V T _j = 25°C _{chiplev.} T _j = 125°C _{chiplev.}		1,9 2,1	2,35 2,55	V V	
C _{ies} C _{oes} C _{res}	V _{CE} = 25, V _{GE} = 0 V f = 1 MHz		28,3 1,9 1,2		nF nF nF	
Q _G	V _{GE} = -8 V ... +15 V		2900		nC	
t _{d(on)} t _r E _{on}	R _{Gon} = 3 Ω	V _{CC} = 600V I _{Cnom} = 300A T _j = 125 °C	185 65 27		ns ns mJ	
t _{d(off)} t _f E _{off}	R _{Goff} = 3 Ω		635 80 33		ns ns mJ	
R _{th(j-c)}	per IGBT			0,061	K/W	

SEMiX 553GD128Dc



SPT IGBT Modules

SEMiX 553GD128Dc

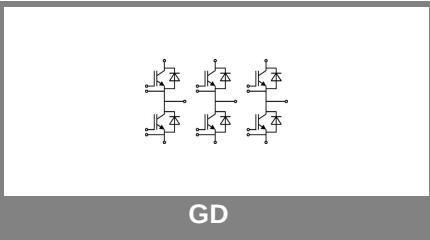
Preliminary Data

Features

- Homogeneous Si
- SPT = Soft-Punch-Through technology
- $V_{CE(sat)}$ with positive temperature coefficient
- High short circuit capability

