



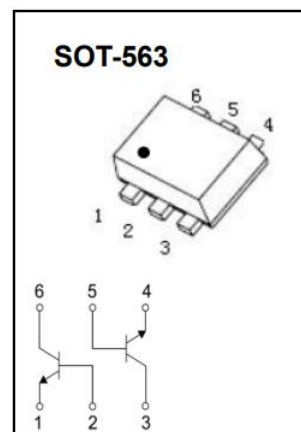
AD-BC847BV Plastic-Encapsulated Transistor

AD-BC847BV

Dual transistor (NPN + NPN)

FEATURES

- Epitaxial die construction
- Complementary PNP type available (AD-BC857BV)
- Ultra-small surface mount package
- AEC-Q101 qualified



MARKING

$\bar{K}4V$

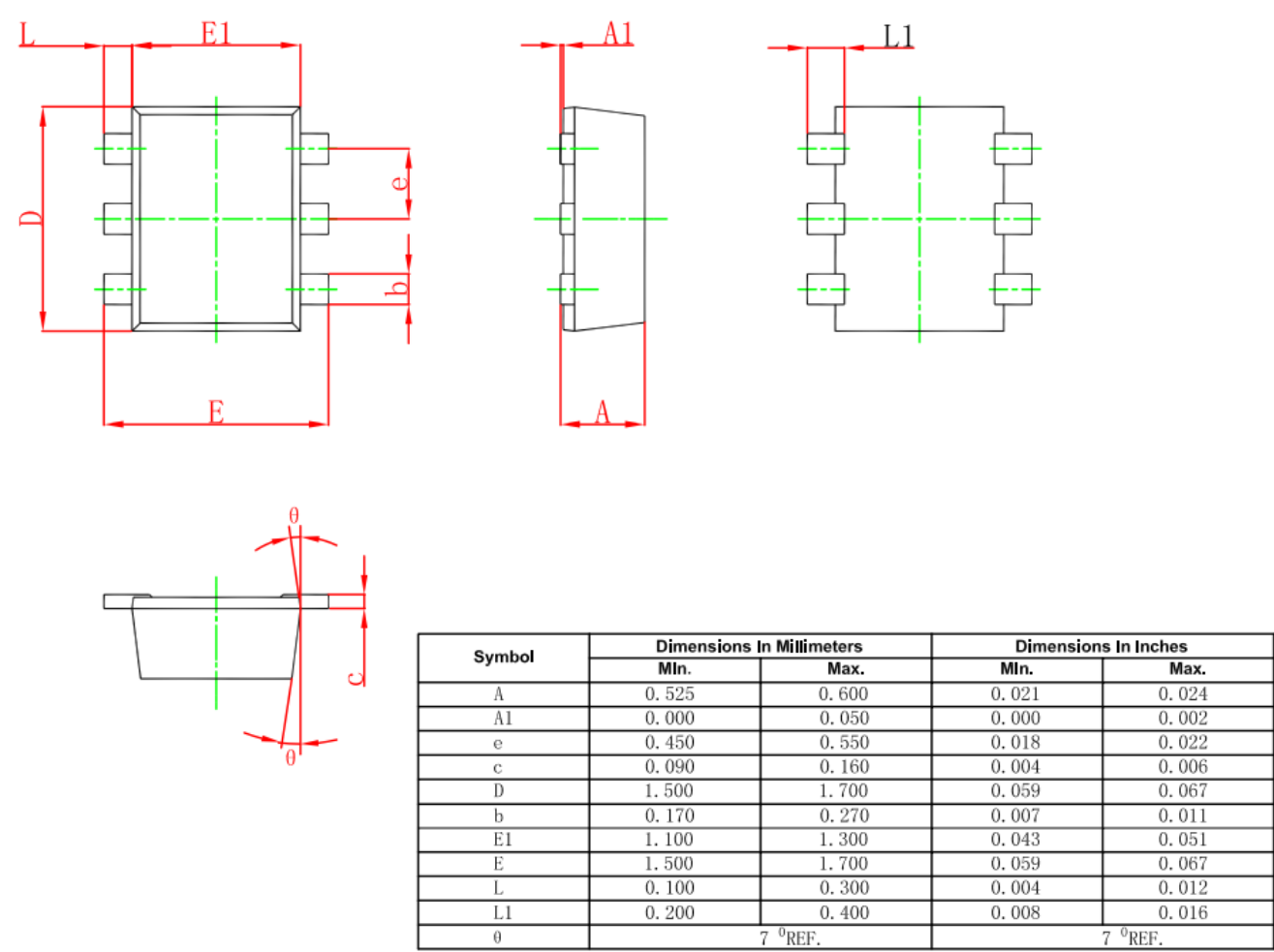
MAXIMUM RATINGS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	45	V
Emitter-base voltage	V_{EBO}	6	V
Collector continuous current	I_{C}	0.1	A
Collector power dissipation	P_{C}	150	mW
Thermal resistance from junction to ambient	$R_{\theta\text{JA}}$	833	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	$^\circ\text{C}$

