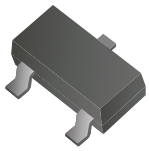
ACDBT-54-HF Series

Reverse Voltage: 30 Volts
Forward Current: 200 mA
RoHS Device
Halogen free



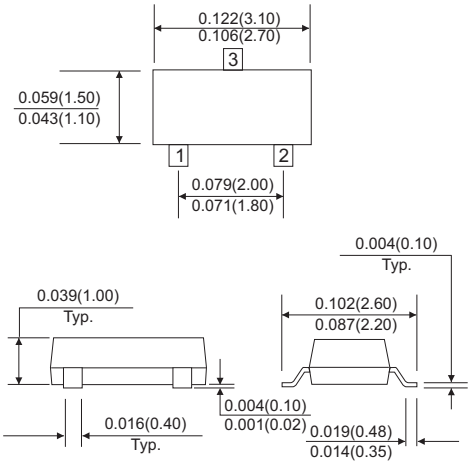
Features

- Fast switching.
- Low turn-on voltage.
- PN junction guard ring for transient and ESD protection.
- Comply with AEC-Q101.

Mechanical data

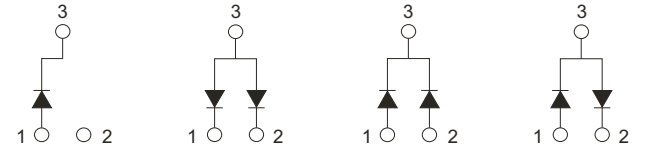
- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Weight: 0.0078 grams(approx.).

SOT-23



Dimensions in inches and (millimeter)

Circuit diagram



ACDBT-54-HF ACDBT-54A-HF ACDBT-54C-HF ACDBT-54S-HF

Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Value	Unit
Peak repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R		30	V
Forward continuous current	I_F		200	mA
Repetitive peak forward current	I_{FRM}		300	mA
Forward surge current	I_{FSM}	@ t<1.0s	600	mA
Power dissipation	P_D		200	mW
Thermal resistance	$R_{\theta JA}$	Junction to ambient air	500	°C/W
Operating and storage temperature	T_J ,T_{STG}		-55 to +125	°C

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R = 100μA	30			V
Forward voltage	V_F	I_F = 0.1mA I_F = 1mA I_F = 10mA I_F = 30mA I_F = 100mA			0.24 0.32 0.40 0.50 1.00	V
Reverse current	I_R	V_R = 25V			2	μA
Diode capacitance	C_D	V_R = 1V, f = 1.0MHz			10	pF
Reverse recovery time	T_{rr}	I_F = I_R = 10mA, I_{RR} = 0.1XI_R , R_L = 100Ω			5	nS

RATING AND CHARACTERISTIC CURVES (ACDBT-54-HF Series)

