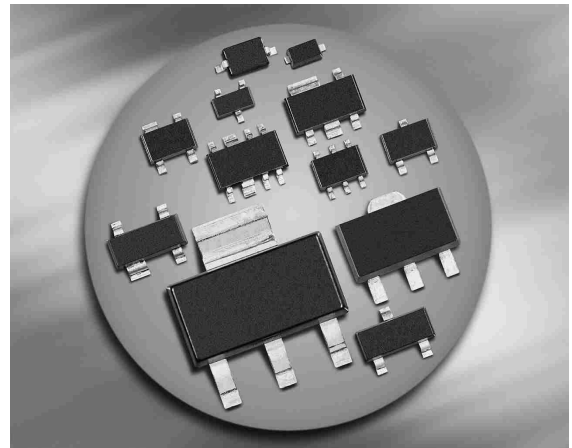
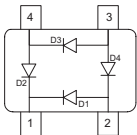


Silicon Switching Diode Array

- Bridge configuration
- High-speed switching diode chip


BGX50A


Type	Package	Configuration	Marking
BGX50A	SOT143	bridge	U1s

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	50	V
Peak reverse voltage	V_{RM}	70	
Forward current	I_F	140	mA
Total power dissipation $T_S \leq 74^\circ\text{C}$	P_{tot}	210	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 ... 150	

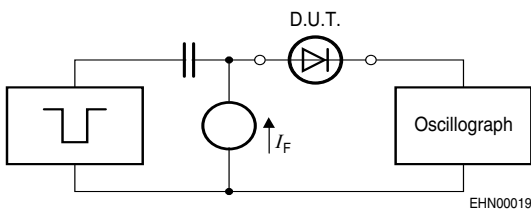
Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾ BGX50A	R_{thJS}	360	K/W

¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current $V_R = 50\text{ V}$ $V_R = 50\text{ V}, T_A = 150\text{ }^\circ\text{C}$	I_R	-	-	0.2 100	μA
Forward voltage $I_F = 100\text{ mA}$	V_F	-	-	1.3	V
AC Characteristics					
Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	C_T	-	-	1.5	pF
Reverse recovery time $I_F = 10\text{ mA}, I_R = 10\text{ mA}$, measured at $I_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}	-	-	6	ns

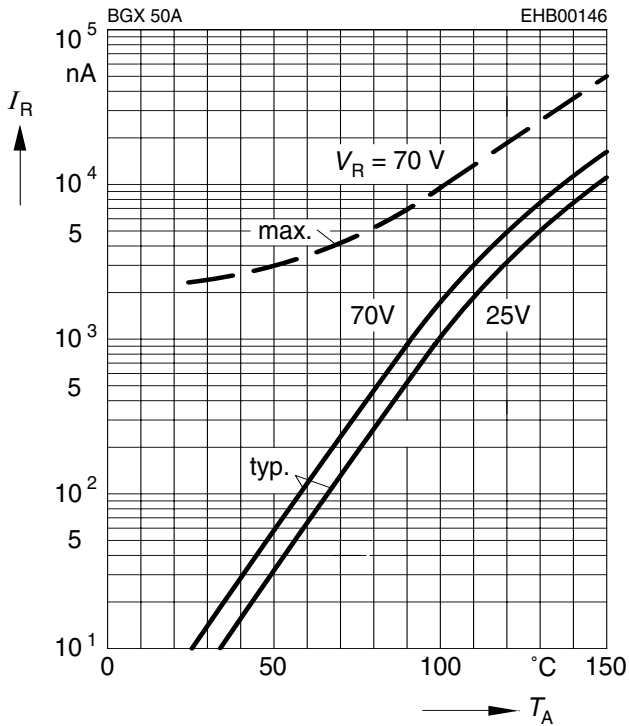
Test circuit for reverse recovery time


Pulse generator: $t_p = 100\text{ ns}$, $D = 0.05$, $t_r = 0.6\text{ ns}$,
 $R_i = 50\text{ }\Omega$

Oscilloscope: $R = 50\text{ }\Omega$, $t_r = 0.35\text{ ns}$, $C \leq 1\text{ pF}$

