

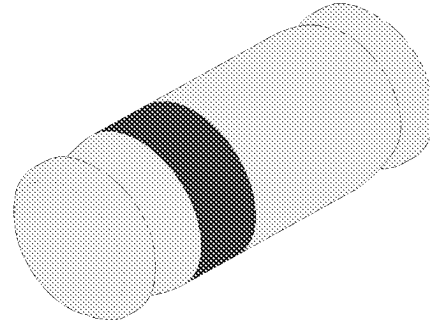
Silicon Planar Diodes

Features

- Very low reverse current

Applications

Protection circuits, time delay circuits, peak follower circuits, logarithmic amplifiers



94 9371

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage		BAQ33	V_R	30	V
		BAQ34	V_R	60	V
		BAQ35	V_R	125	V
Peak forward surge current	$t_p = 1\mu\text{s}$		I_{FSM}	2	A
Forward current			I_F	200	mA
Junction temperature			T_j	200	$^{\circ}\text{C}$
Storage temperature range			T_{stg}	-65...+200	$^{\circ}\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mmx50mmx1.6mm	R_{thJA}	500	K/W

Electrical Characteristics

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

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 100\text{mA}$		V_F			1	V
Reverse current	$E \leq 300\text{lx}$, V_R		I_R		1	3	nA
	$E \leq 300\text{lx}$, V_R , $T_j = 125^{\circ}\text{C}$		I_R			0.5	μA
	$E \leq 300\text{lx}$, $V_R = 15\text{V}$	BAQ33	I_R		0.5	1	nA
	$E \leq 300\text{lx}$, $V_R = 30\text{V}$	BAQ34	I_R		0.5	1	nA
	$E \leq 300\text{lx}$, $V_R = 60\text{V}$	BAQ35	I_R		0.5	1	nA
Breakdown voltage	$I_R = 5\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ms}$	BAQ33	$V_{(BR)}$	40			V
		BAQ34	$V_{(BR)}$	70			V
		BAQ35	$V_{(BR)}$	140			V
Diode capacitance	$V_R = 0$, $f = 1\text{MHz}$		C_D			3	pF

Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)

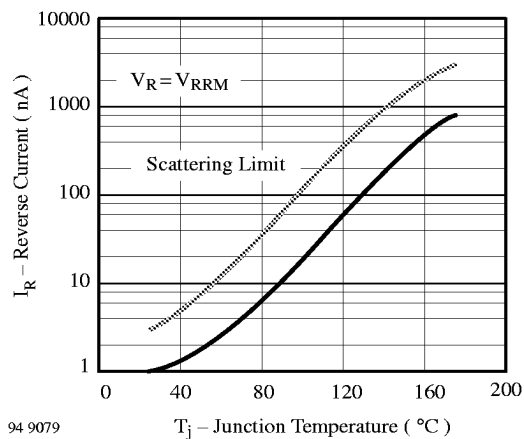


Figure 1. Reverse Current vs. Junction Temperature

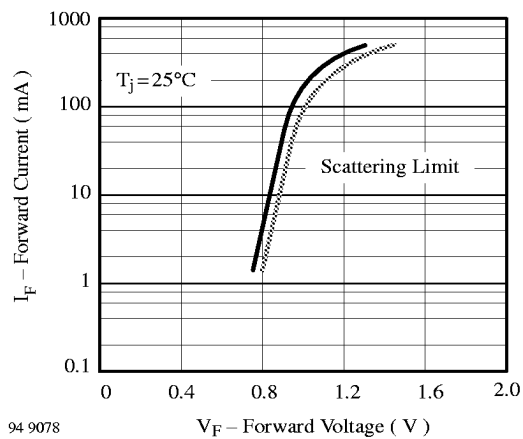
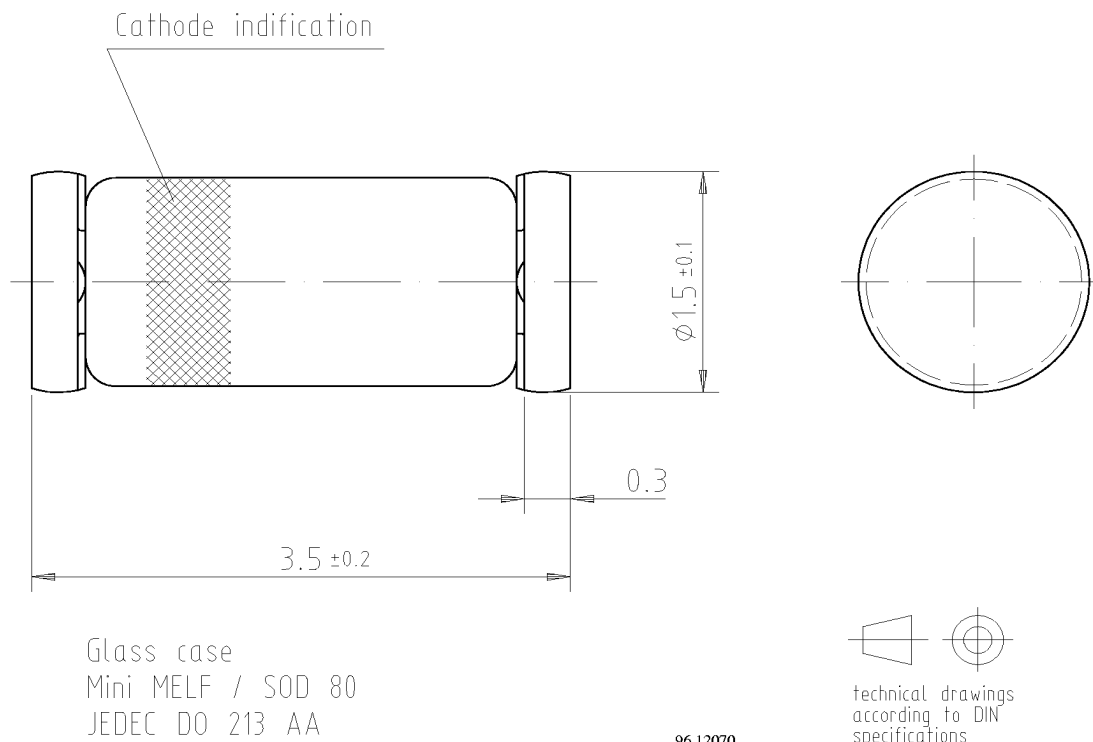


Figure 2. Forward Current vs. Forward Voltage

Dimensions in mm



96 12070