

SEMiX® 13s

Bridge Rectifier Module (halfcontrolled)

SEMiX 241DH

Preliminary Data

Features

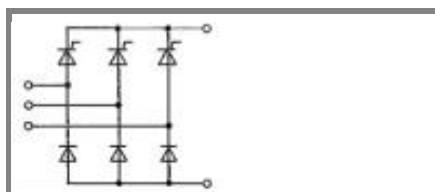
- Terminal height 17 mm
- Chips soldered directly to isolated substrate

Typical Applications

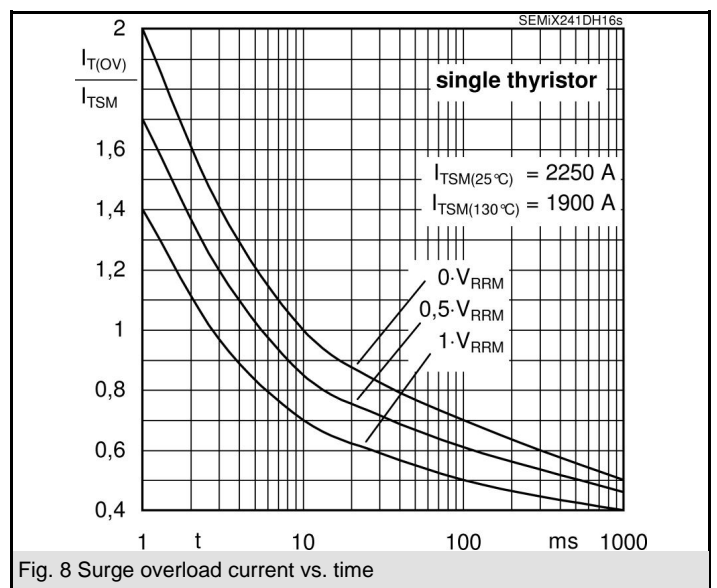