Fig.1 - Forward Characteristics

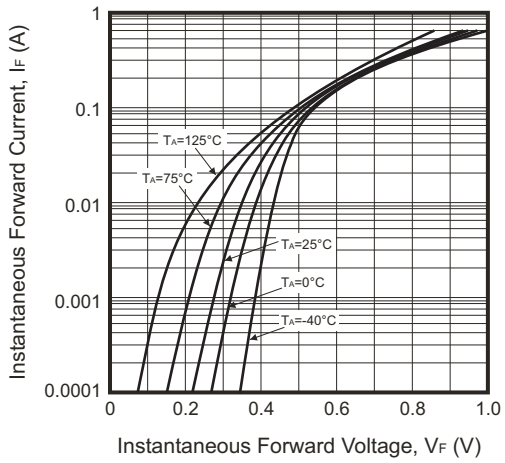


Fig.2 - Typical Reverse Characteristics

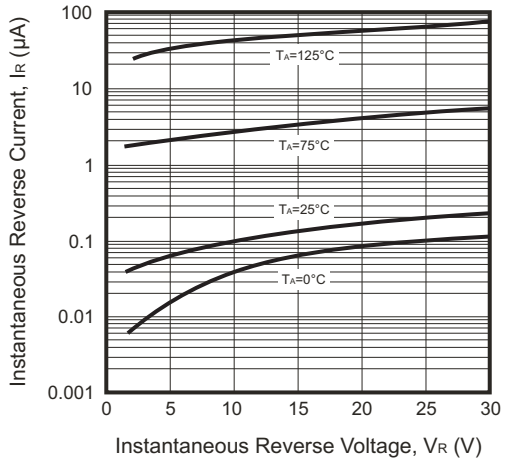


Fig.3 - Typical Capacitance v.s Reverse Voltage

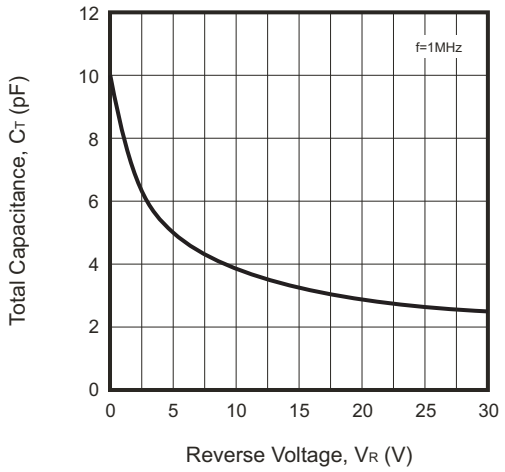
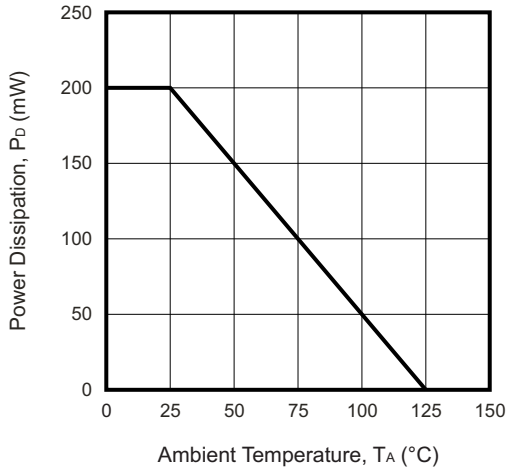
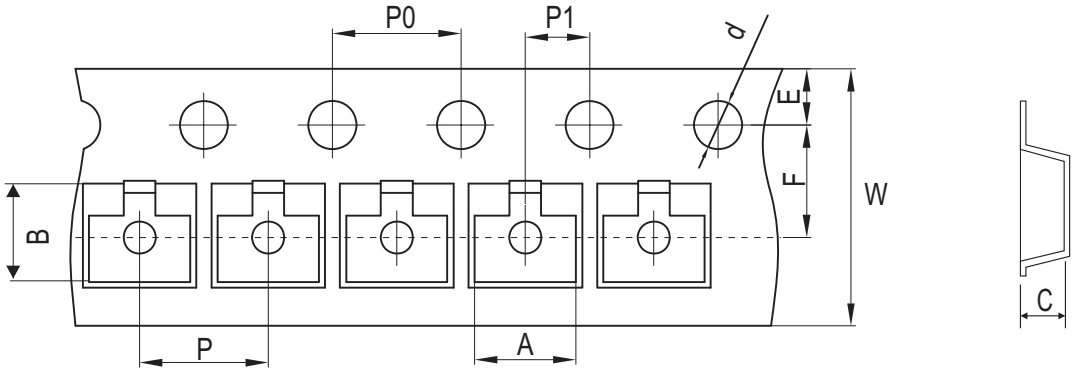