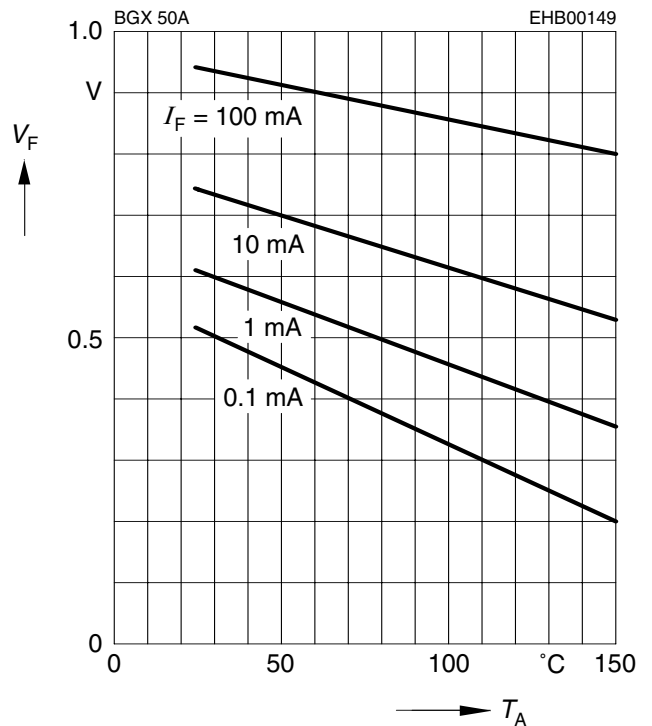
Reverse current $I_R = f(T_A)$

$V_R = \text{Parameter}$



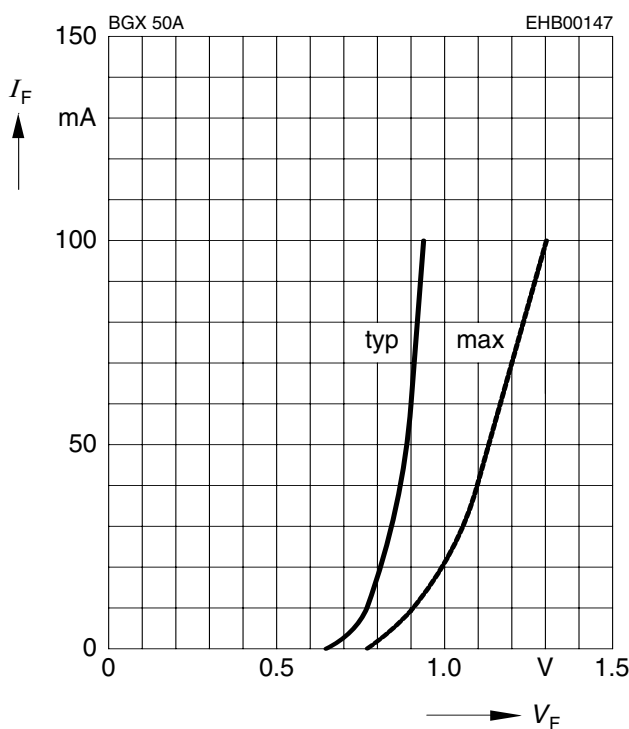
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



