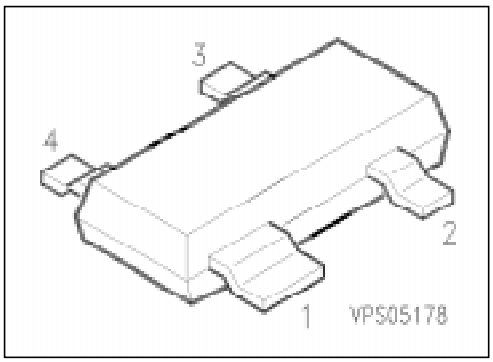
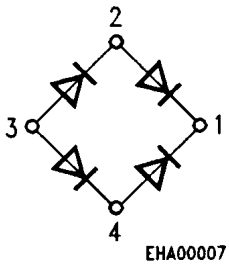
SIEMENS

Silicon Switching Diode Array

BGX 50 A

- Bridge configuration
- High-speed switch diode chip



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package[1)]
BGX 50 A	U1s	Q62702-G38		SOT-143

Maximum Ratings per Diode

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	50	V
Peak reverse voltage	V_{RM}	70	
Forward current	I_F	140	mA
Total power dissipation, T_S = 74 ˚C	P_{tot}	210	mW
Junction temperature	T_j	150	˚C
Storage temperature range	T_{stg}	– 65 … + 150	

Thermal Resistance

Junction - ambient[2)]	$R_{th\ JA}$	≤ 640	K/W
Junction - soldering point	$R_{th\ JS}$	≤ 360	

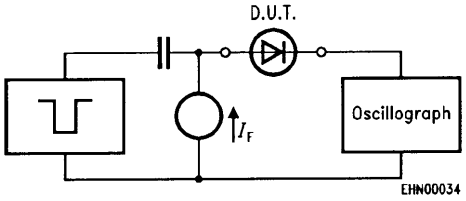
1) For detailed information see chapter Package Outlines.

2) Package mounted on epoxy pcb 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

Electrical Characteristics
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Forward voltage per diode I_F = 100 mA	V_F	–	–	1.3	V
Reverse current per diode V_R = 50 V V_R = 50 V, T_A = 150 °C	I_R	 – –	 – –	 0.2 100	µA
AC characteristics					
Diode capacitance V_R = 0, f = 1 MHz	C_D	–	–	1.5	pF
Reverse recovery time I_F = 10 mA, I_R = 10 mA, R_L = 100 Ω measured at I_R = 1 mA	t_{rr}	–	–	6	ns

