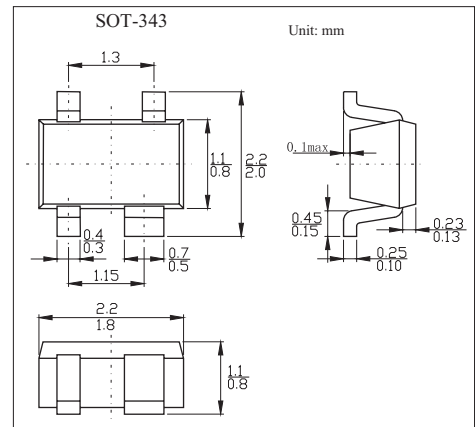


BAS40-07W

■ Features

- General-purpose diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	40	V
Forward current	I_F	120	mA
Surge forward current, $t \leq 10$ ms	I_{FRM}	200	mA
Total power dissipation, $T_s \leq 81^\circ\text{C}$	P_{tot}	250	A
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 to +150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction - ambient ¹⁾	R_{thJA}	≤ 345	K/W
Junction - soldering point	R_{thJS}	≤ 275	K/W

Note

1. Package mounted on epoxy pcb 40mm × 40mm × 1.5mm / 6cm² Cu

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Breakdown voltage	$V_{(BR)}$	$I_{(BR)} = 10 \mu\text{A}$	40			mV
Reverse current	I_R	$V_R = 30\text{V}$			1	μA
		$V_R = 40\text{V}$			10	
Forward voltage	V_F	$I_F = 1\text{mA}$	250	310	380	mV
		$I_F = 10\text{mA}$	350	450	500	
		$I_F = 40\text{mA}$	600	720	1000	
Diode capacitance	C_T	$f = 1\text{MHz}; V_R = 0$		4	5	pF
Charge carrier life time	τ	$I_F = 25\text{mA}$			100	ps
Differential forward resistance	R_F	$I_F = 10\text{mA}, f = 10\text{KHz}$		10		Ω

■ Marking

Marking	47s
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