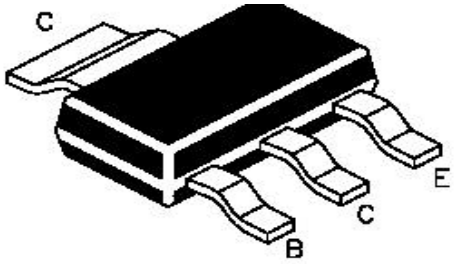
NPN SILICON PLANAR EPITAXIAL TRANSISTORS

BCP54 BCP55 BCP56



SOT-223
Formed SMD Package

General Purpose Medium Power DC Applications

Complementary BCP51 BCP52 and BCP53

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	BCP54	BCP55	BCP56	UNITS
Collector Base Voltage	V_{CBO}	45	60	100	V
Collector Emitter Voltage	V_{CEO}	45	60	80	V
Emitter Base Voltage	V_{EBO}	5.0			V
Collector Current (DC)	I_C	1.0			A
Collector Current Peak	I_{CM}	1.5			A
Base Current Peak	I_{BM}	0.2			A
Power Dissipation upto T_{amb}=25ºC	*P_D	1.33			W
Storage Temperature	T_{stg}	- 65 to +150			ºC
Junction Temperature	T_j	150			ºC
Operating Ambient Temperature	T_{amb}	- 65 to +150			ºC

THERMAL RESISTANCE

From junction to ambient	*$R_{th\ (j-a)}$	94	K/W
From junction to soldering point	$R_{th\ (j-a)}$	13	K/W

*** Device Mounted on printed circuit board, single sided copper, tinplated, mounting pad for collector 1 cm^2.**

ABSOLUTE MAXIMUM RATINGS (T_{amb}=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut Off Current	I_{CBO}	V_{CB}=30V, I_E=0			100	nA
		V_{CB}=30V, I_E=0, T_j=125ºC			10	µA
Emitter Cut Off Current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC Current Gain	h_{FE}	I_C=5mA, V_{CE}=2V	63			
		I_C=150mA, V_{CE}=2V	63		250	
		I_C=500mA, V_{CE}=2V	40			
DC Current Gain	h_{FE}	I_C=150mA, V_{CE}=2V				
		Group -10	63		160	
		Group -16	100		250	
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C=0.5A, I_B=50mA			0.5	V
Base Emitter On Voltage	$V_{BE\ (on)}$	I_C=0.5A, V_{CE}=2V			1.0	V
Transition Frequency	f_T	I_C=10mA, V_{CE}=5V,f=100MHz		130		MHz
DC Current Gain Ratio of the Complementary Pairs	h_{FE1}/h_{FE2}	I_C=150mA, V_{CE}=2V			1.6	

