

BAT54ADV/BRV/CDV/SDV/TV

List

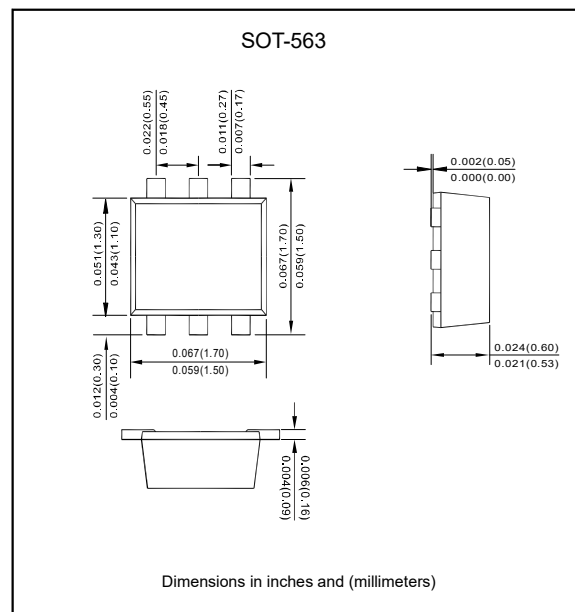
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BAT54ADV/BRV/CDV/SDV/TV**200mA Surface Mount Schottky Barriers
Diode Arrays****Features**

- Low Forward Voltage Drop
- Fast Switching
- Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version
- Lead-free parts meet RoHS requirements
- Suffix "-H" indicates Halogen-free part, ex. BAT54ADV-H

Mechanical data

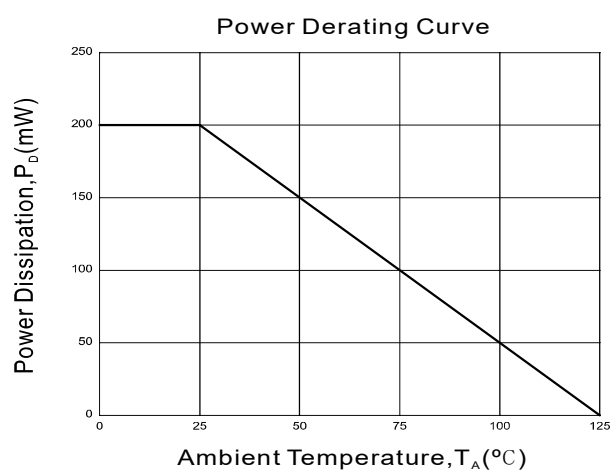
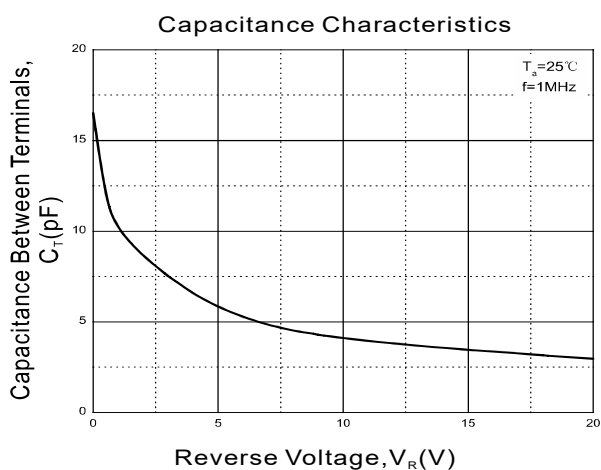
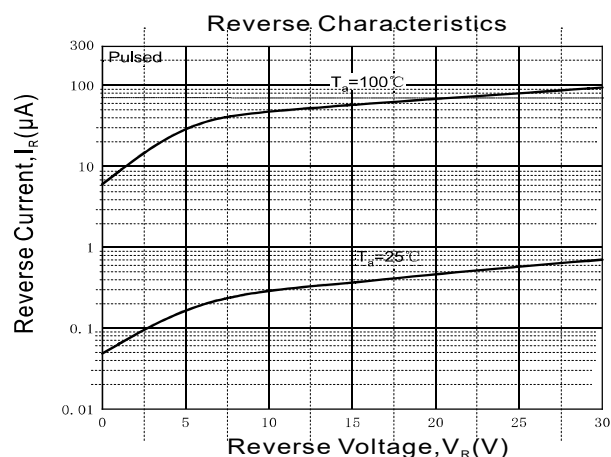
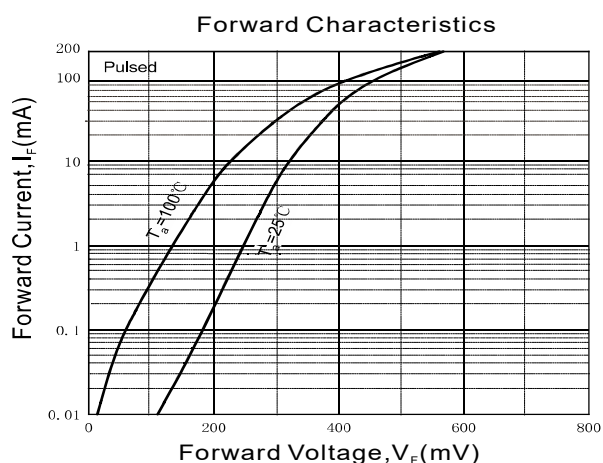
- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-563
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Mounting Position : Any