Typical Applications

- AC inverter drives
- UPS
- Electronic welders up to 20 kHz

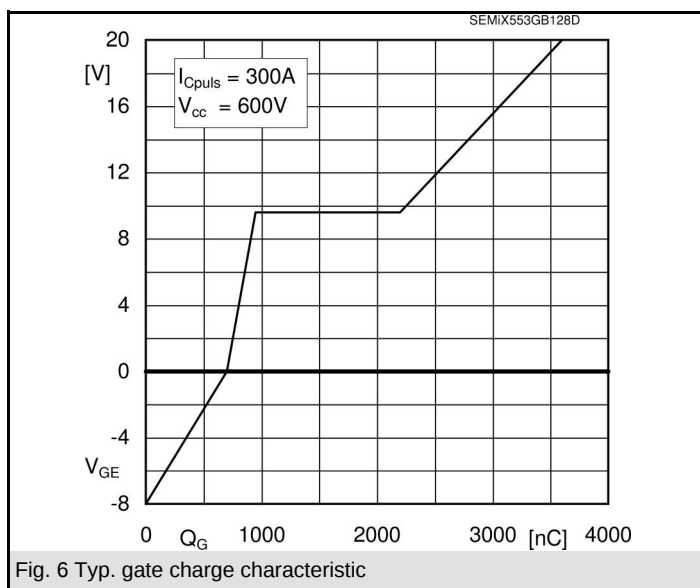
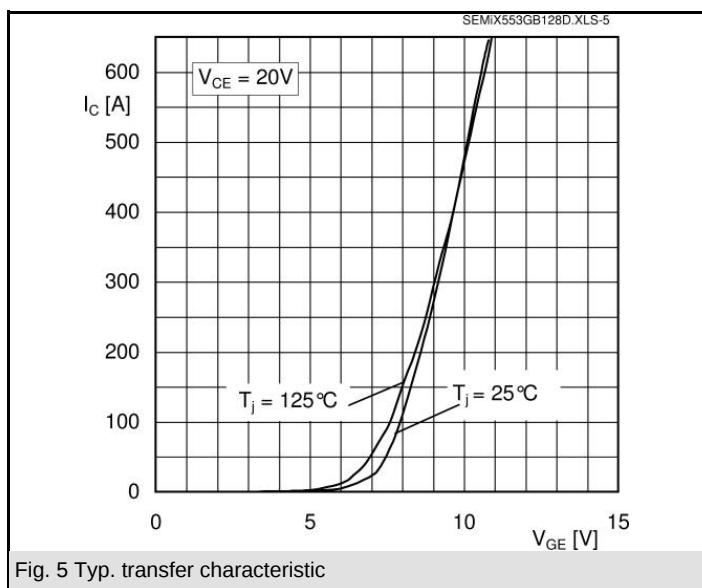
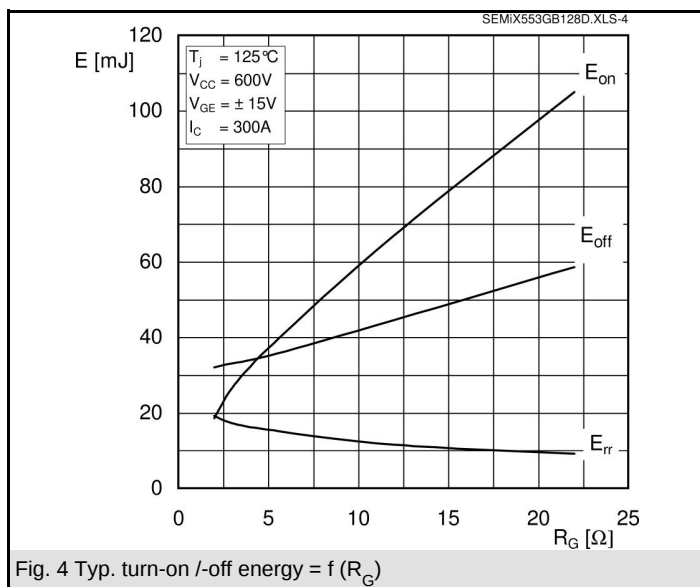
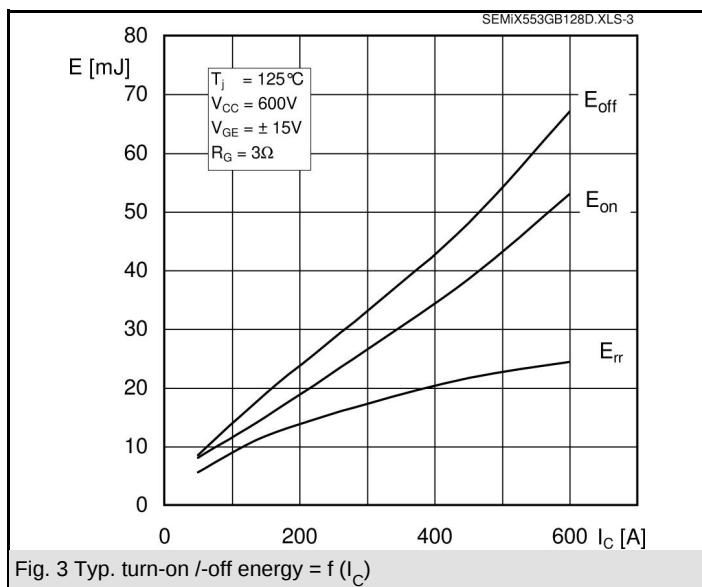
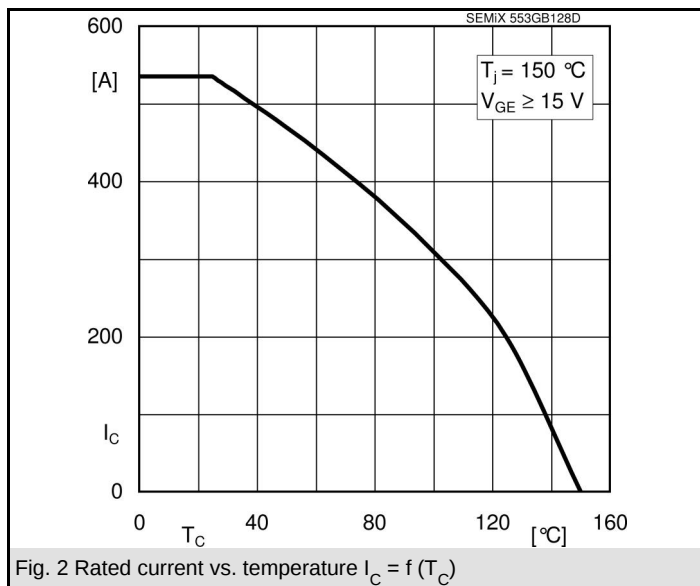
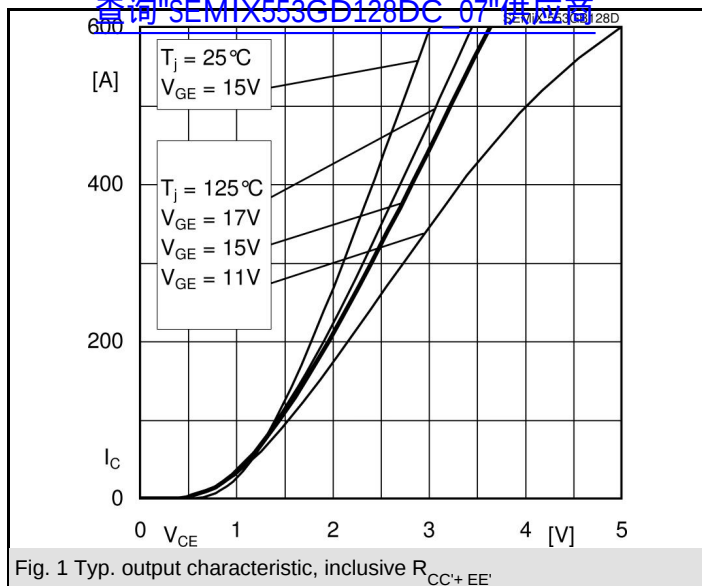


