

SEMiX 452GB126HDs

查询"SEMiX452GAL126HDs"供应商



SEMiX® 2s

Trench IGBT Modules

SEMiX 452GB126HDs

SEMiX 452GAL126HDs

SEMiX 452GAR126HDs

Preliminary Data

Features

- Homogeneous Si
- Trench = Trenchgate technology
- $V_{CE(sat)}$ with positive temperature coefficient
- High short circuit capability

Typical Applications

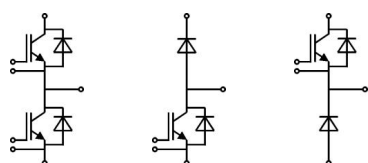
- AC inverter drives
- UPS
- Electronic Welding

Remarks

- Case temperatur limited to $T_C=125^\circ\text{C}$ max.

Absolute Maximum Ratings		$T_{case} = 25^\circ\text{C}$, unless otherwise specified		
Symbol	Conditions	Values		Units
IGBT				
V_{CES}	$T_j = 25^\circ\text{C}$	1200		V
I_C	$T_j = 150^\circ\text{C}$	$T_c = 25^\circ\text{C}$	455	A
		$T_c = 80^\circ\text{C}$	320	A
I_{CRM}	$I_{CRM} = 2 \times I_{Cnom}$	600		A
V_{GES}		± 20		V
t_{psc}	$V_{CC} = 600\text{ V}; V_{GE} \leq 20\text{ V}; T_j = 125^\circ\text{C}$ $V_{CES} < 1200\text{ V}$	10		μs
Inverse Diode				
I_F	$T_j = 150^\circ\text{C}$	$T_c = 25^\circ\text{C}$	395	A
		$T_c = 80^\circ\text{C}$	270	A
I_{FRM}	$I_{FRM} = 2 \times I_{Fnom}$	600		A
I_{FSM}	$t_p = 10\text{ ms}; \sin.$	$T_j = 25^\circ\text{C}$	1900	A
Module				
$I_{t(RMS)}$		600		A
T_{vj}		- 40 ... + 150		$^\circ\text{C}$
T_{stg}		- 40 ... + 125		$^\circ\text{C}$
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	5	5,8	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	1,2	V
			0,9	1,1	V
r _{CE}	V _{GE} = 15 V T _j = 25°C T _j = 125°C		2,3	3,2	mΩ
			3,7	4,5	mΩ
V _{CE(sat)}	I _{Cnom} = 300 A, V _{GE} = 15 V T _j = 25°C _{chiplev.} T _j = 125°C _{chiplev.}		1,7	2,15	V
			2	2,45	V
C _{ies}	V _{CE} = 25, V _{GE} = 0 V f = 1 MHz		21,5		nF
C _{oes}			1,13		nF
C _{res}			0,98		nF
Q _G	V _{GE} = -8 ... +15V		2400		nC
t _{d(on)}	R _{Gon} = 2 Ω	V _{CC} = 600V I _{Cnom} = 300A T _j = 125 °C		280	ns
t _r				65	ns
E _{on}			35	mJ	
t _{d(off)}	R _{Goff} = 2 Ω			630	ns
t _f				130	ns
E _{off}			45	mJ	
R _{th(j-c)}	per IGBT			0,083	K/W



GB

GAL

GAR

SEMiX 452GB126HDs

查询"SEMiX452GAL126HDs"供应商



SEMiX® 2s

Trench IGBT Modules

SEMiX 452GB126HDs

SEMiX 452GAL126HDs

SEMiX 452GAR126HDs

Preliminary Data

Features

- Homogeneous Si
- Trench = Trenchgate technology
- $V_{CE(sat)}$ with positive temperature coefficient
- High short circuit capability

Typical Applications

- AC inverter drives
- UPS
- Electronic Welding

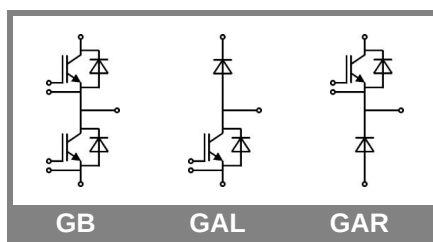
Remarks

- Case temperatur limited to $T_C=125^\circ\text{C}$ max.

