

BAT30S

SMALL SIGNAL SCHOTTKY DIODES

VOLTAGE 30 Volt **CURRENT** 300 mA

SOT-23

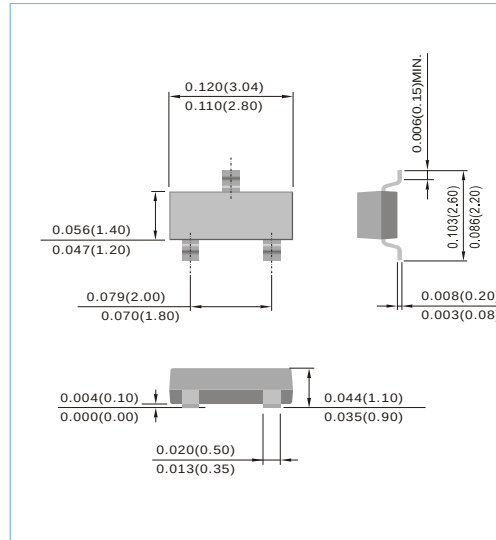
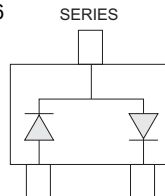
Unit : inch(mm)

FEATURES

- Very low conduction losses
- Negligible switching losses
- Low forward and reverse recovery times
- Extremely Fast Switching
- Surface mount device
- Low capacitance diode
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0003 ounce, 0.0084 gram
- Marking: L33



ABSOLUTE RATINGS@ T_J=25°C, UNLESS OTHERWISE SPECIFIED

PARAMETER		SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V _{RRM}	30	V
Continuous forward current		I _O	300	mA
Surge non repetitive forward current	tp=8.3ms Sinusoidal	I _{FSM}	1	A
Storage temperature range		T _{STG}	-65 to + 150	°C
Operating junction temperature (Note 1)		T _J	150	°C
Soldering temperature		T _L	260	°C

1. Pulse test : tp=5ms, δ < 2%

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Junction to ambient (Note 2)	R _{θJA}	500	°C/W

2. On epoxy printed circuit board with recommended pad layout

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ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
Reverse leakage current (Note 3)	I_R	$T_J=25^{\circ}\text{C}$	$V_R=5\text{V}$	-	-	0.5	μA
			$V_R=10\text{V}$	-	-	1	
			$V_R=25\text{V}$	-	0.65	3	
			$V_R=30\text{V}$	-	-	5	
		$T_J=70^{\circ}\text{C}$	$V_R=10\text{V}$	-	7	20	
		$T_J=85^{\circ}\text{C}$		-	18	50	
Forward voltage drop (Note 4)	V_F	$T_J=25^{\circ}\text{C}$	$I_F=0.1\text{mA}$	-	-	240	mV
			$I_F=1\text{mA}$	-	-	300	
			$I_F=10\text{mA}$	-	-	375	
			$I_F=30\text{mA}$	-	-	430	
			$I_F=100\text{mA}$	-	-	500	
			$I_F=200\text{mA}$	-	-	580	
			$I_F=300\text{mA}$	-	530	-	

3. Pulse test : $t_p=5\text{ms}$, $\delta < 2\%$

4. Pulse test : $t_p=380\mu\text{s}$, $\delta < 2\%$

DYNAMIC CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Total Capacitance	C_T	$V_R=0\text{V}, F=1\text{MHz}$	-	-	65	pF
		$V_R=1\text{V}, F=1\text{MHz}$	-	-	40	
		$V_R=10\text{V}, F=1\text{MHz}$	-	-	17	

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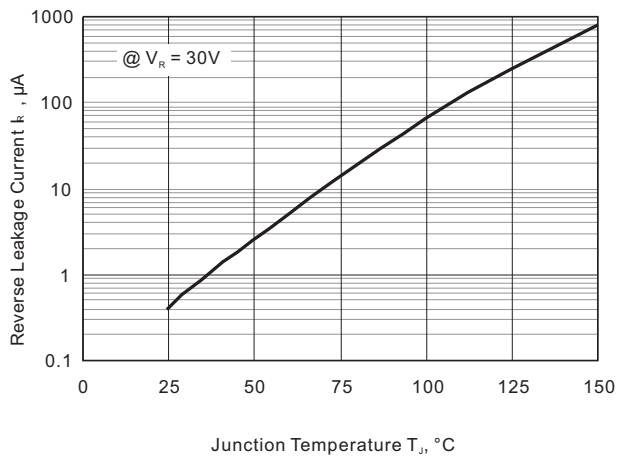