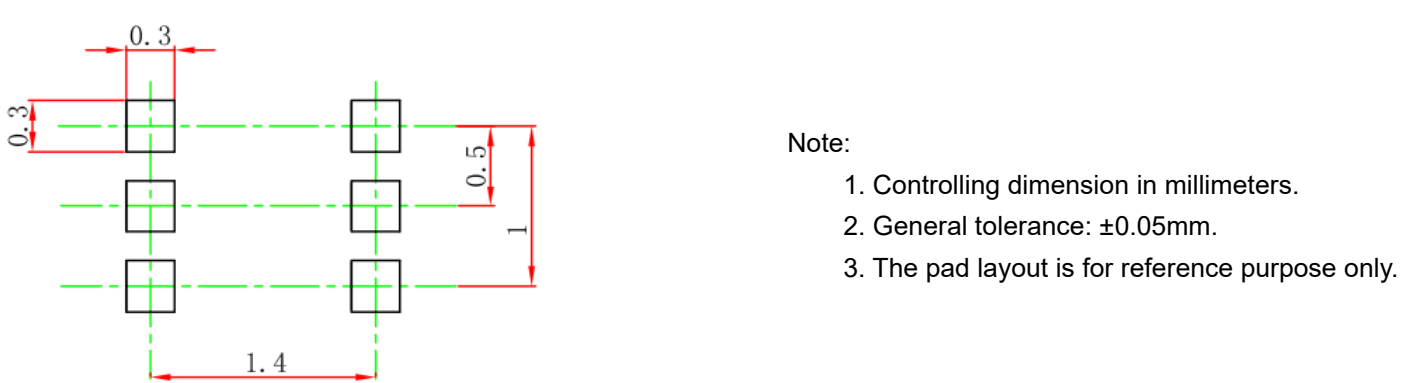
ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	$I_{\text{C}} = 10\mu\text{A}, I_{\text{E}} = 0\text{A}$	50	-	-	V
Collector-emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	$I_{\text{C}} = 10\text{mA}, I_{\text{B}} = 0\text{A}$	45	-	-	V
Emitter-base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	$I_{\text{E}} = 1\mu\text{A}, I_{\text{C}} = 0\text{A}$	6	-	-	V
Collector cutoff current	I_{CBO}	$V_{\text{CB}} = 30\text{V}, I_{\text{E}} = 0\text{A}$	-	-	15	nA
Emitter cutoff current	I_{EBO}	$V_{\text{EB}} = 5\text{V}, I_{\text{C}} = 0\text{A}$	-	-	100	nA
DC current gain	h_{FE}	$V_{\text{CE}} = 5\text{V}, I_{\text{C}} = 2\text{mA}$	200	-	450	-
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 10\text{mA}, I_{\text{B}} = 0.5\text{mA}$	-	-	0.1	V
		$I_{\text{C}} = 100\text{mA}, I_{\text{B}} = 5\text{mA}$	-	-	0.3	
Base-emitter saturation voltage	$V_{\text{BE(sat)}}$	$I_{\text{C}} = 10\text{mA}, I_{\text{B}} = 0.5\text{mA}$	-	0.7	-	V
		$I_{\text{C}} = 100\text{mA}, I_{\text{B}} = 5\text{mA}$	-	0.9	-	
Base-emitter voltage	$V_{\text{BE(on)}}$	$V_{\text{CE}} = 5\text{V}, I_{\text{C}} = 2\text{mA}$	580	660	700	mV
		$V_{\text{CE}} = 5\text{V}, I_{\text{C}} = 10\text{mA}$	-	-	770	
Transition frequency	f_{T}	$V_{\text{CE}} = 5\text{V}, I_{\text{C}} = 10\text{mA}, f = 100\text{MHz}$	100	-	-	MHz
Collector output capacitance	C_{ob}	$V_{\text{CB}} = 10\text{V}, I_{\text{E}} = 0\text{A}, f = 1\text{MHz}$	-	-	4.5	pF
Noise figure	NF	$V_{\text{CE}} = 5\text{V}, f = 1\text{KHz}, R_{\text{s}} = 2\text{K}\Omega, \text{BW} = 200\text{Hz}$	-	-	10	dB