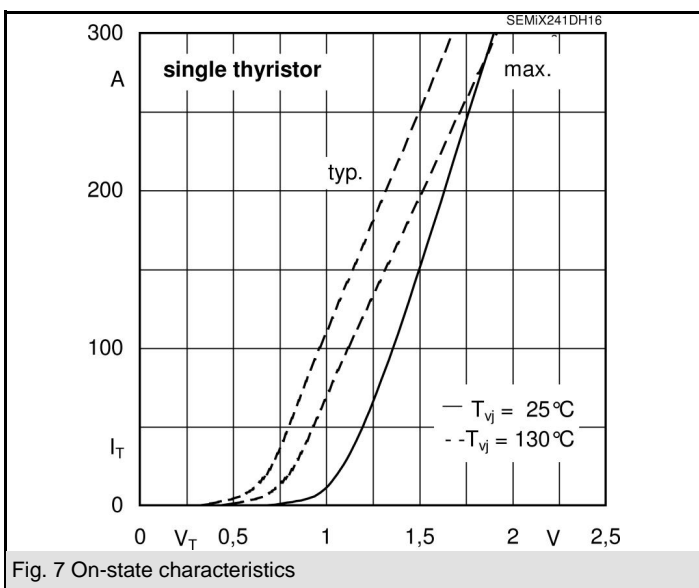
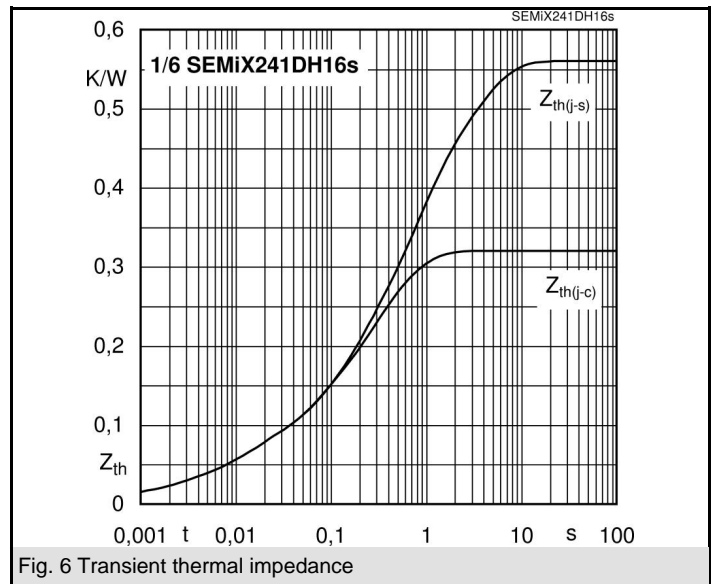
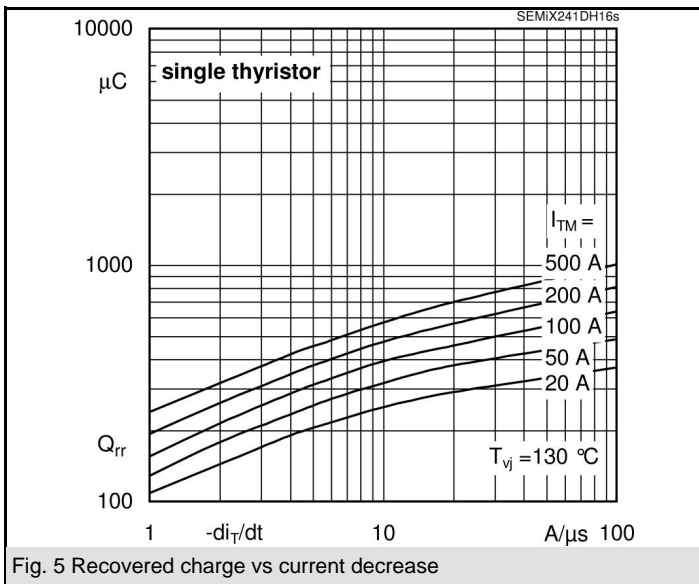
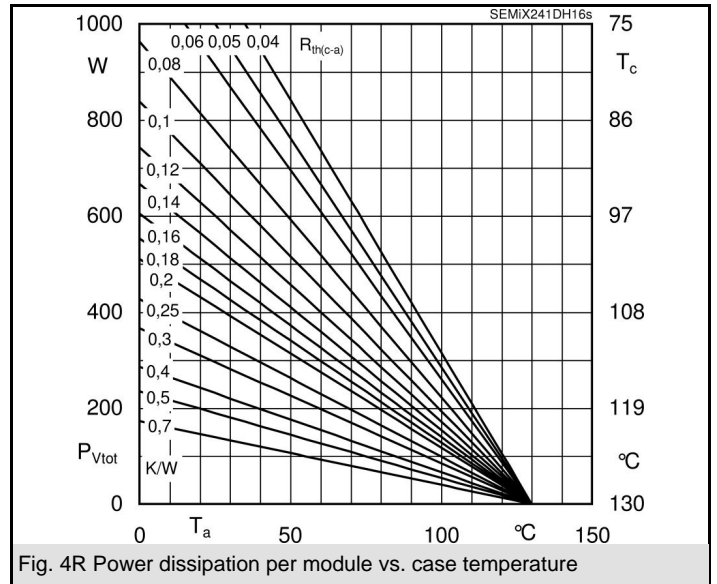
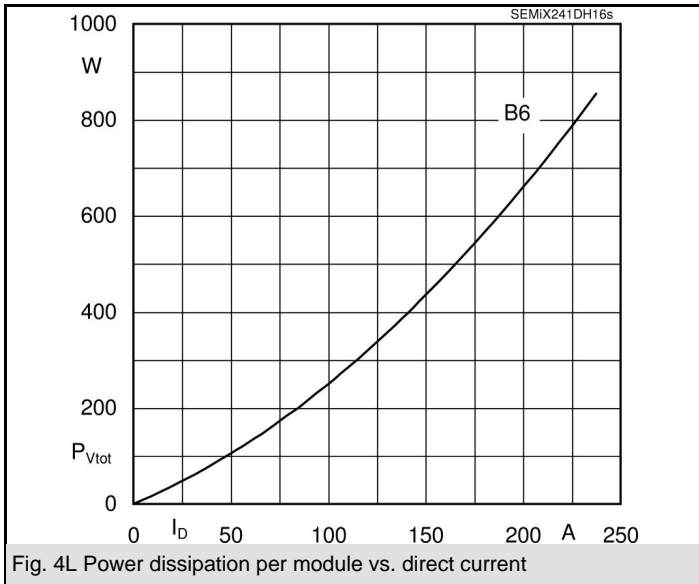
- Input Bridge Rectifier for
- AC/DC motor control
- power supply