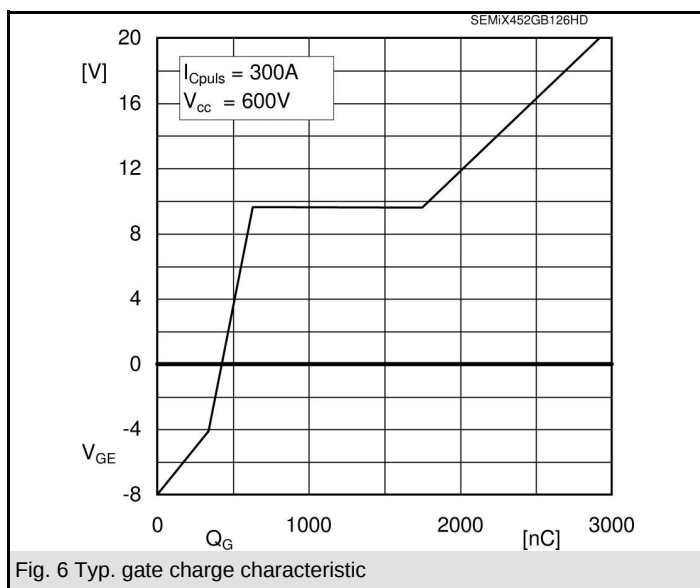
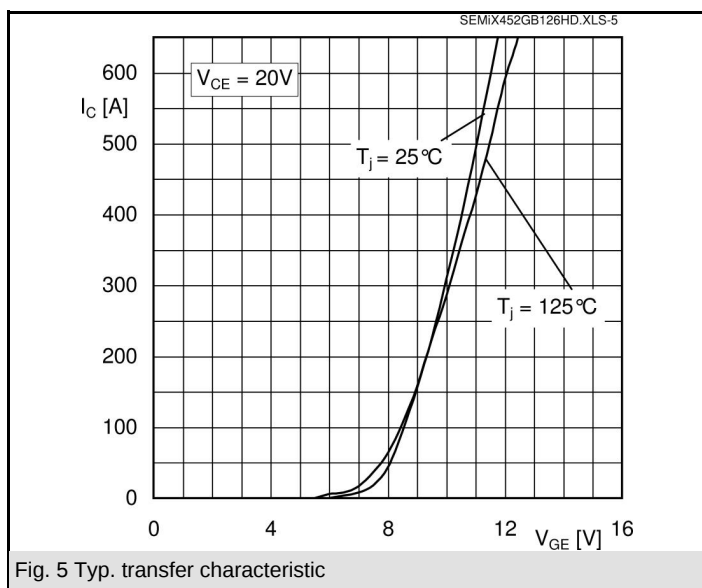
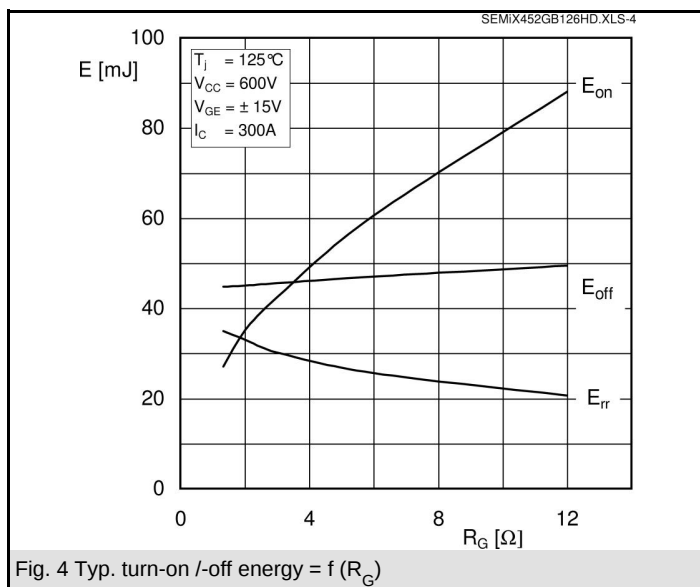
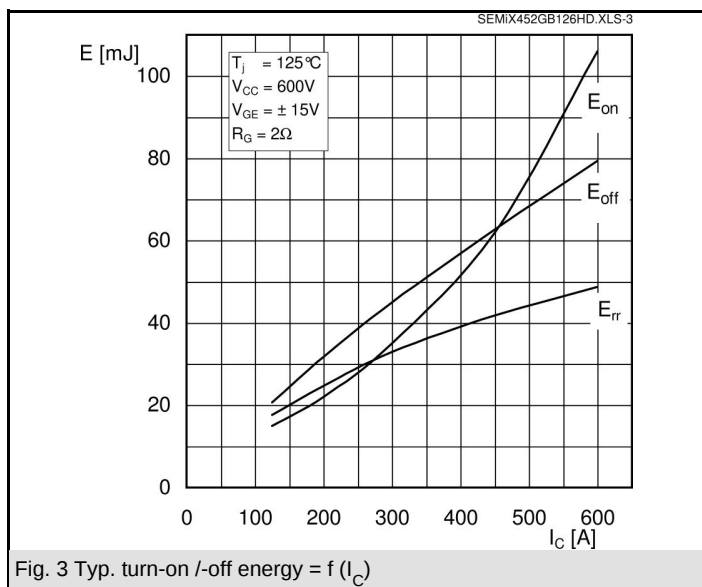
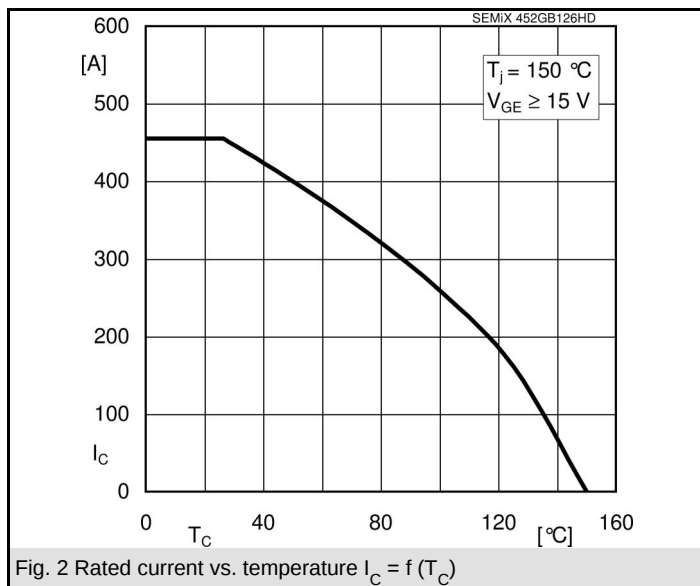
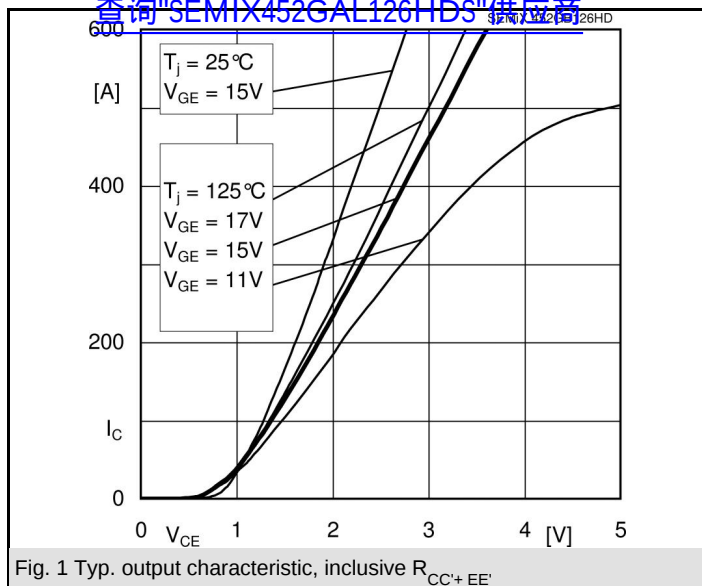
Characteristics					
Symbol	Conditions	min.	typ.	max.	Units
Inverse Diode					
$V_F = V_{EC}$	$I_{Fnom} = 300 \text{ A}; V_{GE} = 0 \text{ V}$				
	$T_j = 25^\circ\text{C}$ chiplev.		1,6	1,8	V
	$T_j = 125^\circ\text{C}$ chiplev.		1,6	1,8	V
V_{F0}	$T_j = 25^\circ\text{C}$		1	1,1	V
	$T_j = 125^\circ\text{C}$		0,8	0,9	V
r_F	$T_j = 25^\circ\text{C}$		2	2,3	mΩ
	$T_j = 125^\circ\text{C}$		2,7	3	mΩ
I_{RRM}	$I_{Fnom} = 300 \text{ A}$		375		A
Q_{rr}	$di/dt = 6200 \text{ A}/\mu\text{s}$		75		μC
E_{rr}	$V_{GE} = -15 \text{ V}; V_{CC} = 600 \text{ V}$		33		mJ
$R_{th(j-c)D}$	per diode			0,15	K/W
Module					
L_{CE}			18		nH
$R_{CC'+EE'}$	res., terminal-chip	$T_{case} = 25^\circ\text{C}$	0,7		mΩ
		$T_{case} = 125^\circ\text{C}$	1		mΩ
$R_{th(c-s)}$	per module		0,045		K/W
M_s	to heat sink (M5)		3	5	Nm
M_t	to terminals (M6)		2,5	5	Nm
w				250	g
Temperature sensor					
R_{100}	$T_c = 100^\circ\text{C}$ ($R_{25} = 5 \text{ k}\Omega$)		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.