FIG. 1-Reverse Leakage Current vs. Junction Temperature

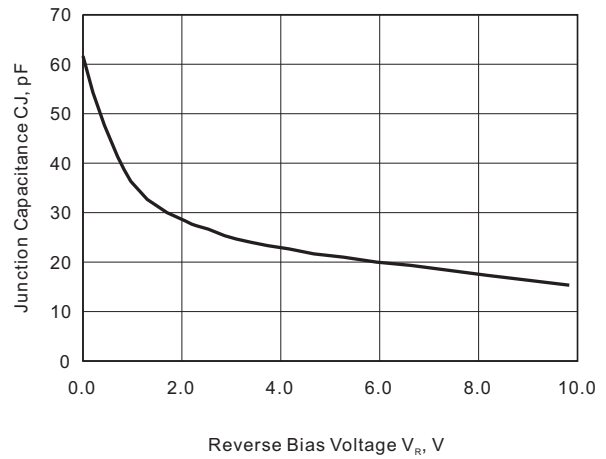


FIG. 2-Typical Junction Capacitance under Bias

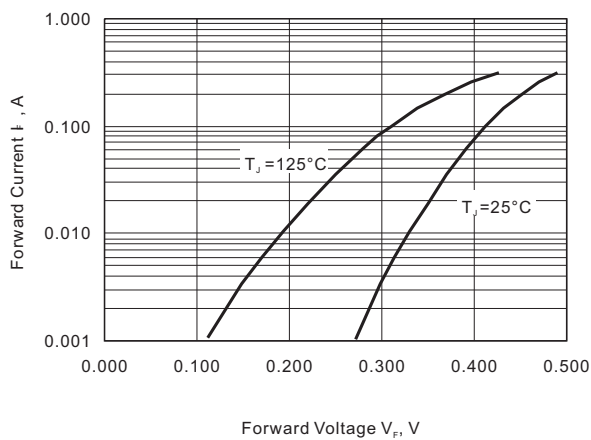


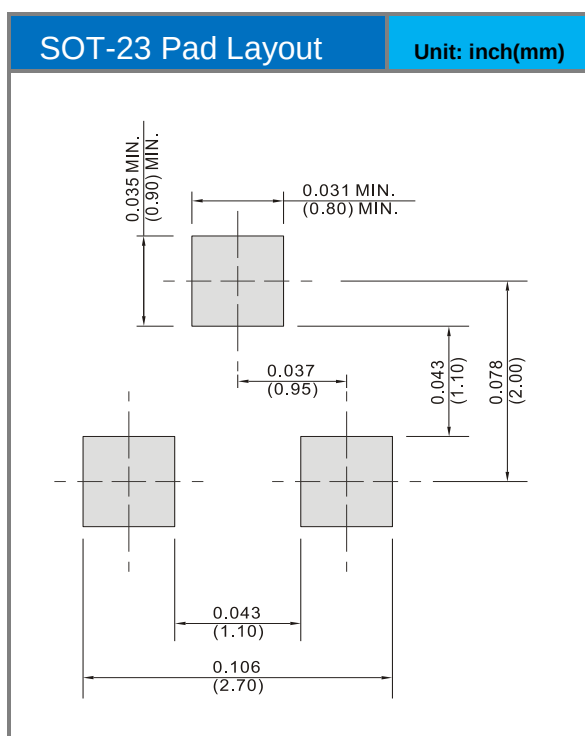
FIG. 3 Typical Forward Voltage characteristic

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAT30S	SOT-23	3K pcs / 7" reel	L33
BAT30S	SOT-23	12K pcs / 13" reel	L33

Mounting Pad Layout



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