Package outline**Maximum ratings** (At $T_A=25^{\circ}\text{C}$ unless otherwise noted)

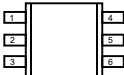
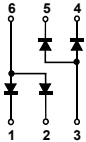
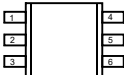
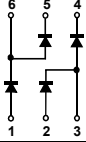
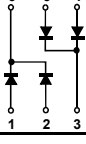
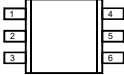
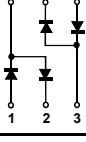
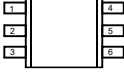
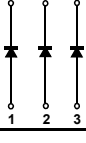
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Peak Working Reverse Voltage	V_{RWM}	30	V
DC Blocking Voltage	V_R	30	V
Forward Continuous Current	I_O	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-40~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^{\circ}\text{C}$

BAT54ADV/BRV/CDV/SDV/TV**Electrical Characteristics** (At $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Voltage	$I_R=100\mu\text{A}$	$V_{(BR)}$	30			V
Reverse Current	$V_R=25\text{V}$	I_R			2	μA
Forward Voltage	$I_F=1\text{mA}$	V_F			320	mV
	$I_F=10\text{mA}$				400	
	$I_F=30\text{mA}$				500	
	$I_F=100\text{mA}$				1000	
Total Capacitance	$V_R=1\text{V}$, $f=1\text{MHz}$	C_{tot}			10	pF
Reverse Recovery Time	$I_F=I_R=10\text{mA}$, $I_{\text{rr}}=0.1 \times I_R$, $R_L=100\Omega$	t_{rr}			5	ns

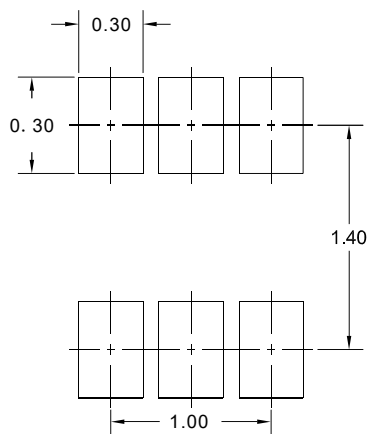
Typical characteristics curves

BAT54ADV/BRV/CDV/SDV/TV**Pinning information and marking**

Type Number	Simplified Outline	Marking Code	Symbol
BAT54AV		K L 6	
BAT54BV		K L B	
BAT54CV		K L 7	
BAT54SV		K L 8	
BAT54TV		K L A	