Characteristics					
Symbol	Conditions	min.	typ.	max.	Units
Inverse Diode					
$V_F = V_{EC}$	$I_{Fnom} = 300\text{ A}$; $V_{GE} = 0\text{ V}$				
	$T_j = 25\text{ }^{\circ}\text{C}_{chiplev.}$		2	2,5	V
	$T_j = 125\text{ }^{\circ}\text{C}_{chiplev.}$		1,8	2,3	V
V_{F0}	$T_j = 25\text{ }^{\circ}\text{C}$		1,1	1,45	V
	$T_j = 125\text{ }^{\circ}\text{C}$		0,85	1,2	V
r_F	$T_j = 25\text{ }^{\circ}\text{C}$		3	3,5	mΩ
	$T_j = 125\text{ }^{\circ}\text{C}$		3,2	3,7	mΩ
I_{RRM}	$I_{Fnom} = 300\text{ A}$		325		A
Q_{rr}	$di/dt = 5400\text{ A}/\mu\text{s}$		46		μC
E_{rr}	$V_{GE} = -15\text{ V}$; $V_{CC} = 600\text{ V}$		17		mJ
$R_{th(j-c)D}$	per diode			0,11	K/W
Module					
L_{CE}			20		nH
$R_{CC'+EE'}$	res., terminal-chip	$T_{case} = 25\text{ }^{\circ}\text{C}$	0,7		mΩ
		$T_{case} = 125\text{ }^{\circ}\text{C}$	1		mΩ
$R_{th(c-s)}$	per module		0,014		K/W
M_s	to heat sink (M5)		3	5	Nm
M_t	to terminals (M6)		2,5	5	Nm
w				900	g
Temperature sensor					
R_{100}	$T_c = 100\text{ }^{\circ}\text{C}$ ($R_{25} = 5\text{ k}\Omega$)		0,493±5%		kΩ
$B_{100/125}$	$R(T) = R_{100} \exp[B_{100/125} (1/T - 1/T_{100})]$; $T[\text{K}]; B$		3550±2%		K