SOT-563 PACKAGE OUTLINE DIMENSIONS

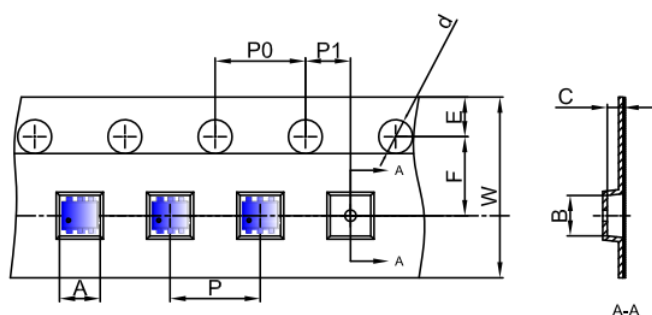


SOT-563 SUGGESTED PAD LAYOUT



SOT-563 TAPE AND REEL

SOT-563 Embossed Carrier Tape

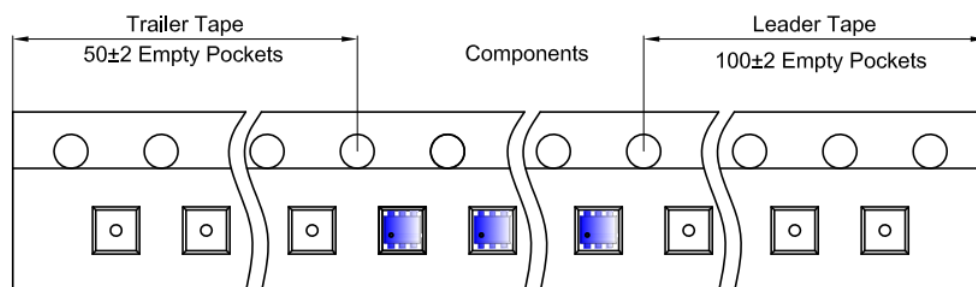


Packaging Description:

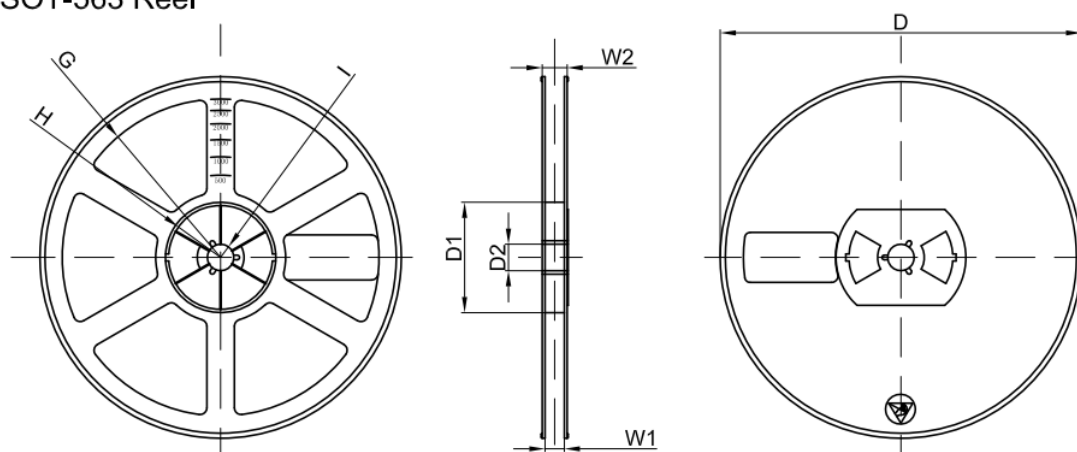
SOT-563 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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



SOT-563 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"D1a	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

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