Suggested solder pad layout

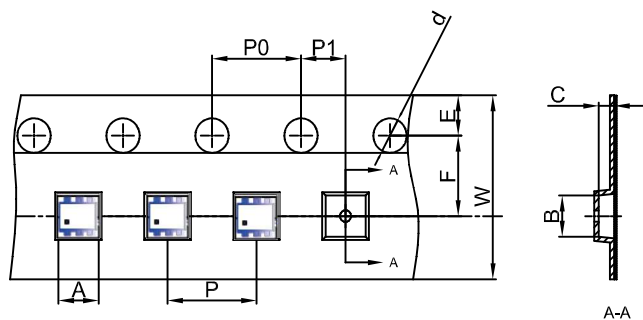
SOT-563



Dimensions in millimeters

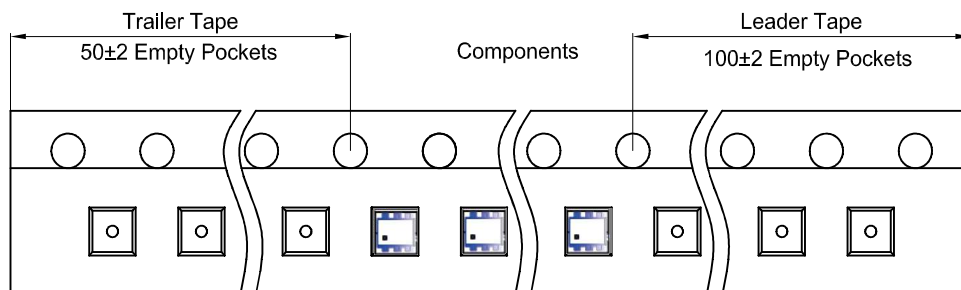
Note :

1. Controlling dimension : in millimeters.
2. General tolerance : $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

BAT54ADV/BRV/CDV/SDV/TV**Packing information****SOT-563 Embossed Carrier Tape****Packaging Description:**

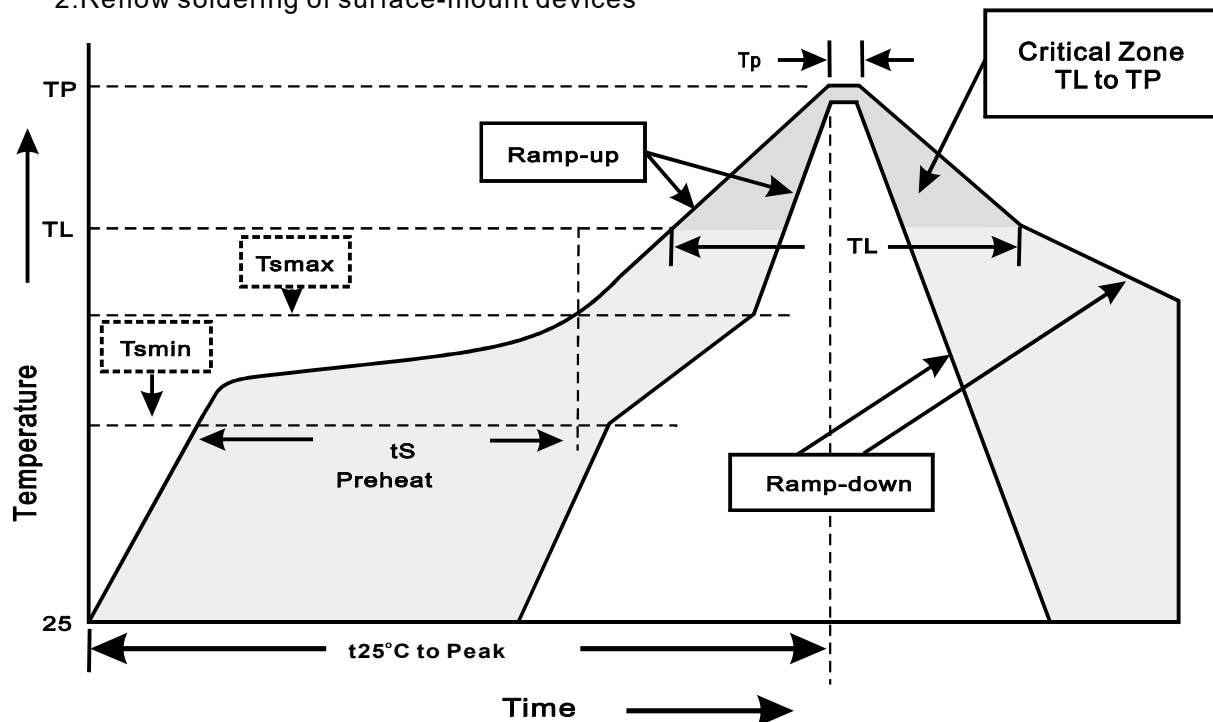
SOT-563 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-563	1.78	1.78	0.69	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-563 Tape Leader and Trailer

BAT54ADV/BRV/CDV/SDV/TV**Suggested thermal profiles for soldering processes**

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices

**3.Reflow soldering**

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smmin}) -Temperature Max(T _{smmax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smmax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes