200mA, 30V Schottky Barrier Diode

FEATURES

- Low forward voltage drop
- Fast switching time
- Surface mounted device
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Portable consumer electronic devices

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
$I_{F(AV)}$	200	mA
V_{RRM}	30	V
I_{FSM}	4	A
V_F at I_F=200mA	1	V
T_J Max.	125	°C
Package	SOD-523F	
Configuration	Single die	

Pb-Free RoHS COMPLIANT

MECHANICAL DATA

- Case: SOD-523F
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 1.3mg (approximately)

Not Recommended

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**BAT43X**	**UNIT**
Marking code on the device		S8	
Repetitive peak reverse voltage	V_{RRM}	30	V
Maximum dc blocking voltage	V_R	30	V
Forward current	I_F	200	mA
Peak forward surge current @t<10ms	I_{FSM}	4	A
Repetitive peak forward current @t<1s	I_{FRM}	500	mA
Power dissipation	P_D	150	mW
Thermal resistance from Junction to Ambient	R_{THJA}	500	°C/W
Junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +150	°C

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**MIN**	**MAX**	**UNIT**
Forward voltage per diode (1)	I_F = 2mA	V_F	0.26	0.33	V
	I_F = 15mA		-	0.45	
	I_F = 200mA		-	1.00	
Reverse voltage	I_R=10μA	V_R	30	-	V
Reverse current (2)	V_R=25V	I_R	-	0.5	μA
Capacitance between rerminals	f=1 MHz, V_R=1V	C_T	-	10	pF
Reverse recovery time	I_F=I_R=10mA, R_L=100Ω, I_{RR}=0.1xI_R	t_{rr}	-	5	ns

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION		
ORDERING CODE (Note1)	**PACKAGE**	**PACKING**
BAT43X RS	SOD-523F	8K / 7" Reel
BAT43X RSG	SOD-523F	8K / 7" Reel
BAT43X-M0 RS	SOD-523F	8K / 7" Reel
BAT43X-M0 RSG	SOD-523F	8K / 7" Reel

Note:

1. “G” means green compound (halogen free)