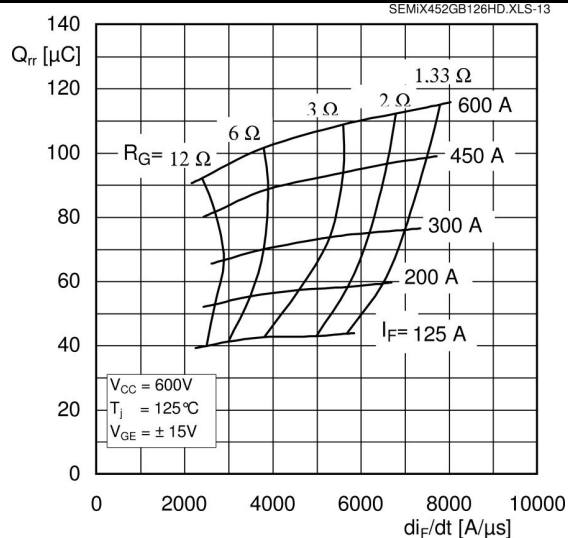
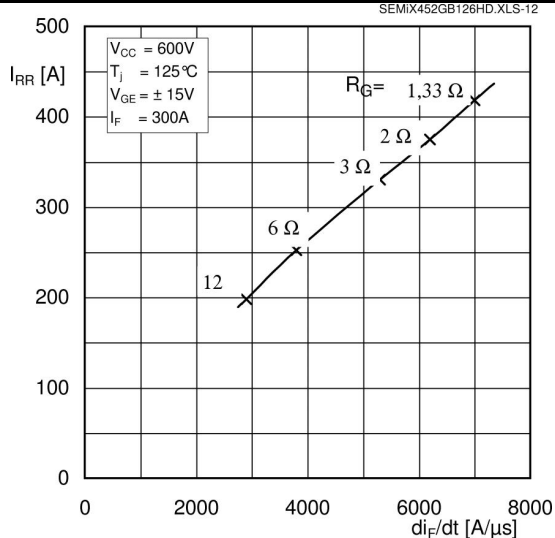
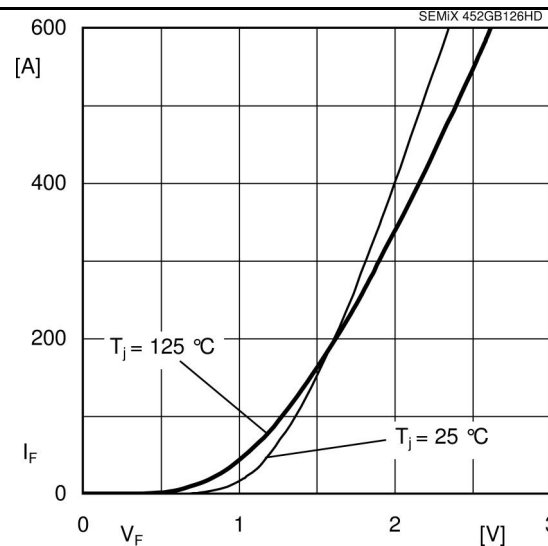
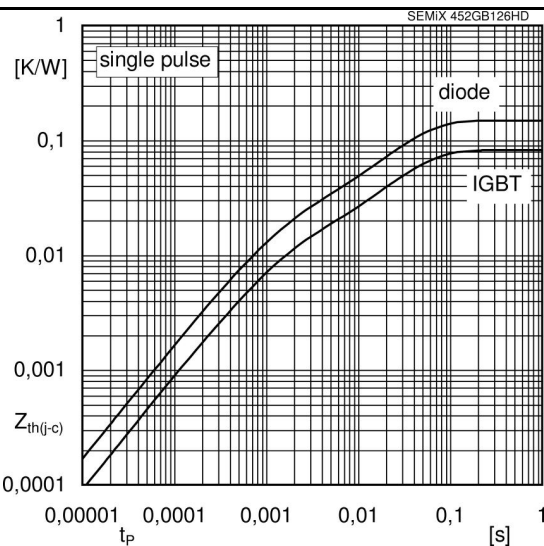