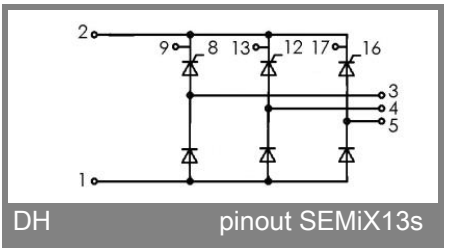
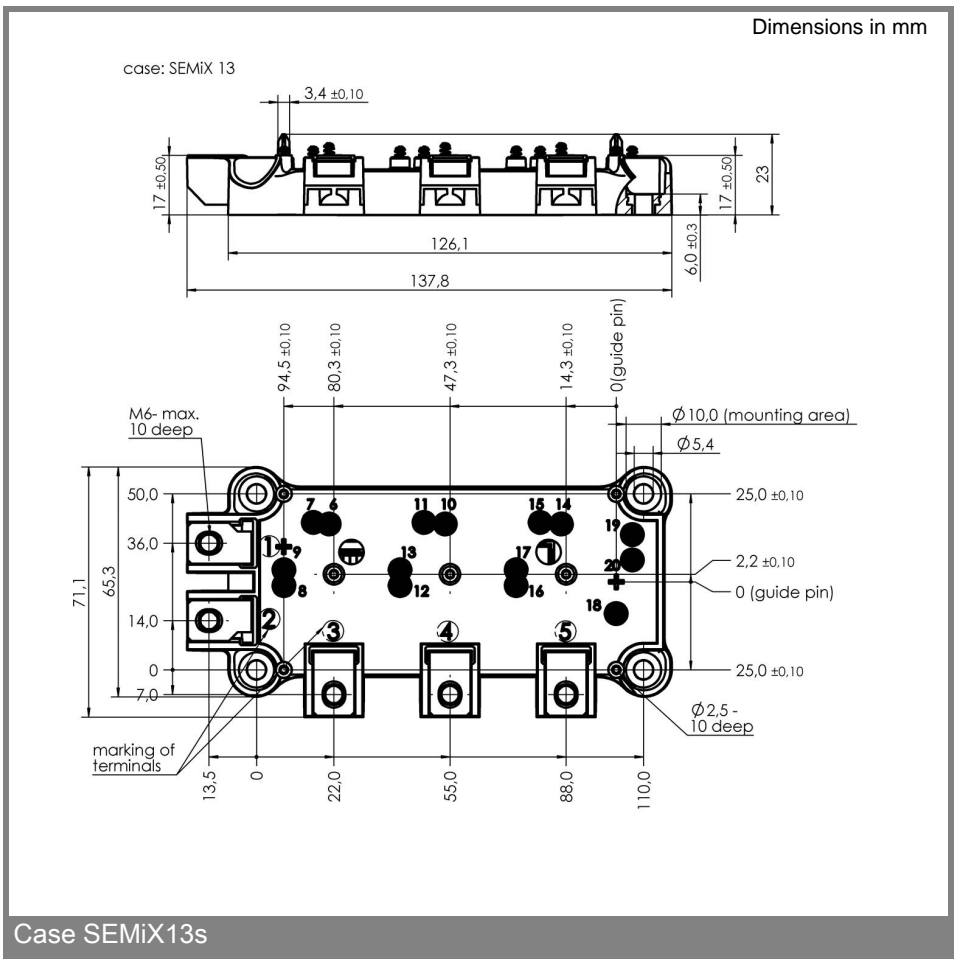
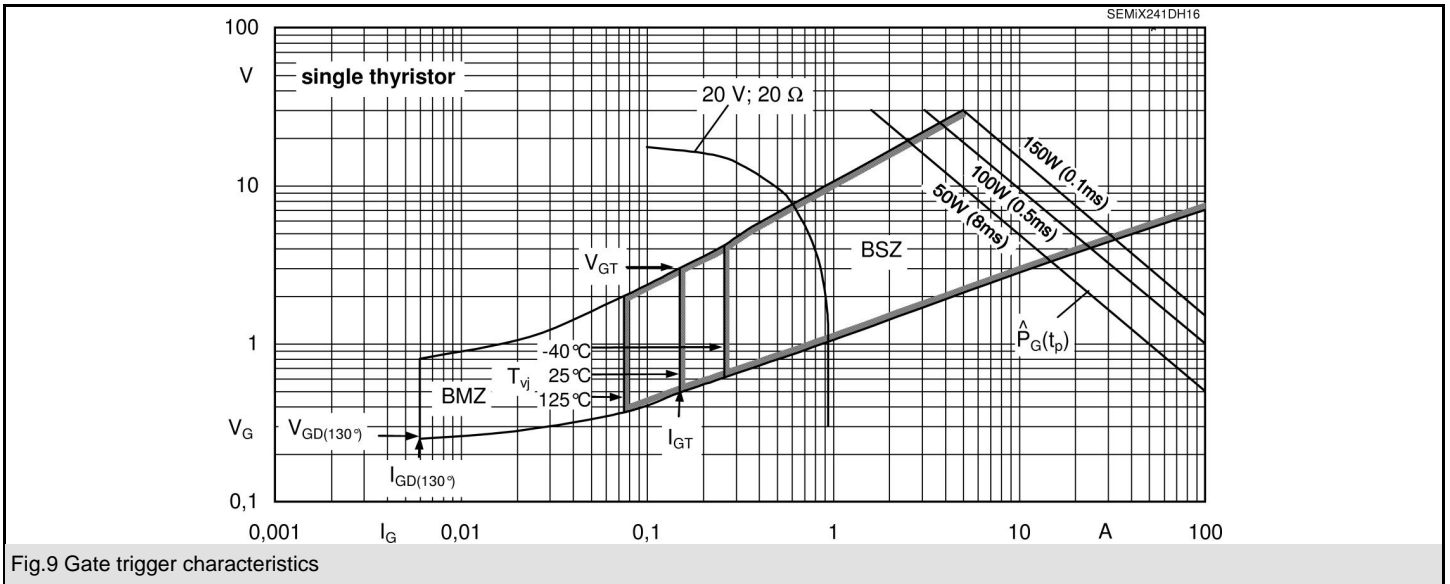
V_{RSM} V	V_{RRM}, V_{DRM} V	$I_D = 240$ A (full conduction) ($T_c = 85$ °C)
1700	1600	SEMiX 241DH16s

