

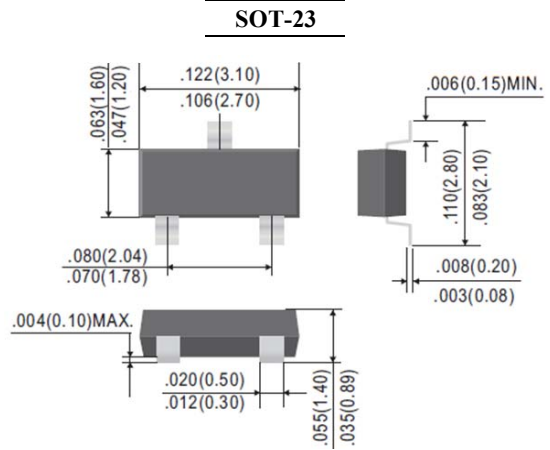
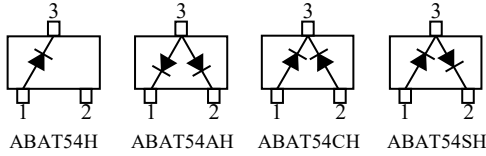


ABAT54 SERIES

SCHOTTKY BARRIER DIODES

FEATURES

- Low forward voltage
- AEC-Q101 qualified
- Suffix "H" indicates Halogen-free parts, ex. ABAT54H.



Dimensions in inch and (millimeter)

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Average Rectified Forward Current	$I_{F(AV)}$	300	mA
Repetitive Peak Forward Current	I_{FRM}	350	mA
Non-Repetitive Peak Forward Surge Current at $t_p=1.0s$	I_{FSM}	600	mA
Total Power Dissipation	P_{tot}	290	mW
Thermal Resistance from Junction Ambient (Note 1)	$R_{\theta JA}$	430	$^\circ\text{C} / \text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Note :

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min	Max	Unit
Forward Voltage	$I_F=0.1\text{mA}$	V_F	-	240	mV
	$I_F=1\text{mA}$		-	320	
	$I_F=10\text{mA}$		-	400	
	$I_F=30\text{mA}$		-	500	
	$I_F=100\text{mA}$		-	1000	
Reverse Breakdown Voltage	$I_R=100\mu\text{A}$	$V_{(BR)R}$	30	-	V
Reverse Current	$V_R=25\text{V}$	I_R	-	2	μA
Total Capacitance	$V_R=1\text{V}$, $f=1\text{MHz}$	C_T	-	10	pF
Revers Recovery time	$I_F=10\text{mA}$, $I_R=10\text{mA}$, $I_{RR}=1\text{mA}$, $R_L=100\Omega$	t_{rr}	-	5	ns