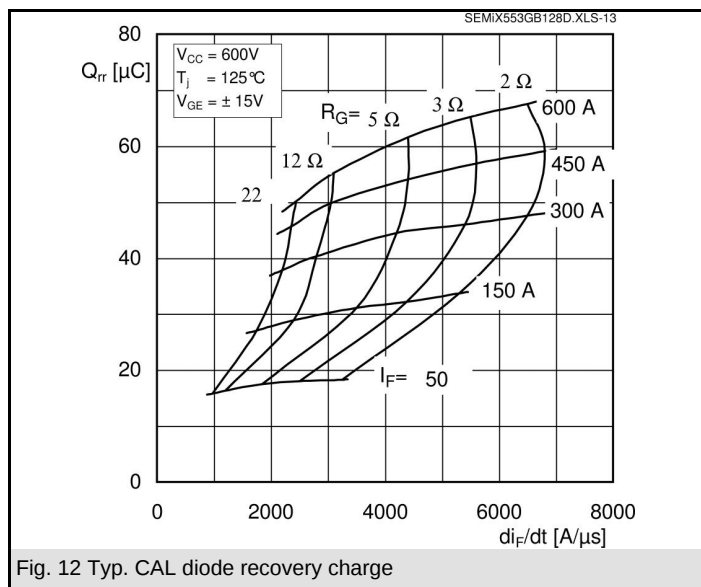
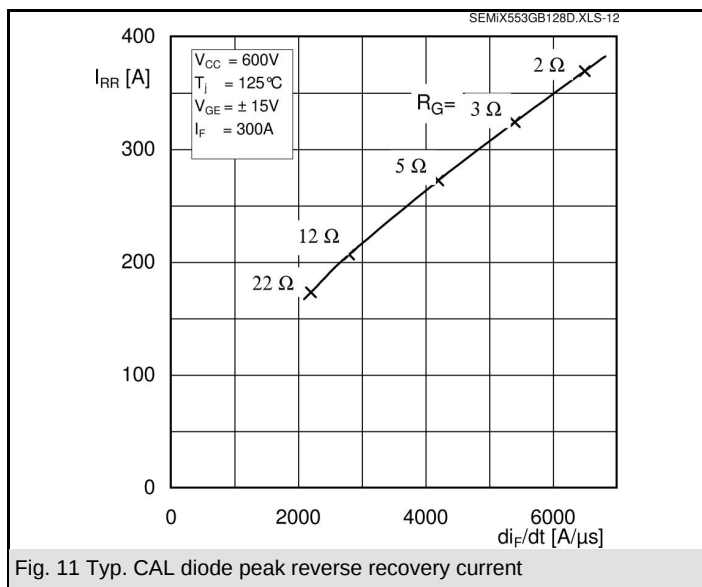
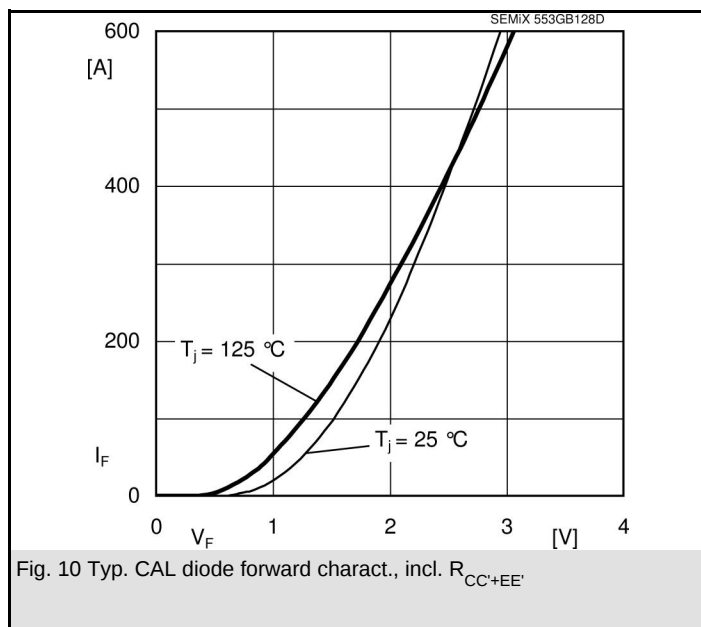
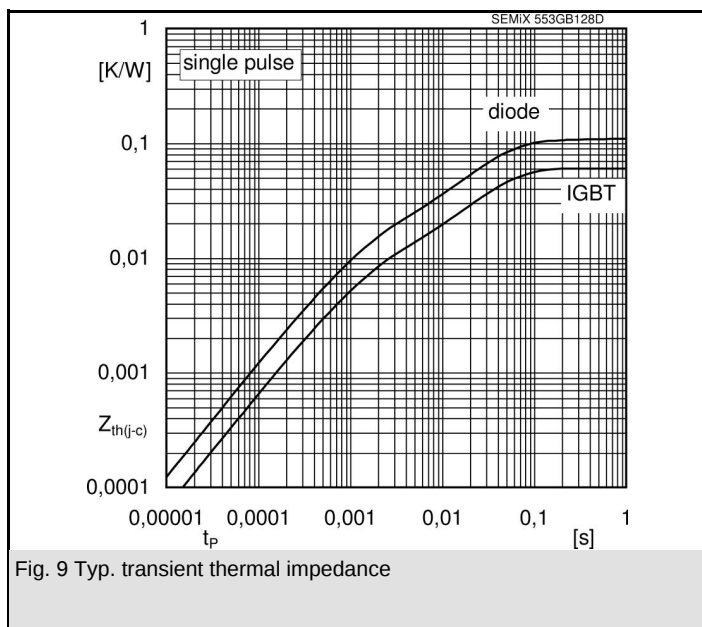
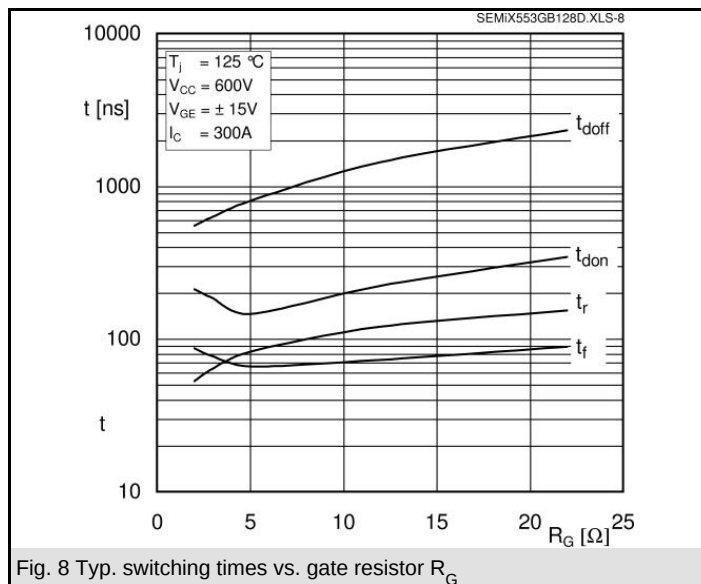
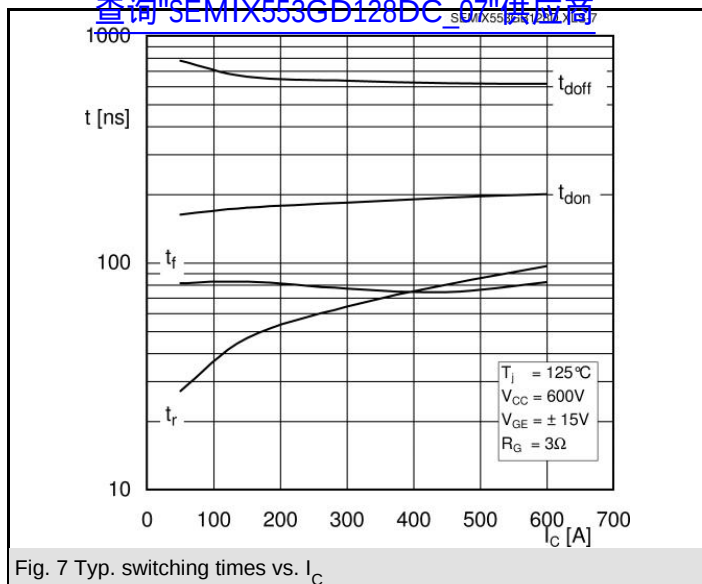
This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

