

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	R0605- BAT54SS200S030	
DATE	June 05, 2024	
REVISION	A2	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	<p>SMD Schottky Diodes, Plastic- Encapsulate Diodes, 3 pads, Case SOT-23, BAT54 series, KL4 Type Pin Connection,</p> <p>Peak Repetitive Reverse Voltage 30V Max.</p> <p>Forward Continuous Current 0.2A Max.</p> <p>Operating Temp. Range -55°C ~+125°C,</p> <p>Package in Tape/Reel, 3000pcs/Reel</p> <p>RoHS III/REACH Compliant and Halogen Free (HF)</p>	
CUSTOMER		
CUSTOMER PART NO.		
CROSS REF. PART NO.		
ORIGINAL MFG/PART NO.	MDD Diodes/BAT54S	
PART CODE	BAT54SS200S030	

VENDOR APPROVE

Issued/Checked/Approved



DATE: June 05, 2024

CUSTOMER APPROVE

DATE:

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23

MAIN FEATURE

- Low Forward Voltage Drop
- Extremely Fast Switching Speed
- Fast Switching Time
- Surface Mount Package Ideally Suited For Automatic Insertion
- Cross Competitors Parts and More.
- REACH/RoHS III Complaint and Halogen Free



APPLICATION

- For General Purpose Switching Applications

ELECTRICAL CHARACTERISTICS

- See Page 4~ Page 6

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate Pat Code When You Order Or RFQ For Custom Specification

PART CODE GUIDE

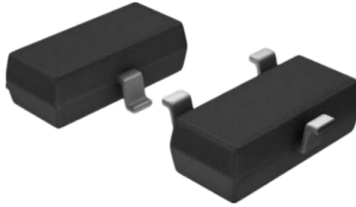
RFQ
Request For Quotation

CODE	NAME	KEY SPECIFICATION OPTION
BAT54	Product Series Code	SMD Schottky Diodes, Forward Current 0.2A. Reverse Voltage 30V
C	Marking Code	0: KL1 Type Pin Connection; A: KL2 Type Pin Connection; C: KL3 Type Pin Connection; S: KL4 Type Pin Connection
S2	Case Code	S2: Case SOT-23
00S	Internal Control Code	Custom letter A~Z, a-z or Digits (0-9)
030	DC Blocking Voltage Code	020: 20V; 030: 30V; 040: 40V;

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23

DIMENSION (Unit: Inch/mm)

Image for reference

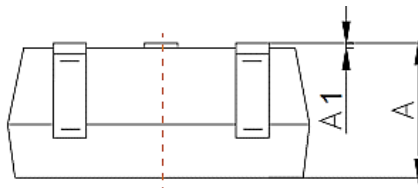
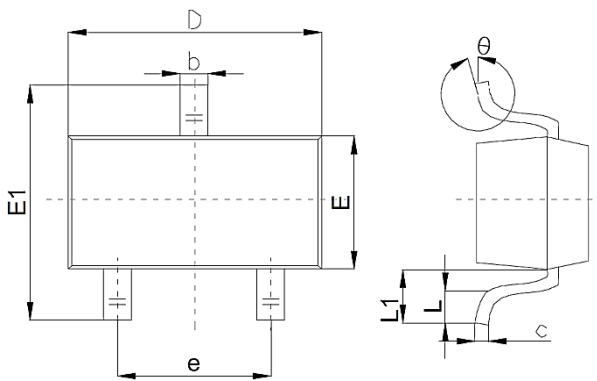


Marking:

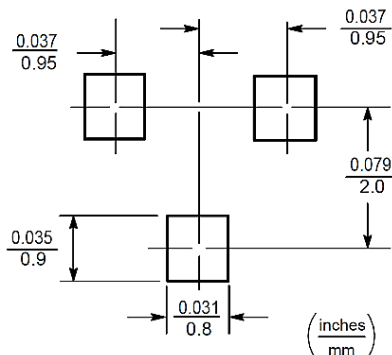
See Page -4 Marking List

For different Part code

SOT-23



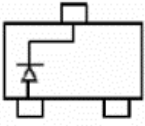
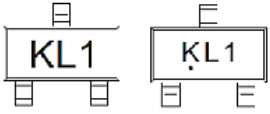
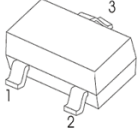
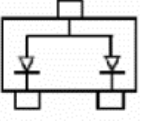
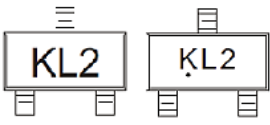
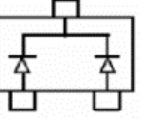
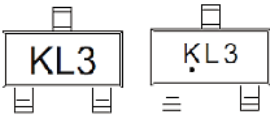
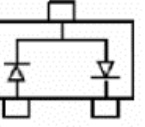