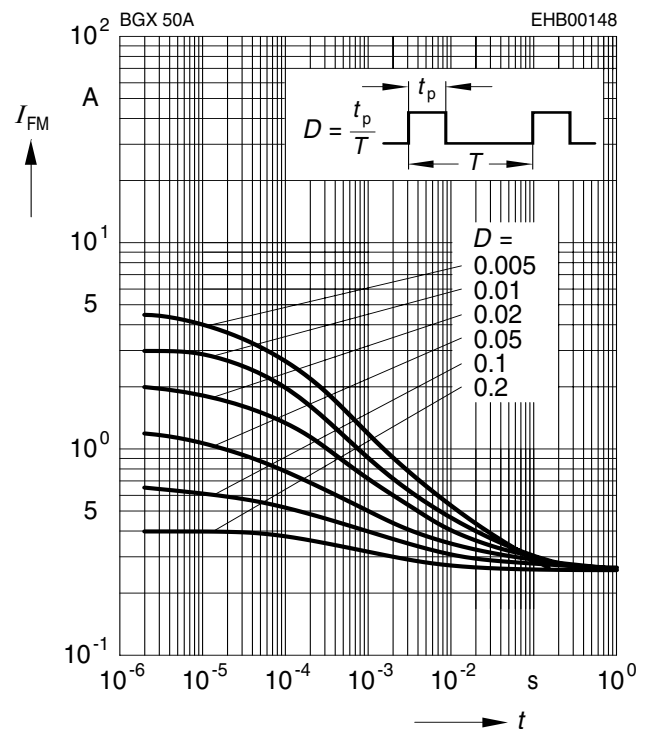
Forward current $I_F = f(V_F)$

$T_A = 25^\circ\text{C}$



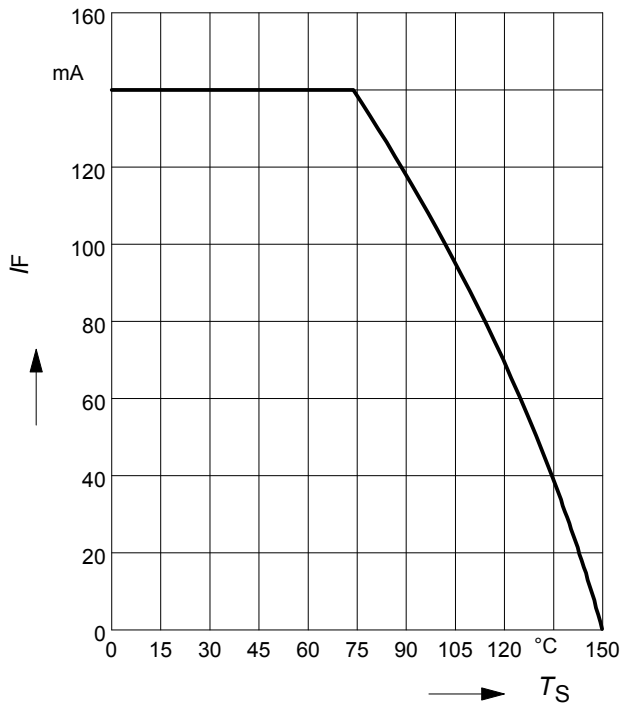
Peak forward current $I_{FM} = f(t_p)$

$T_A = 25^\circ\text{C}$

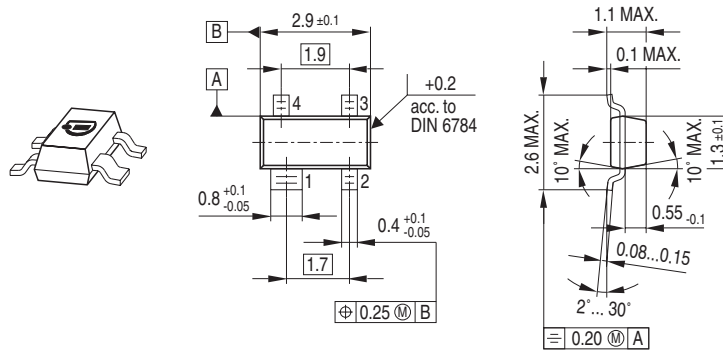


Forward current $I_F = f(T_S)$

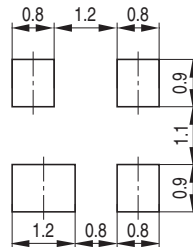
BGX50A



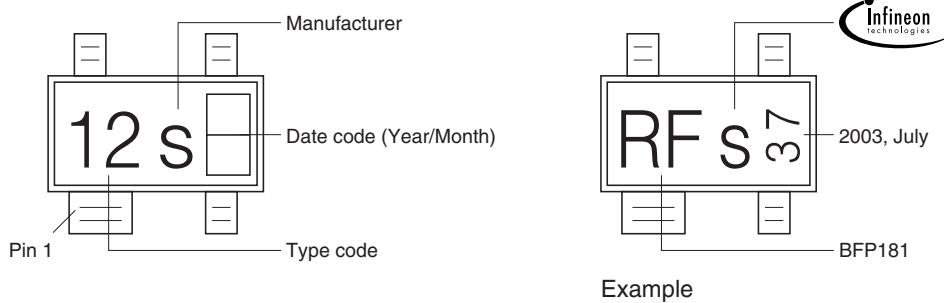
Package Outline



Foot Print

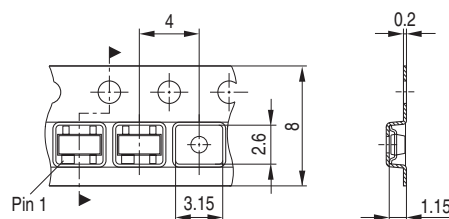


Marking Layout



Packing

Code E6327: Reel $\varnothing 180$ mm = 3.000 Pieces/Reel
 Code E6433: Reel $\varnothing 330$ mm = 10.000 Pieces/Reel



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