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

查询"SEMiX553GD128DC 07"供应商

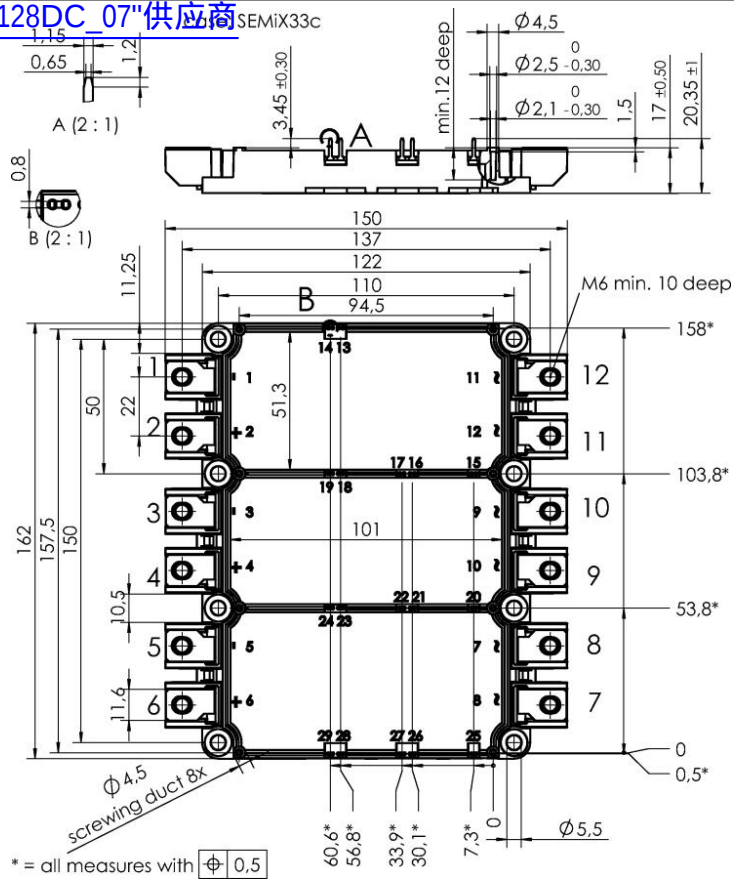


查询"SEMIX553GD128DC" 07"供应商



SEMIX 553GD128Dc

查询"SEMIX553GD128DC 07"供应商



Case SEMiX 33c

