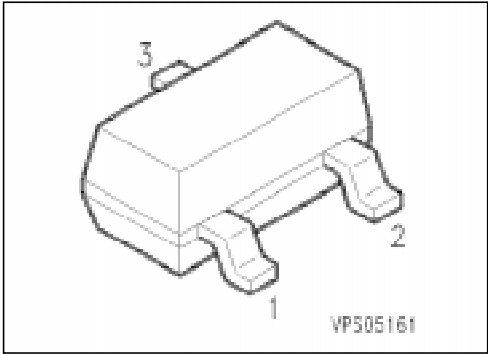
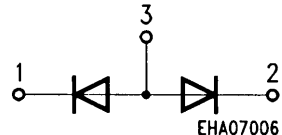


Silicon Switching Diode Array

SMBD 2835
SMBD 2836

- For high-speed switching applications
- Common anode



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package ¹⁾
SMBD 2835 SMBD 2836	sA3 sA2	Q68000-A8547 Q68000-A8436		SOT-23

Maximum Ratings

Parameter	Symbol	Values		Unit
		SMBD 2835	SMBD 2836	
Reverse voltage	V_R	30	50	V
Peak reverse voltage	V_{RM}	35	75	
Forward current	I_F	200		mA
Surge forward current, $t = 1 \mu s$	I_{FS}	4.5		A
Total power dissipation, $T_s = 31 \text{ }^{\circ}C$	P_{tot}	330		mW
Junction temperature	T_j	150		$^{\circ}C$
Storage temperature range	T_{stg}	− 65 ... + 150		

Thermal Resistance

Junction - ambient ²⁾	$R_{th JA}$	≤ 500	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 $T_A = 25^\circ\text{C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

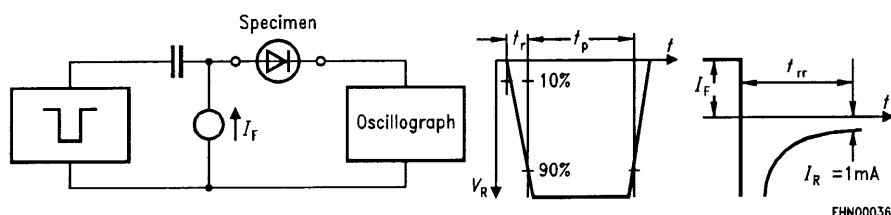
DC characteristics

Breakdown voltage $I_{(BR)} = 100\ \mu\text{A}$	SMDB 2835 SMDB 2836	$V_{(BR)}$	35 75	— —	— —	V
Forward voltage $I_F = 10\ \text{mA}$ $I_F = 50\ \text{mA}$ $I_F = 100\ \text{mA}$		V_F	— — —	— — —	855 1000 1200	mV
Reverse current $V_R = 30\ \text{V}$ $V_R = 50\ \text{V}$	SMDB 2835 SMDB 2836	I_R	— —	— —	100 100	nA

AC characteristics

Diode capacitance $V_R = 0$, $f = 1\ \text{MHz}$		C_D	—	—	4	pF
Reverse recovery time $I_F = 10\ \text{mA}$, $I_R = 10\ \text{mA}$, $R_L = 100\ \Omega$ measured at $I_R = 1\ \text{mA}$		t_{rr}	—	—	6	ns

Test circuit for reverse recovery time

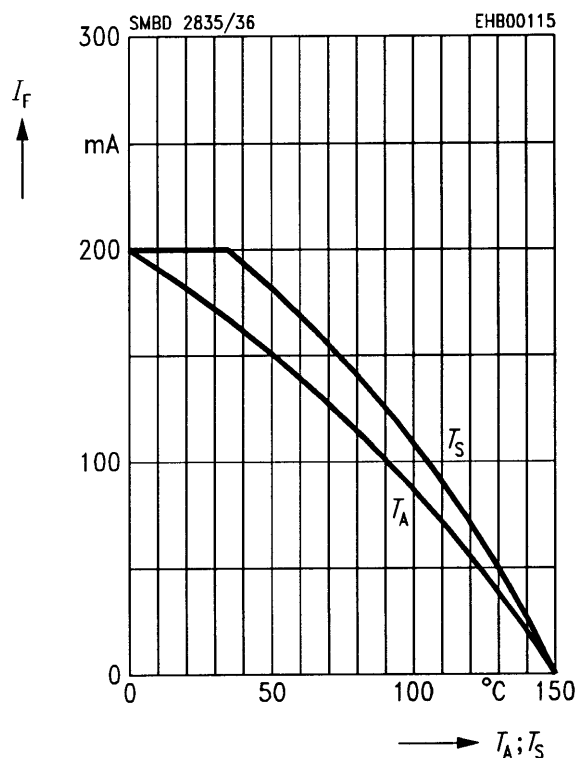


Pulse generator: $t_p = 100\ \text{ns}$, $D = 0.05$
 $t_r = 0.6\ \text{ns}$, $R_j = 50\ \Omega$