Recommend Pad Layout



Symbol	Value (mm)		
	Min.	Typ.	Max.
A	0.9		1.4
A1			0.10
b	0.30		0.50
c	0.08		0.20
D	2.80	2.90	3.10
E	1.20		1.60
E1	2.25		2.80
e	1.8	1.9	2.00
L	0.10		0.50
L1	0.40		
θ	0°		10°

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23

PIN CONNECTION AND MARKING LIST – For Different Part Code

PART CODE	PIN CONNECTION TYPE CODE	PIN CONNECTION	MARKING	PIN FUNCTION
BAT540S200S030	KL1			 1. Base 2. Emitter 3. Collector
BAT54AS200S030	KL2			
BAT54CS200S030	KL3			
BAT54SS200S030	KL4			

Note:

Solid Dot = Green Molding Compound Device, If None, The Normal Device

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23
MECHANICAL DATA

CASE	TERMINALS	POLARITY	MOUNTING POSITION	WEIGHT PER PIECE
JEDEC SOT-23 Molded Plastic Body	Solder Plated, Solderable Per MIL-STD-750, Method 2026	Polarity Symbol Marking On Case	Any	0.00019 Ounce, 0.0055 grams

MAXIMUM RATINGS - @ 25 °C

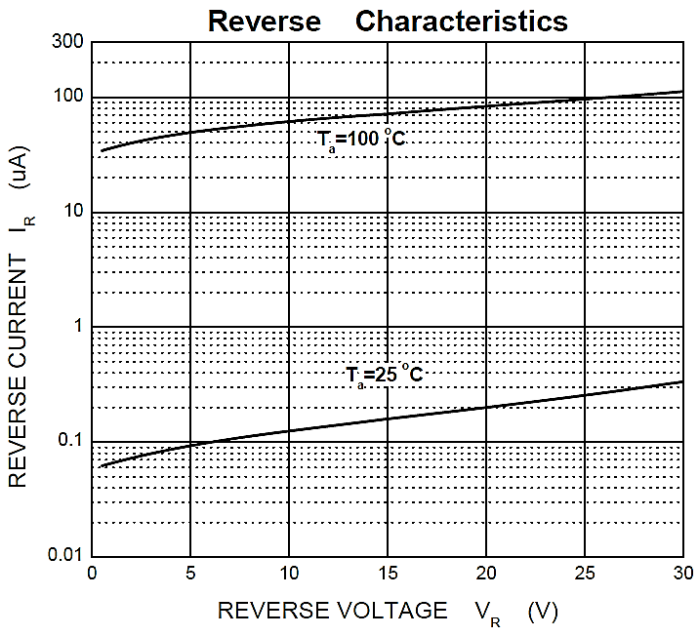
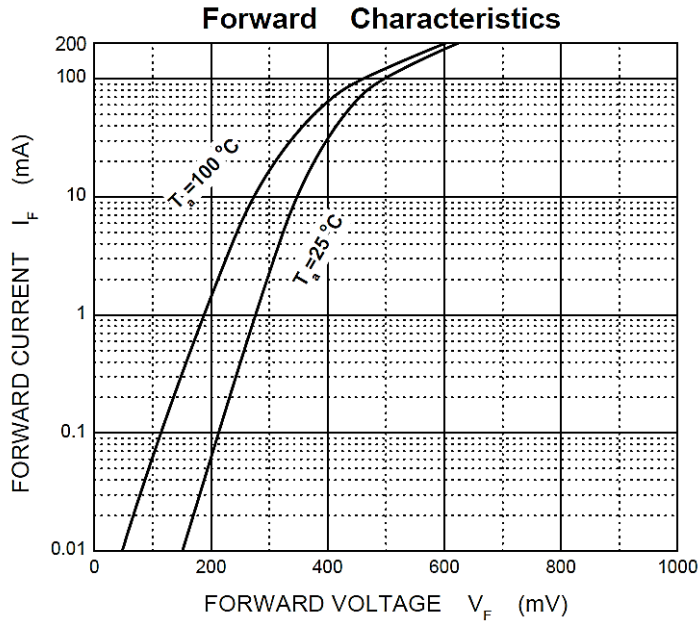
PARAMETER	SYMBOLS	VALUE	UNITS
Peak Repetitive Reverse Voltage	VRRM	30	V
Working Peak Reverse Voltage	VRWM		
DC Blocking Voltage	VR		
Forward Continuous Current	IFM	0.2	A
Non-repetitive Peak Forward Surge Current @ t=8.3ms	IFSM	0.6	A
Repetitive Peak Forward Current @ t≤1s,δ≤0.5	IFRM	0.3	A
Power Dissipation	PD	200	mW
Thermal Resistance junction To Ambient Air	RθJA	500	°C/W
Junction Temperature Range	TJ	-55 ~ +125	°C
Storage Temperature Range	TSTG	-55 ~ +150	°C