Symbol	Conditions	Values	Units
I_D	$T_c = 85$ °C	240	A
	$T_c = 100$ °C	200	A
I_{TSM}, I_{FSM}	$T_{vj} = 25$ °C; 10 ms	2250	A
	$T_{vj} = 130$ °C; 10 ms	1900	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	25300	A ² s
	$T_{vj} = 130$ °C; 8,3 ... 10 ms	18000	A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 300$	max. 1,9	V
$V_{T(TO)}$	$T_{vj} = 130$ °C;	max. 0,85	V
r_T	$T_{vj} = 130$ °C	max. 4	mΩ
$I_{DD}; I_{RD}$	$T_{vj} = 130$ °C; $V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$	max. 24	mA
t_{gd}	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs	1	μs
t_{gr}	$V_D = 0,67 \cdot V_{DRM}$	2	μs
$(dv/dt)_{cr}$	$T_{vj} = 130$ °C	max. 1000	V/μs
$(di/dt)_{cr}$	$T_{vj} = 130$ °C; $f = 50$ Hz	max. 100	A/μs
t_q	$T_{vj} = 130$ °C; typ.	150	μs
I_H	$T_{vj} = 25$ °C; typ. / max.	150 / 250	mA
I_L	$T_{vj} = 25$ °C; $R_G = 33$	300 / 600	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 150	mA
V_{GD}	$T_{vj} = 130$ °C; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 130$ °C; d.c.	max. 6	mA
$R_{th(j-c)}$	per thyristor	0,32	K/W
	per diode	0,32	K/W
	per module	0,04	K/W
T_{vj}		- 40 ... + 130	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	4800 (4000)	V
M_s	(min./max.)	3/5	Nm
M_t	(min./max.)	2,5/5	Nm
a		5 * 9,81	m/s ²
m		300	g
Case	SEMiX13s		



DH





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