ABAT54 SERIES SCHOTTKY BARRIER DIODES

RATINGS AND CHARACTERISTIC CURVES

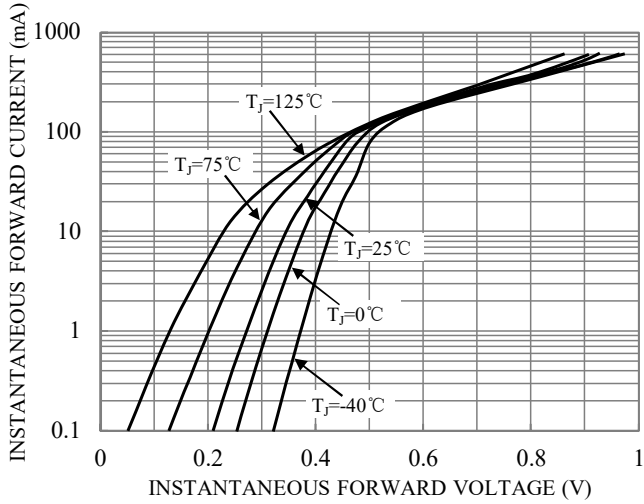


Fig. 1-TYPICAL FORWARD CHARACTERISTICS

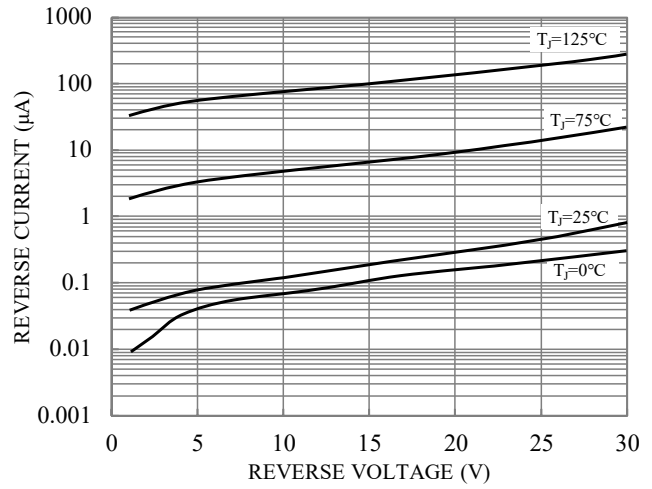


Fig. 2-TYPICAL REVERSE CHARACTERISTICS

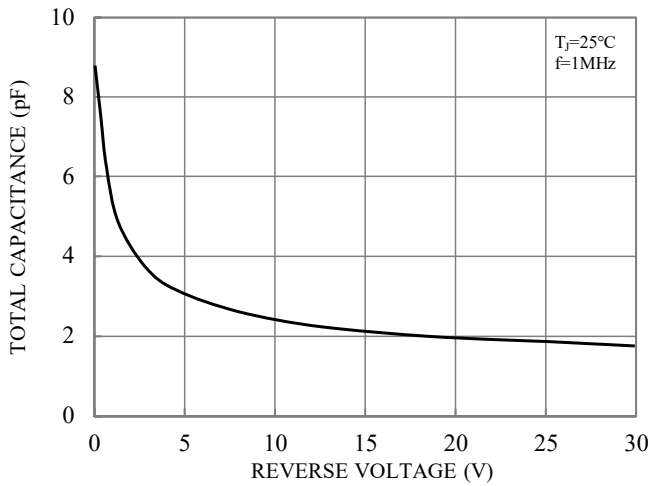


Fig. 3-TYPICAL TOTAL CAPACITANCE

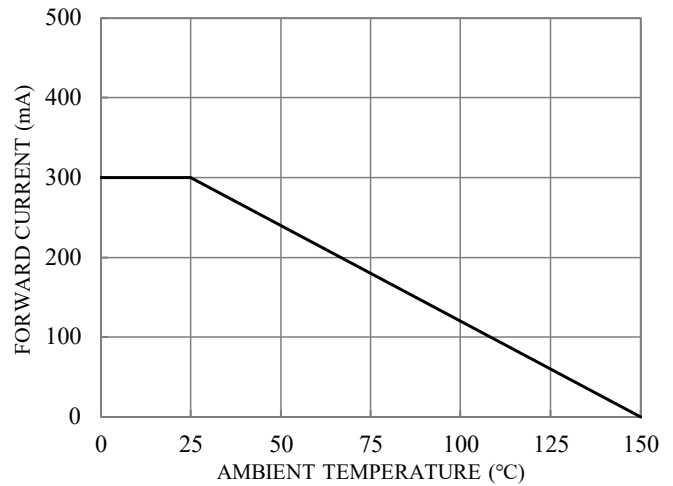


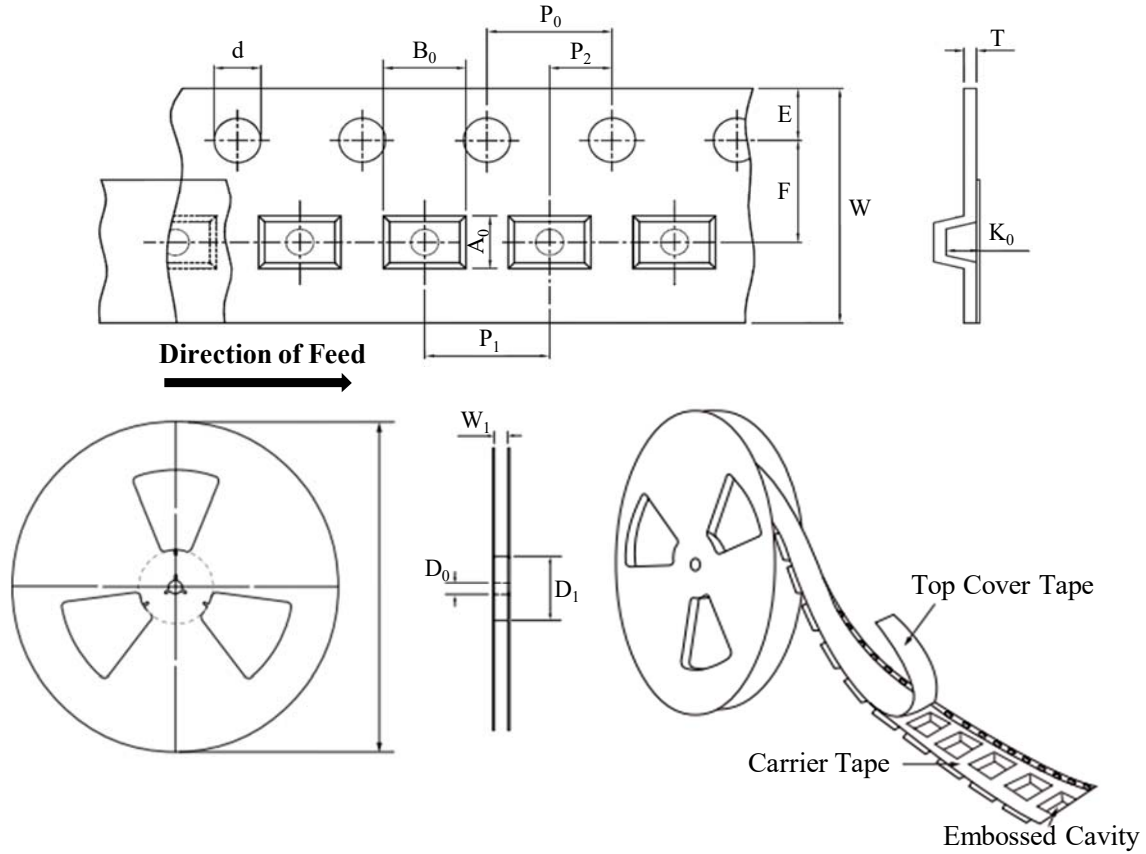
Fig. 4-FORWARD CURRENT DERATING CURVE



ABAT54 SERIES

SCHOTTKY BARRIER DIODES

TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A ₀	3.30 ± 0.10
Carrier length	B ₀	3.00 ± 0.10