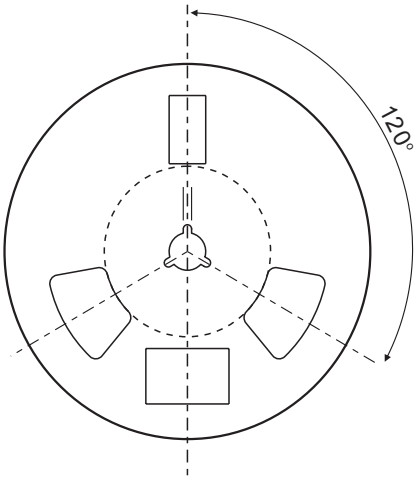
Fig.4 - Power Derating Curve

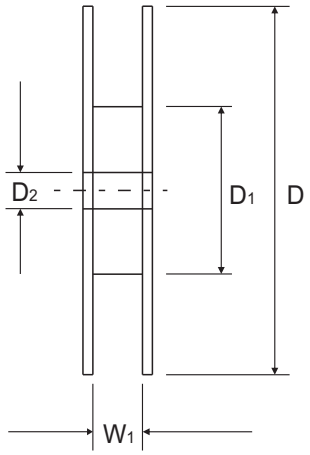


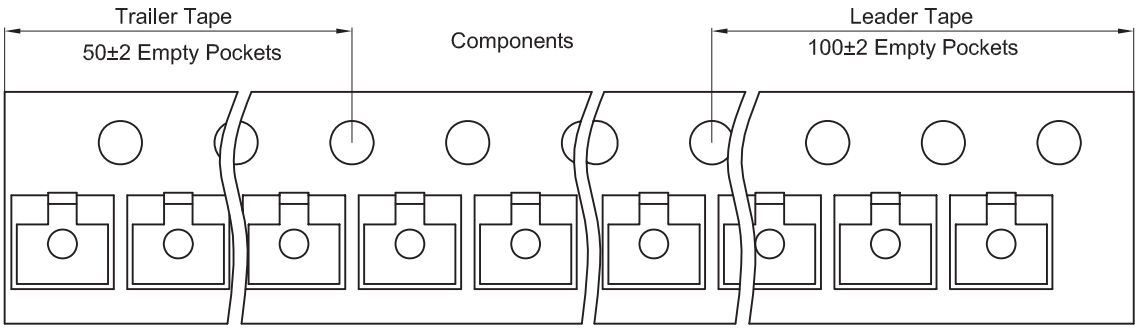
Company reserves the right to improve product design , functions and reliability without notice.

Reel Taping Specification







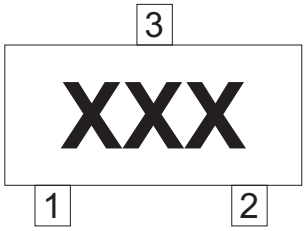


	SYMBOL	A	B	C	d	D	D_1	D_2
SOT-23	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 + 0.10	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 + 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

	SYMBOL	E	F	P	P_0	P_1	W	W_1
SOT-23	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 / - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.002	0.315 + 0.012 / - 0.004	0.374 ± 0.039

Marking Code

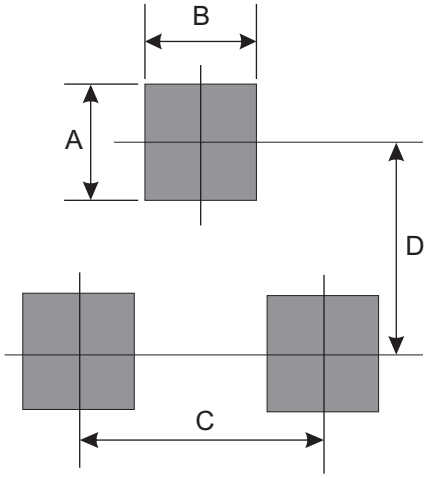
Part Number	Marking Code
ACDBT-54-HF	KL1
ACDBT-54A-HF	KL2
ACDBT-54C-HF	KL3
ACDBT-54S-HF	KL4



XXX = Product type marking code
Solid dot = Halogen free parts

Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	1.90	0.075
D	2.00	0.079



Note:
1.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Comchip Technology:

ACDBT-54S-HF ACDBT-54-HF ACDBT-54C-HF