Not Recommended

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

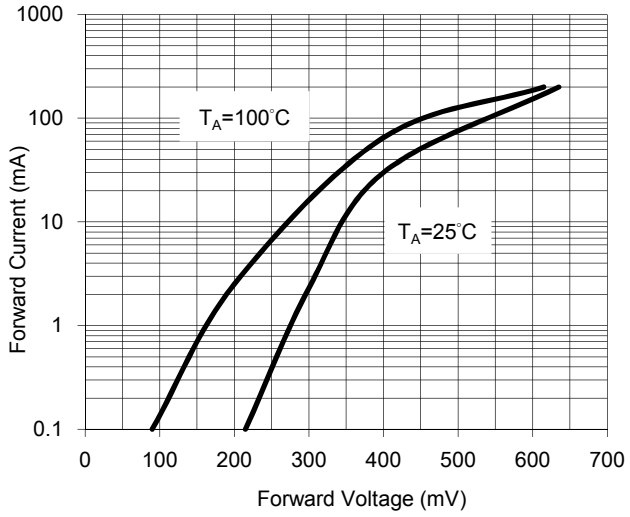


Fig.2 Typical Reverse Characteristics

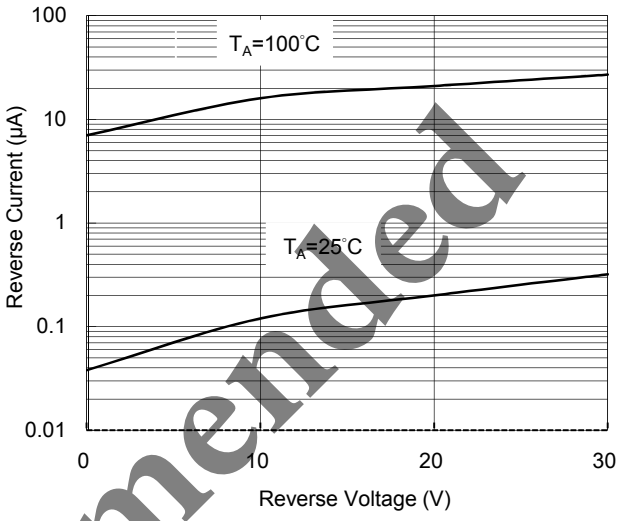


Fig.3 Power Derating Curve

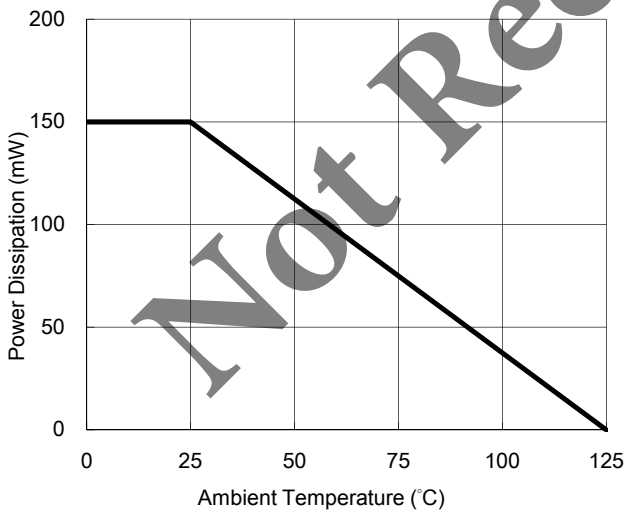
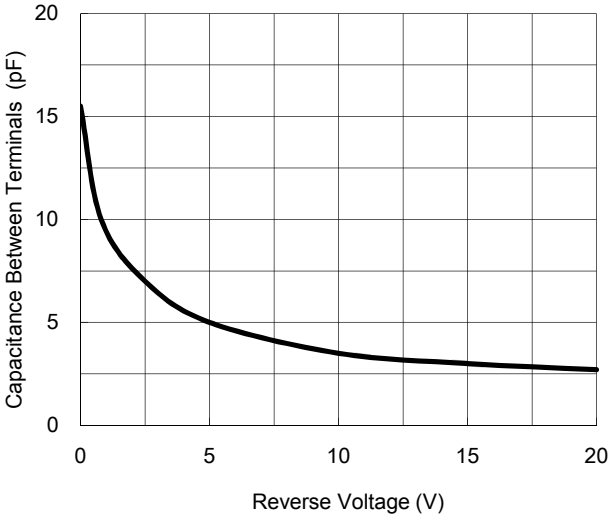


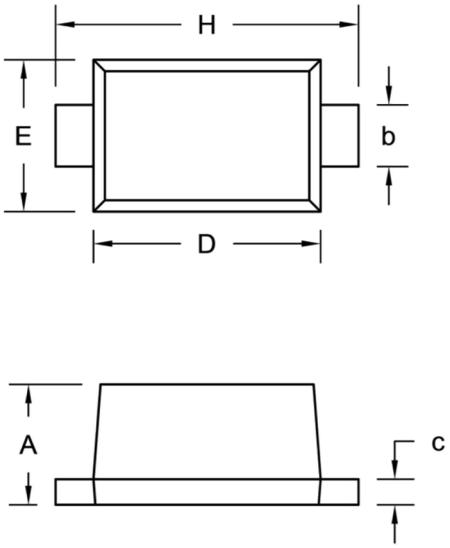
Fig.4 Typical Capacitance Characteristics



Not Recommended

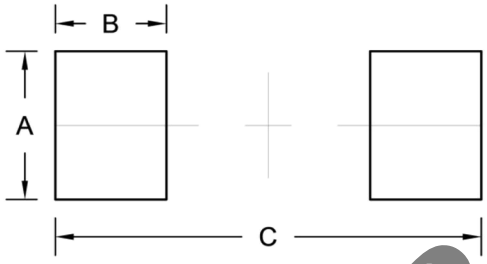
PACKAGE OUTLINE DIMENSION

SOD-523F



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	0.50	0.77	0.020	0.030
b	0.25	0.40	0.010	0.016
c	0.07	0.20	0.003	0.008
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H	1.50	1.70	0.059	0.067

SUGGEST PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	0.80	0.031
B	0.60	0.024
C	2.30	0.091

Not Recommended

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