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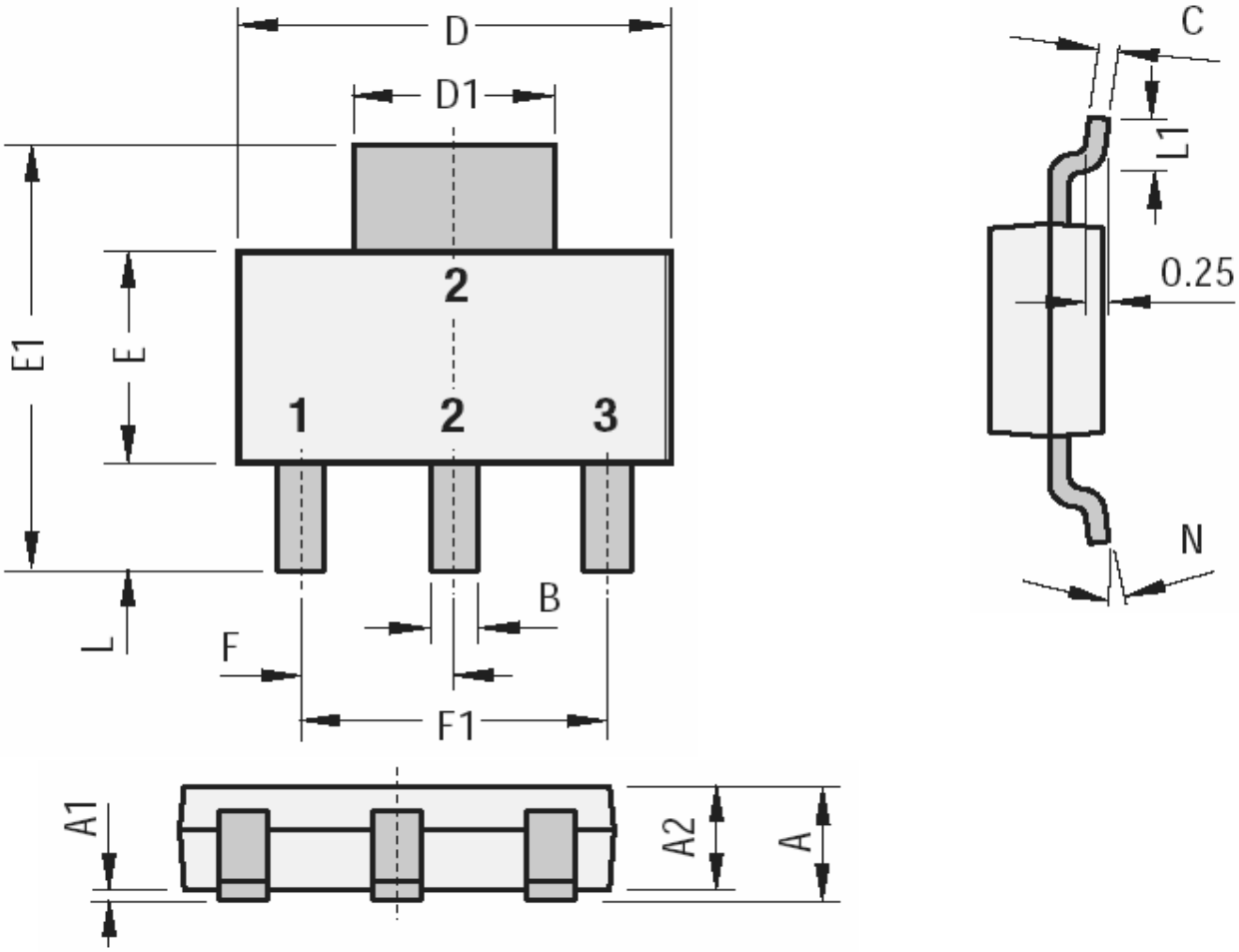
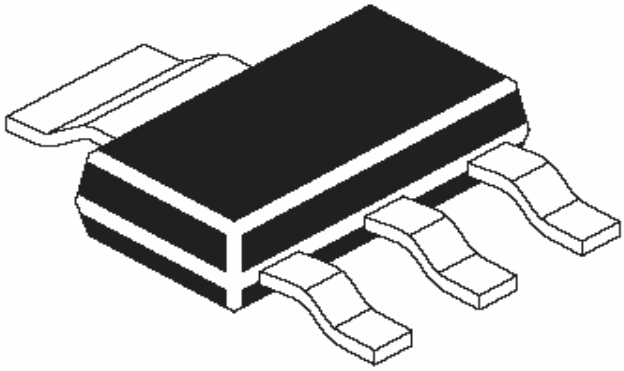
SOT-223 SMD Plastic Package



DIM	Min	Max
A	1.52	1.80
A1	0.02	0.10
A2	1.50	1.70
B	0.61	0.81
C	0.25	0.35
D	6.30	6.70
D1	2.90	3.10