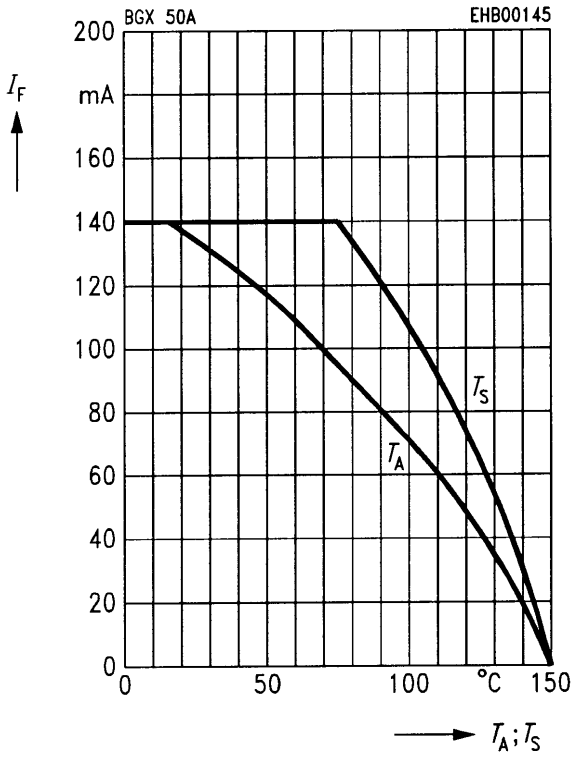
Test circuit for reverse recovery time



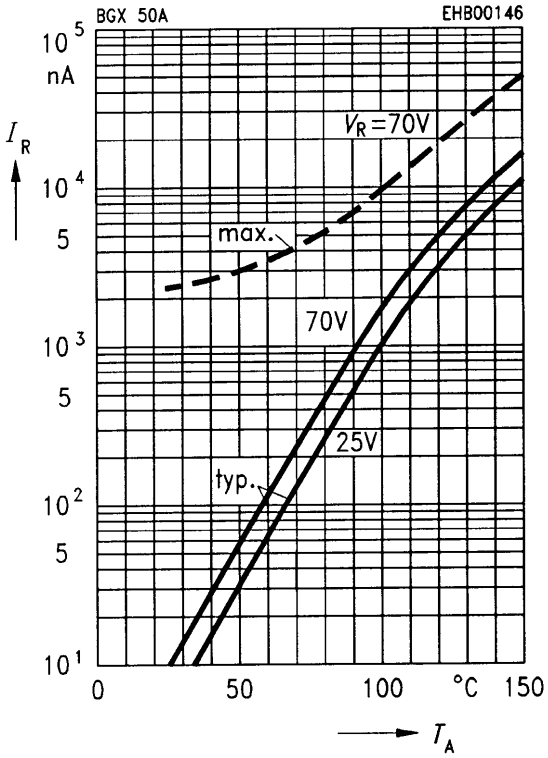
Pulse generator: t_p = 100 ns, D = 0.05
t_r = 0.6 ns, R_j = 50 Ω

Oscillograph: R = 50 Ω
t_r = 0.35 ns
$C \leq$ 1 pF

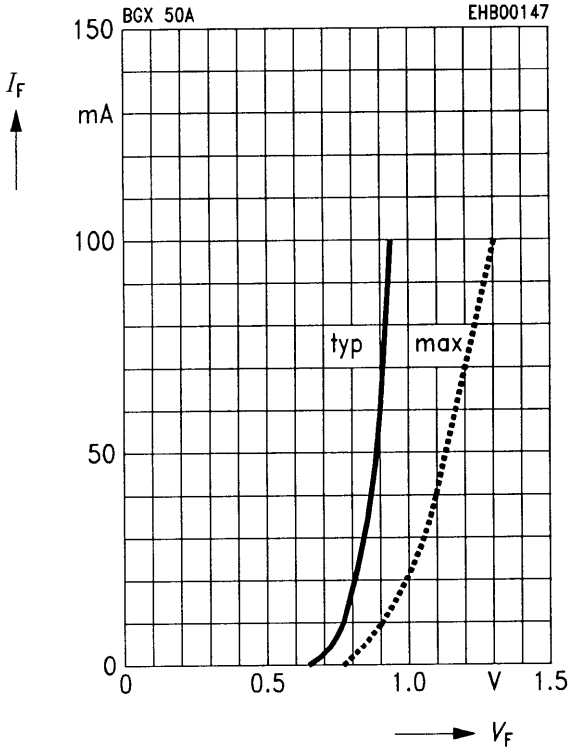
Forward current $I_F = f(T_A^*; T_S)$
* Package mounted on epoxy



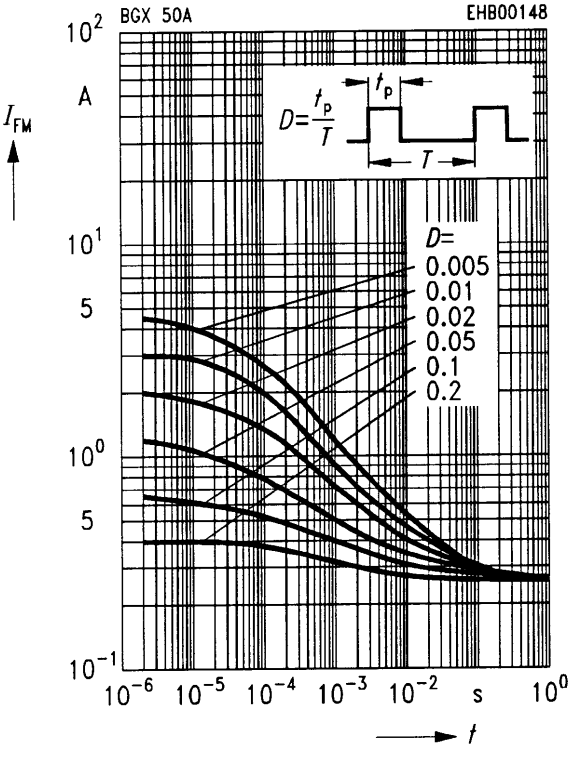
Reverse current $I_R = f(T_A)$



Forward current $I_F = f(V_F)$
T_A = 25 °C



Peak forward current $I_{FM} = f(t)$
T_A = 25 °C



Forward voltage $V_F = f(T_A)$