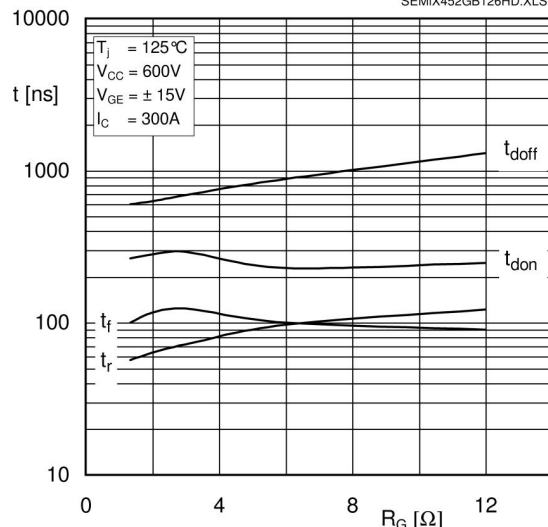
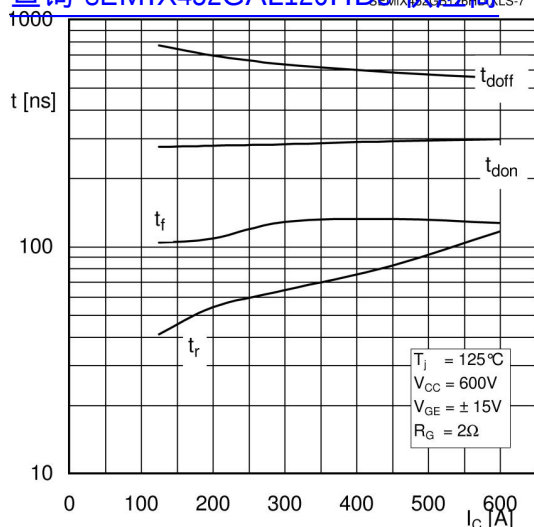
This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.



