BAT30S

SMALL SIGNAL SCHOTTKY DIODES

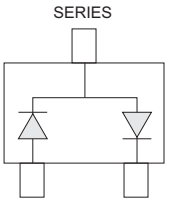
VOLTAGE 30 Volts **CURRENT** 300 mA

FEATURES

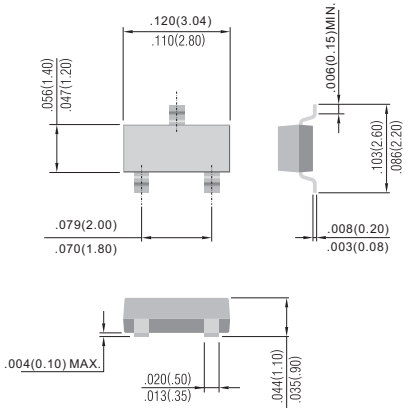
- Very low conduction losses
- Negligible switching losses
- Low forward and reverse recovery times
- Extremely Fast Switching
- Surface mount device
- Low capacitance diode
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

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



SOT-23 Unit: inch (mm)



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

PARAMETER		SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRm}	30	V
Continuous forward current		IO	300	m A
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)	$R_{\theta JA}$	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°C	V_R=5V V_R=10V V_R=25V V_R=30V	- - - -	- - 0.65 -	0.5 1 3 5	μA
		T_J=70°C	V_R=10V	-	7	20	
		T_J=85°C		-	18	50	
Forward voltage drop (Note 4)	V_F	T_J=25°C	I_F=0.1mA	-	-	240	mV
			I_F=1mA	-	-	300	
			I_F=10mA	-	-	375	
			I_F=30mA	-	-	430	
			I_F=100mA	-	-	500	
			I_F=200mA	-	-	580	
			I_F=300mA	-	530	-	

3. Pulse test : tp=5ms, δ < 2%

4. Pulse test : tp=380μs, δ < 2%

DYNAMIC CHARACTERISTICS

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

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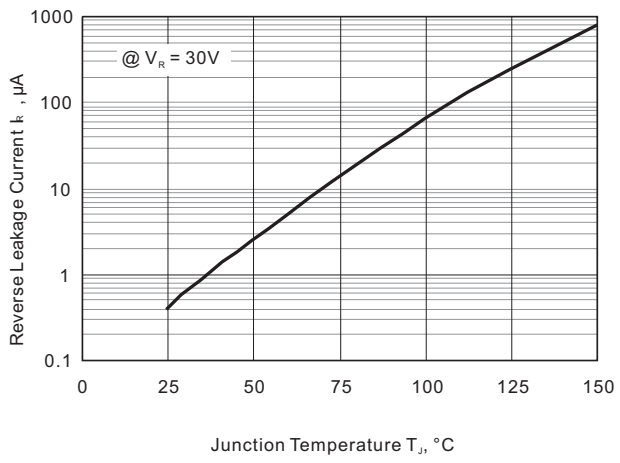

FIG. 1-Reverse Leakage Current vs. Junction Temperature

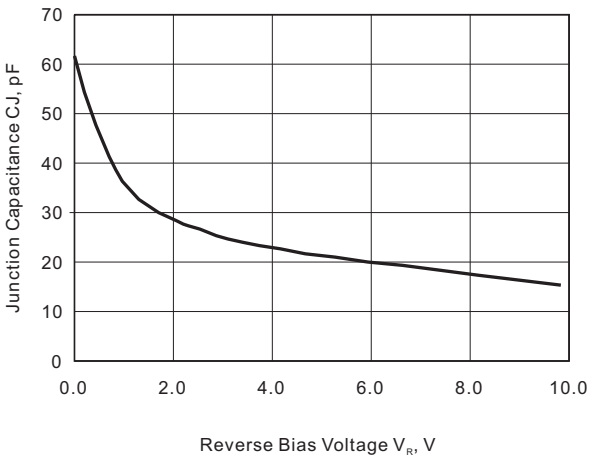

FIG. 2-Typical Junction Capacitance under Bias

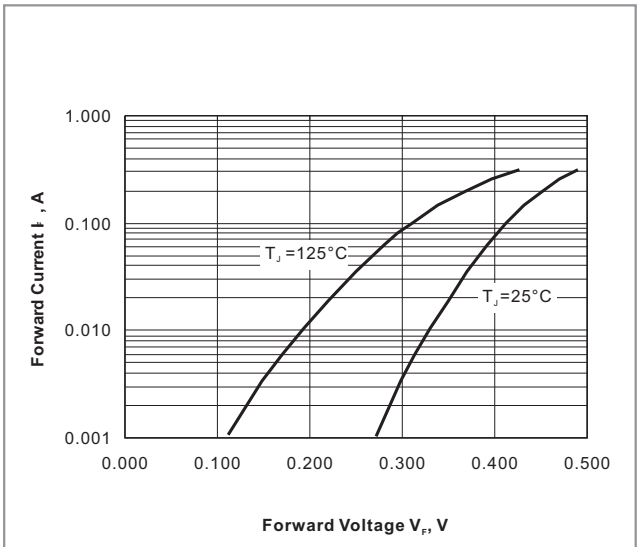

FIG. 3 Typical Forward Voltage characteristic

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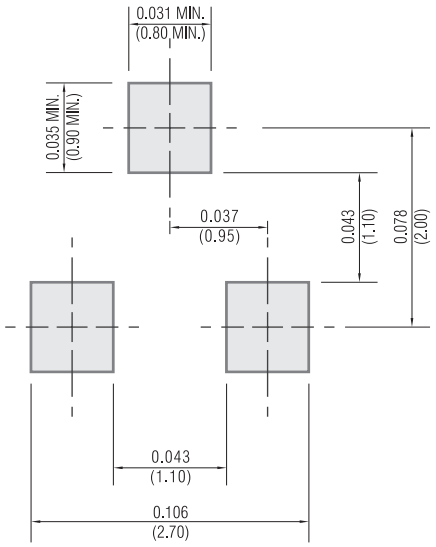
MOUNTING PAD LAYOUT

SOT-23 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7” plastic Reel

LEGAL STATEMENT