

High-speed diode

BAS55

■ Features

- Small plastic SMD package
- High switching speed: max. 6ns
- Continuous reverse voltage: max. 60 V
- Repetitive peak forward current: max. 600 mA.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Max	Unit
Repetitive peak reverse voltage	V_{RRM}			60	V
Continuous reverse voltage	V_R			60	V
Continuous forward current	I_F	Note 1		250	mA
Repetitive peak forward current	I_{FRM}			600	mA
Non-repetitive peak forward current	I_{FSM}	square wave; $T_j = 25^\circ\text{C}$ prior to surge; $t = 1\ \mu\text{s}$ $t = 100\ \mu\text{s}$ $t = 100\ \text{ms}$		9 3 1.7	A
Total power dissipation	P_{tot}	$T_{mab} = 25^\circ\text{C}$; Note 1		250	mW
Storage temperature	T_{stg}		-65	+150	$^\circ\text{C}$
Junction temperature	T_j			150	$^\circ\text{C}$

Note

1. Device mounted on an FR4 printed-circuit board.

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■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Max	Unit
Forward voltage	V_F	$I_F = 200\text{ mA}$; DC value; Note 1	1.0	V
Reverse current	I_R	$V_R = 60\text{ V}$;	100	nA
		$V_R = 60\text{ V}$; $T_j = 150^\circ\text{C}$	100	μA
Diode capacitance	C_d	$f = 1\text{ MHz}$; $V_R = 0$;	2.5	pF
Reverse recovery time	t_{rr}	when switched from $I_F = 400\text{ mA}$ to $I_R = 400\text{ mA}$; $R_L = 100\ \Omega$;measured at $I_R = 40\text{ mA}$;	6	ns
Forward recovery voltage	V_{fr}	when switched to $I_F = 400\text{ mA}$; $t_r = 30\text{ ns}$;	2	V
		when switched to $I_F = 400\text{ mA}$; $t_r = 100\text{ ns}$;	1.5	

Note

1. $T_{amb} = 25^\circ\text{C}$; device has reached the thermal equilibrium when mounted on an FR4 printed-circuit board.

■ Marking

Marking	L5p
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