Carrier depth	K ₀	1.70 ± 0.10
Sprocket hole	d	1.60 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.50
Reel inner diameter	D ₁	MIN. 50.00
Sprocke hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocke hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W ₁	MAX. 14.50

ORDER INFORMATION

Package	Reel Size	Quantity
SOT-23	7"	3,000

MARKING CODE

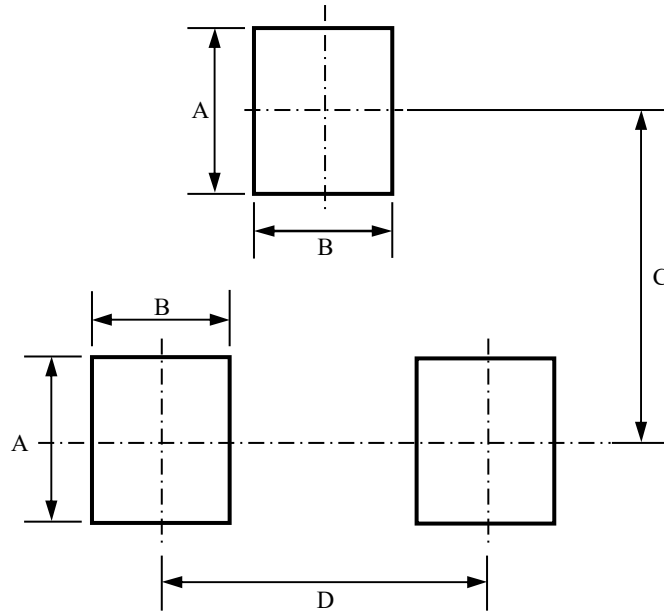
Part Number	Marking Code
ABAT54H	L4
ABAT54AH	L42
ABAT54CH	L43
ABAT54SH	L44



ABAT54 SERIES

SCHOTTKY BARRIER DIODES

SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOT-23	1.00	0.80	2.00	1.90