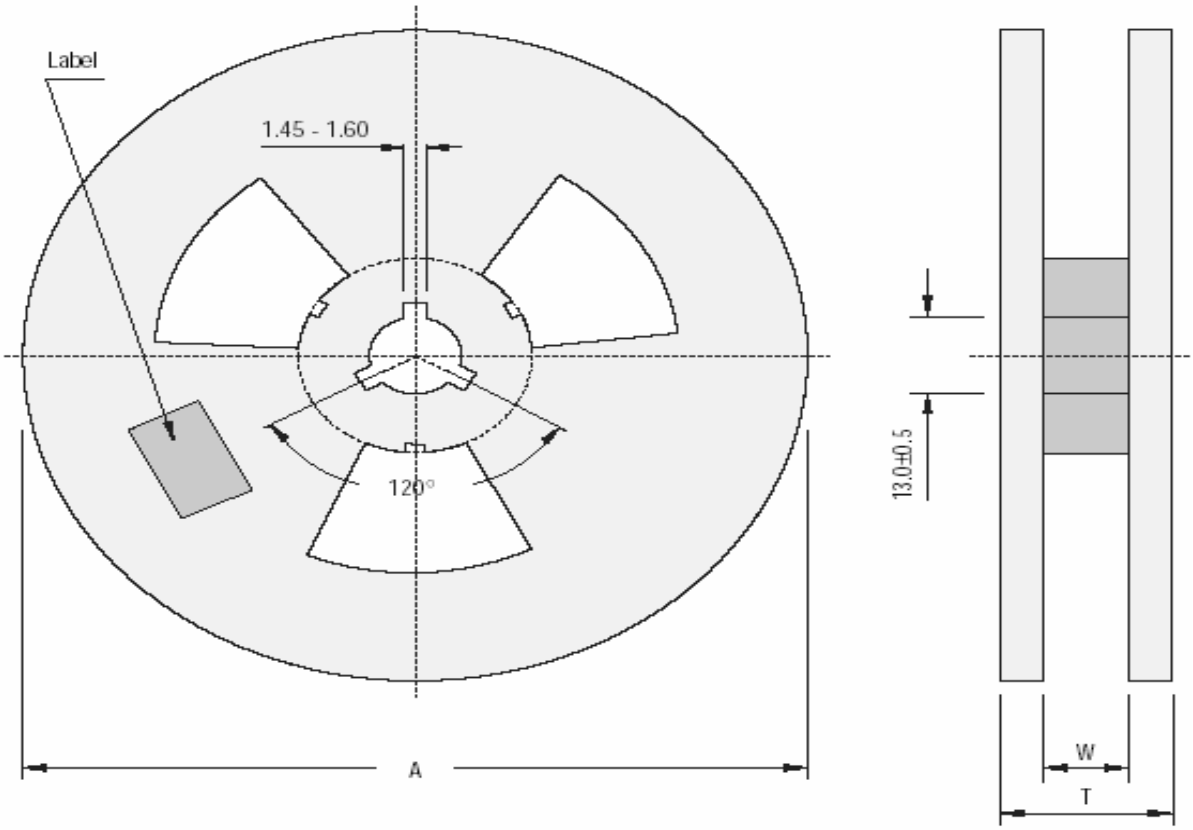
DIM	Min	Max
E	3.30	3.70
E1	6.70	7.30
F	2.30 Typ	
F1	4.50	4.70
L	1.76 Typ	
L1	0.90	
N	0.00	10.00

All Dimensions are in mm



SOT-223

Reel Dimensions and Components/Reel for SMD Package



Reel Specifications				
Package	Tape Width	Reel Dia. A - Max	Inside Thickness W	Reel Thickness T - max
SOT-223	12	180	12.4 ± 2	18.4
	12	330	12.4 ± 2	18.4

All Dimensions are in mm

Packaging Information

Package/	Packaging Type	Std. Packing	Inner Carton			Outer Carton		
Case Type		Qty	Qty	Size L x W x H	Gross Weight	Qty	Size L x W x H	Gross Weight
				(cm)	(Kg)		(cm)	(Kg)
SOT-223	T & R	1,000						
	T & R	4,000						

T & R: Tape and Reel

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

SOT-223
Formed SMD Package

Disclaimer

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CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdilsemi.com