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23
ELECTRICAL CHARACTERISTICS - @ 25 °C

PARAMETER	SYMBOLS	VALUE			UNIT	CONDITION
		MIN.	TYP.	MAX.		
Reverse Voltage	V _{BR}	30			V	I _R =100uA
Forward Voltage	V _F			0.24	V	I _{F1} =0.1mA
				0.32		I _{F2} =1mA
				0.40		I _{F3} =10mA
				0.50		I _{F4} =30mA
				1		I _{F5} =100mA
Reverse Current	I _R			2.0	uA	V _R =25V
Diode Capacitance	C _t			10	pF	V _R =0V, f=1MHz
Reverse Recovery Time	t _{rr}			5.0	ns	I _F =I _R =10mA I _{rr} =0.1 x I _R ; R _L =100Ω

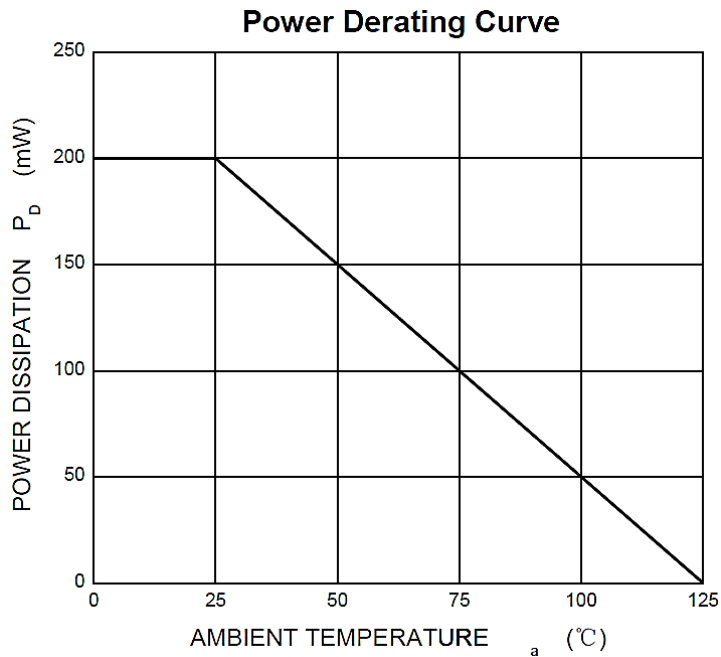
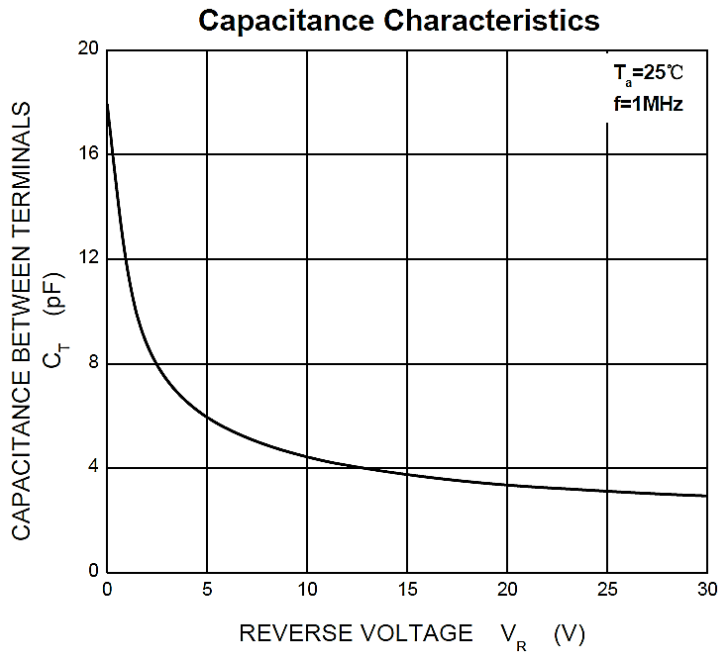
SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23

