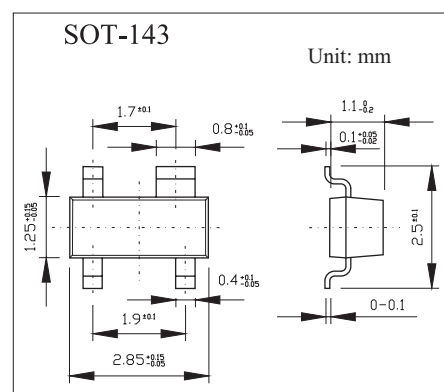


High-Speed Double Diode

BAS56

■ Features

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

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

Parameter	Symbol	Test Condition	Min	Max	Unit
repetitive peak reverse voltage	V_{RRM}			60	V
		series connection		120	
continuous reverse voltage	V_R			60	V
		series connection		120	
continuous forward current	I_F	single diode loaded;		200	mA
		double diode loaded;		150	
repetitive peak forward current	I_{FRM}	single diode loaded		600	mA
		double diode loaded		430	
non-repetitive peak forward current	I_{FSM}	square wave; $T_j = 25^\circ\text{C}$ prior to surge			A
		$t = 1\ \mu\text{s}$		9	
		$t = 100\ \mu\text{s}$		3	
		$t = 10\ \text{ms}$		1.7	
total power dissipation	P_{tot}	$T_{amb} = 25^\circ\text{C}$		250	mW
storage temperature	T_{stg}		-65	+150	$^\circ\text{C}$
junction temperature	T_j			150	$^\circ\text{C}$
thermal resistance from junction to tie-point	$R_{th\ j-tp}$			360	K/W
thermal resistance from junction to ambient	$R_{th\ j-a}$			500	K/W

BAS56■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Condition	Min	Max	Unit
forward voltage	V_F	$I_F = 200\text{ mA}$; DC value;		1.0	mV
reverse current	I_R	$V_R = 60\text{ V}$		100	nA
		$V_R = 60\text{ V}; T_j = 150^\circ\text{C}$		100	$\mu\text{ A}$
reverse current	I_R	series connection			
		$V_R = 120\text{ V}$		100	nA
		$V_R = 120\text{ V}; T_j = 150^\circ\text{C}$		100	$\mu\text{ A}$
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 from $I_F = 400\text{ mA}; t_r = 30\text{ ns}$;		2.0	V
		when switched from $I_F = 400\text{ mA}; t_r = 100\text{ ns}$;		1.5	V

■ Marking

Marking	L51
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