

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	

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)



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ 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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 2\text{mA}$	V_F	0.26	0.33	V
	$I_F = 15\text{mA}$		-	0.45	
	$I_F = 200\text{mA}$		-	1.00	
Reverse voltage	$I_R = 10\mu\text{A}$	V_R	30	-	V
Reverse current ⁽²⁾	$V_R = 25\text{V}$	I_R	-	0.5	μA
Capacitance between terminals	$f = 1\text{ MHz}, V_R = 1\text{V}$	C_T	-	10	pF
Reverse recovery time	$I_F = I_R = 10\text{mA}, R_L = 100\Omega,$ $I_{RR} = 0.1 I_R$	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)

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Typical Forward Characteristics

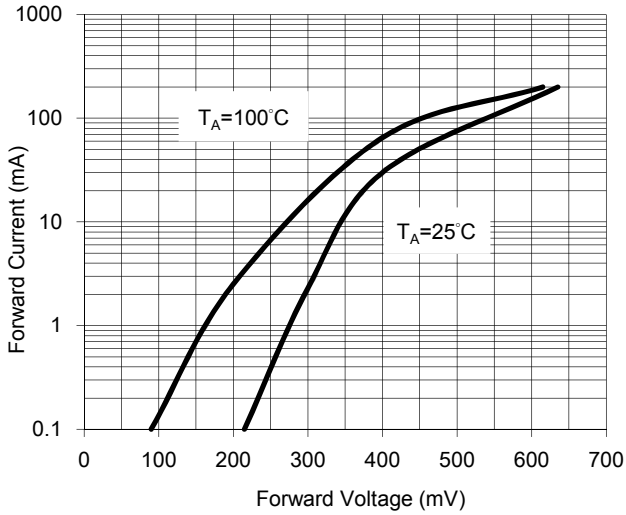


Fig.2 Typical Reverse Characteristics

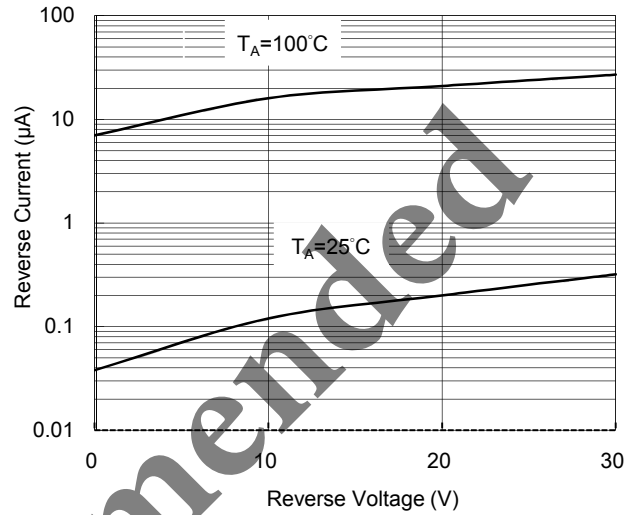


Fig.3 Power Derating Curve

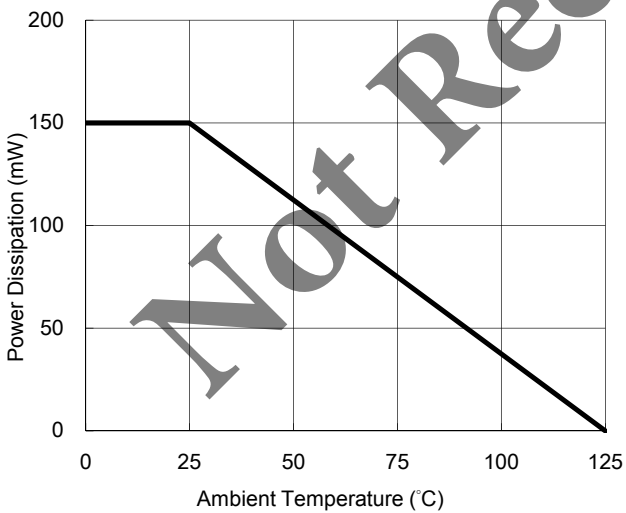
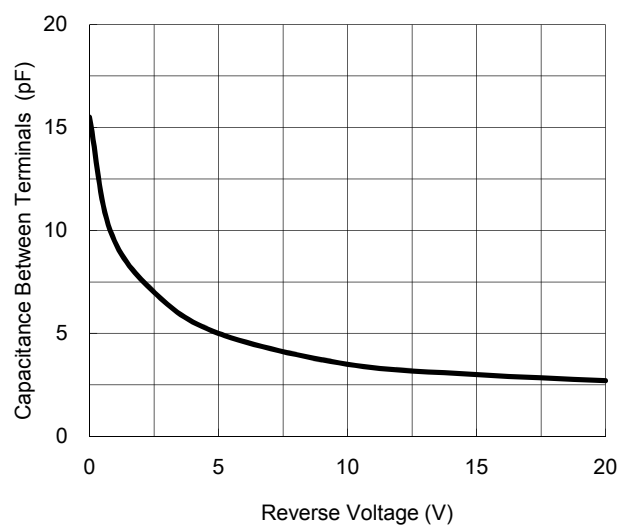
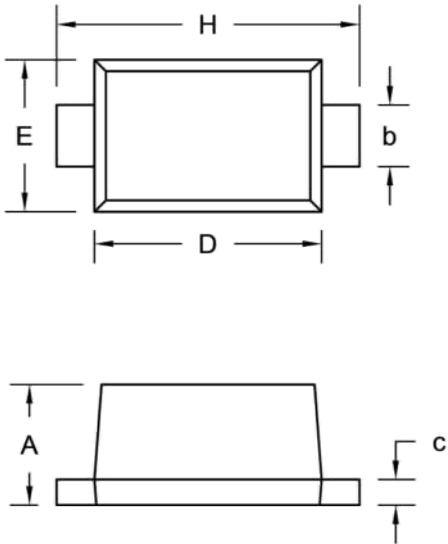


Fig.4 Typical Capacitance Characteristics



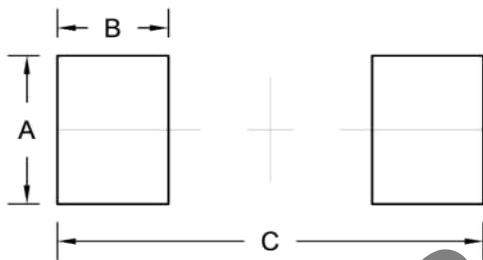
PACKAGE OUTLINE DIMENSION

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

Not Recommended

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