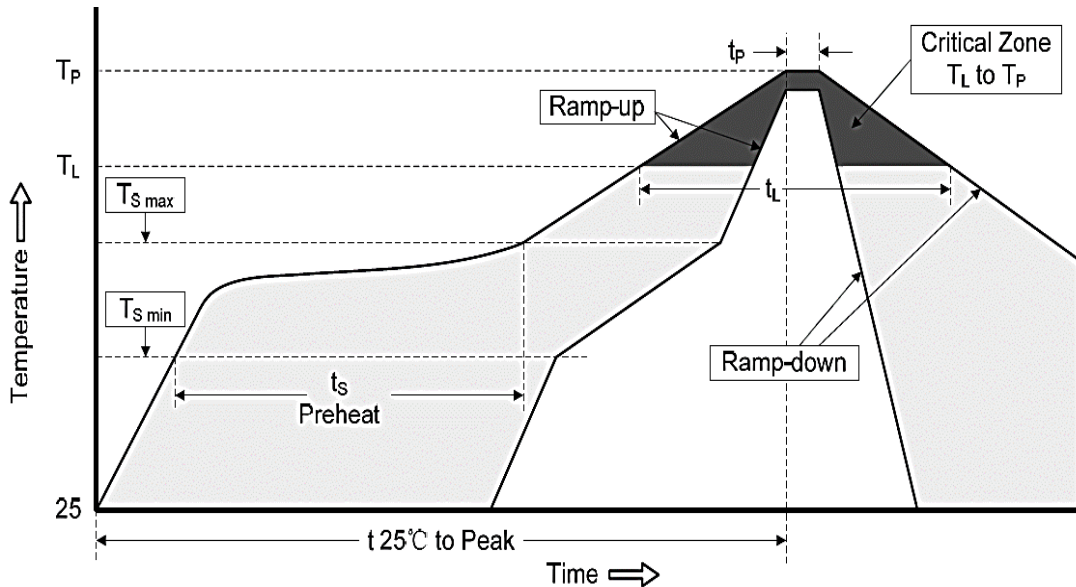
TYPICAL CHARACTERISTIC CURVES - For Reference Only



SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23

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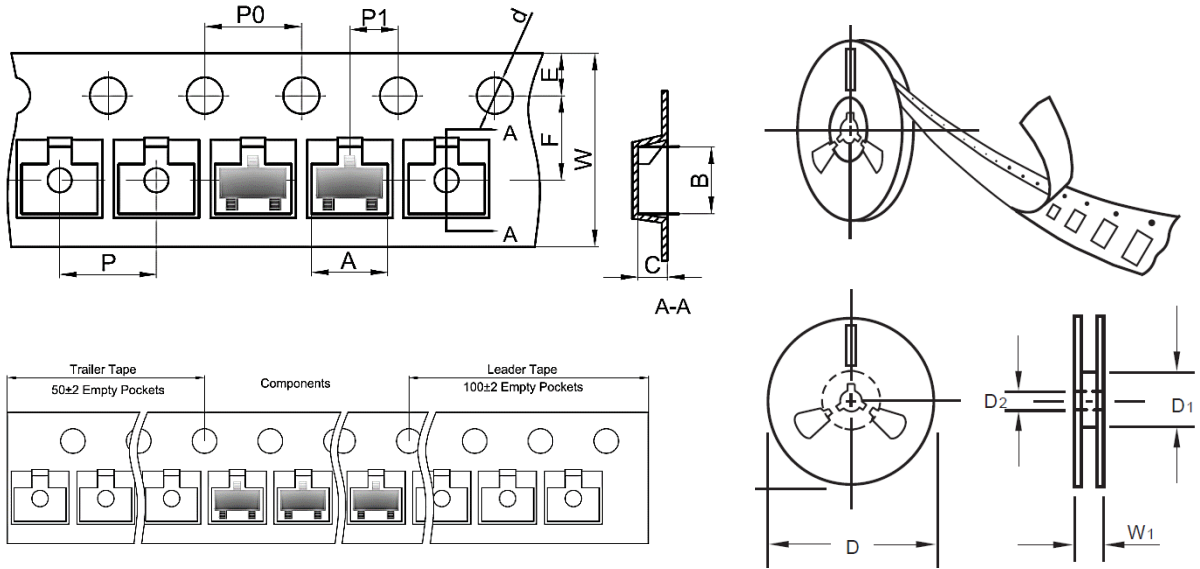


SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23
SUGGESTED REFLOW PROFILE - For Reference Only


PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_S Max to T_P)		3°C/second Max
Preheat	Temperature Min (T_S Min.)	150°C
	Temperature Max (T_S Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_P)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		20 ~ 40 seconds
Ramp-down rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 minutes Max.
Suggest reflow times		3 Times Max.

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23
TAPE/REEL - Unit: mm

All Devices are packed in accordance with EIA standard RS-481-A and specifications.



ITEM	SYMBOL	TOLERANCE	SOT-23
Carrier width	A	0.1	3.15
Carrier Length	B	0.1	2.77
Carrier Depth	C	0.1	1.22
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	Min.	54.4
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.00
Reel width	W1	1.0	19.50
MPQ/Reel	3000pcs/Reel		

SMD SCHOTTKY BARRIER DIODES BAT54 SERIES CASE SOT-23

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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