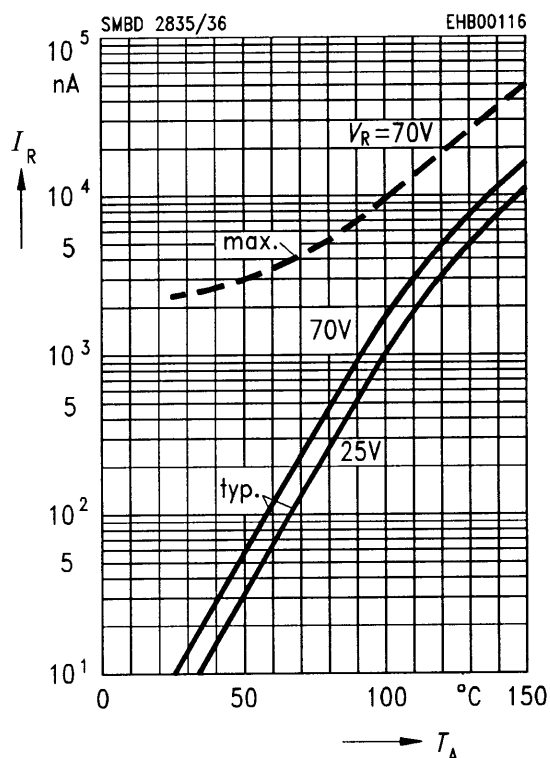
Oscilloscope: $R = 50\ \Omega$
 $t_r = 0.35\ \text{ns}$
 $C \leq 1\ \text{pF}$

Forward current $I_F = f(T_A^*; T_S)$

* Package mounted on epoxy

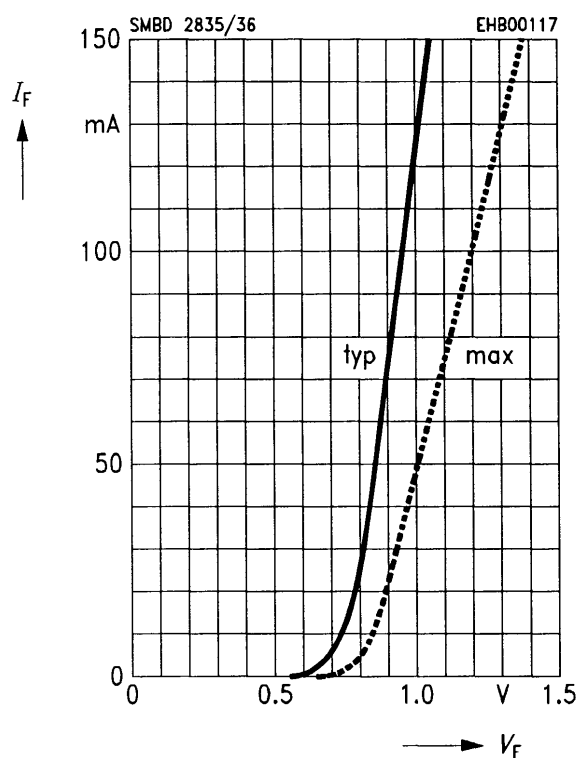


Reverse current $I_R = f(T_A)$



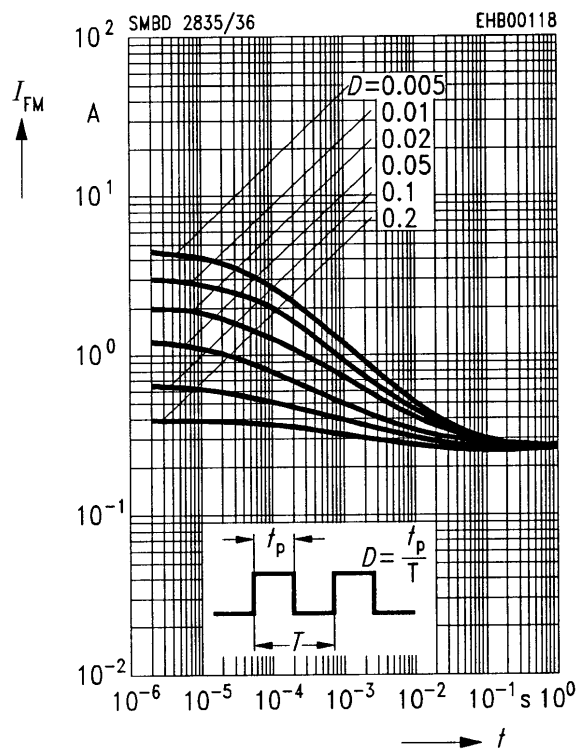
Forward current $I_F = f(V_F)$

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



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

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



Forward voltage $V_F = f(T_A)$