查询"SEMiX452GB126HDS"供应商

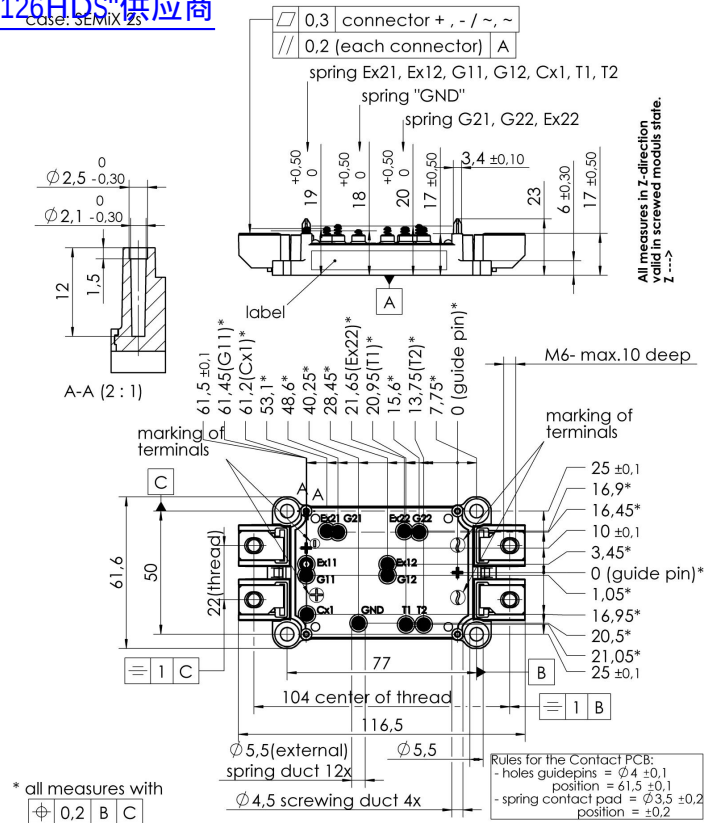


查询"SEMiX452GB126HDs"供应商

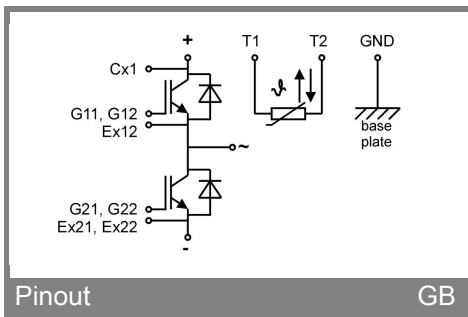


查询"SEMiX452GAL126HDS"供应商

Case: SEMiX 2s

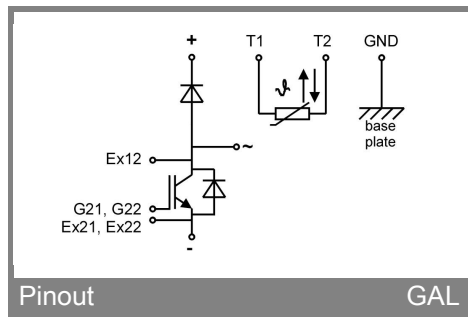


Case SEMiX 2s



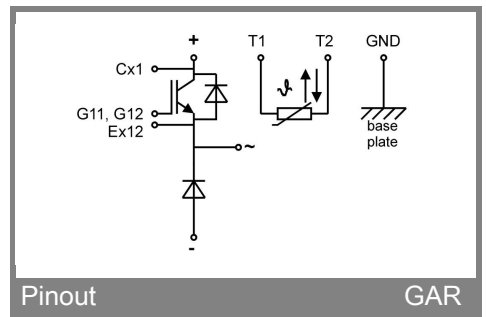
Pinout

GB



Pinout

GAL



Pinout

GAR