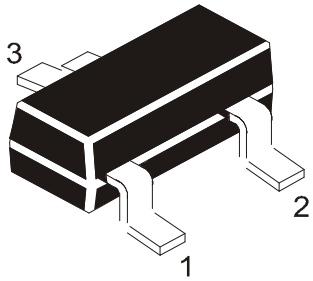
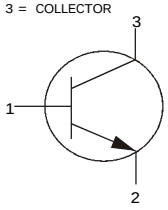
NPN SILICON PLANAR EPITAXIAL TRANSISTOR

BCX41



PIN CONFIGURATION (NPN)
1 = BASE
2 = EMITTER
3 = COLLECTOR



SOT-23
Formed SMD Package

MARKING
BCX41=EK

Medium Power Transistor

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CES}	125	V
Collector Emitter Voltage	V_{CEO}	125	V
Emitter Base Voltage	V_{EBO}	5.0	V
Peak Pulse Current	I_{CM}	1.0	A
Continuous Collector Current	I_C	800	mA
Base Current	I_B	100	mA
Power Dissipation	P_{tot}	330	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to +150	ºC

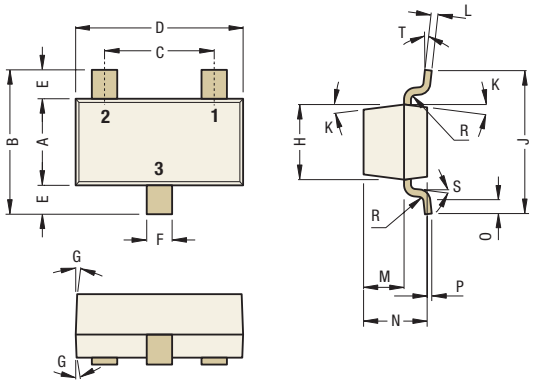
Electrical Characterstics (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Cut Off Current	I_{CES}	V_{CE}=100V, V_{BE}=0			100	nA
		V_{CE}=100V, V_{BE}=0, T_{amb}=150ºC			10	µA
Collector Cut Off Current	I_{CEX}	V_{CE}=100V, V_{BE}=0.2V, T_{amb}=85ºC			10	µA
		V_{CE}=100V, V_{BE}=0.2V, T_{amb}=125ºC			75	µA
Emitter Cut Off Current	I_{EBO}	V_{EB}=4V, I_C=0			100	nA
Collector Emitter Saturation Voltage	*$V_{CE\ (sat)}$	I_C=300mA, I_B=30mA			0.9	V
Base Emitter Saturation Voltage	*$V_{BE\ (sat)}$	I_C=300mA, I_B=30mA			1.4	V
DC Current Gain	h_{FE}	I_C=100µA, V_{CE}=1V	25			
		*I_C=100mA, V_{CE}=1V	63			
		*I_C=200mA, V_{CE}=1V	40			
Transition Frequency	f_T	I_C=10mA, V_{CE}=5V, f=20 MHz		100		MHz
Output Capacitance	C_{obO}	V_{CB}=10V, I_E=0, f=1MHz		12		pF

***Pulse width=300ms, duty cycle=2%**

BCX41 Rev 240310E

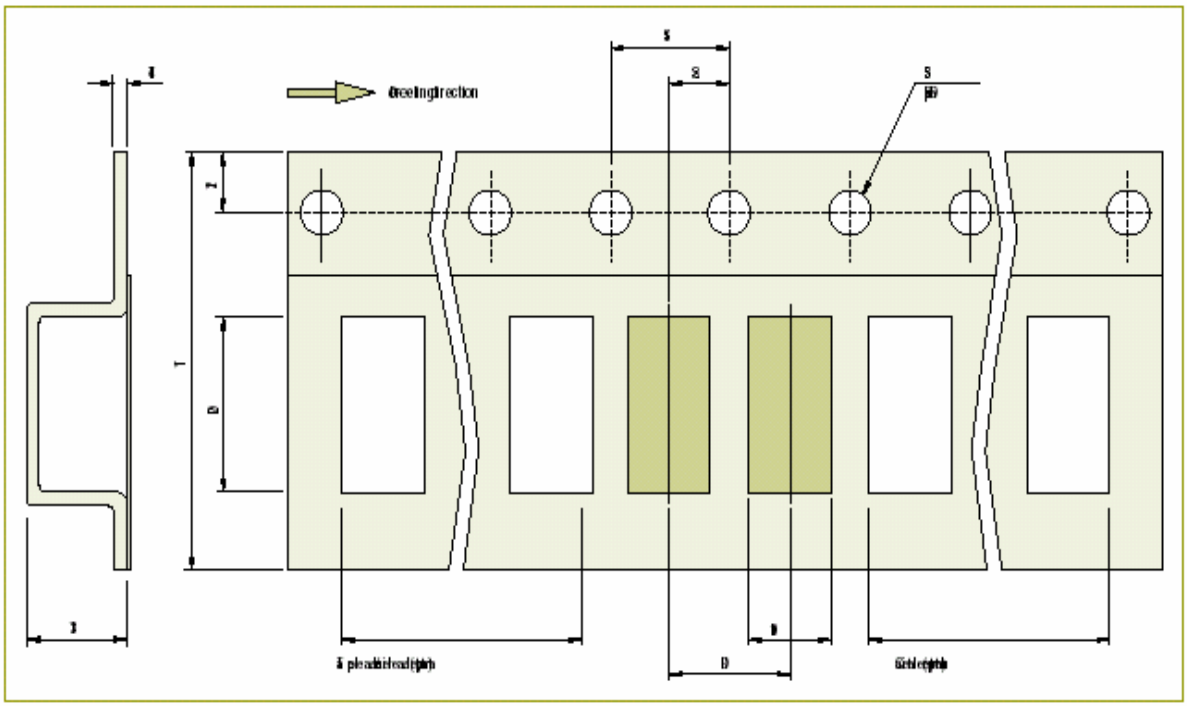
SOT-23
SMD Plastic Package



DIM	Min	Max
A	1.20	1.40
B	2.10	2.64
C	1.85	1.95
D	2.80	3.04
E	0.54	0.67
F	0.30	0.50
G	3°	
H	—	1.30
J	2.10	2.64

DIM	Min	Max
K	7°	
L	0.08	0.20
M	0.58	0.62
N	0.70	1.02
O	0.21	—
P	0.02	0.15
R	—	0.08
S	2°	8°
T	2°	10°

Packaging Tape Specifications for SMD Packages



SMD Tape Specifications (8-12 mm)

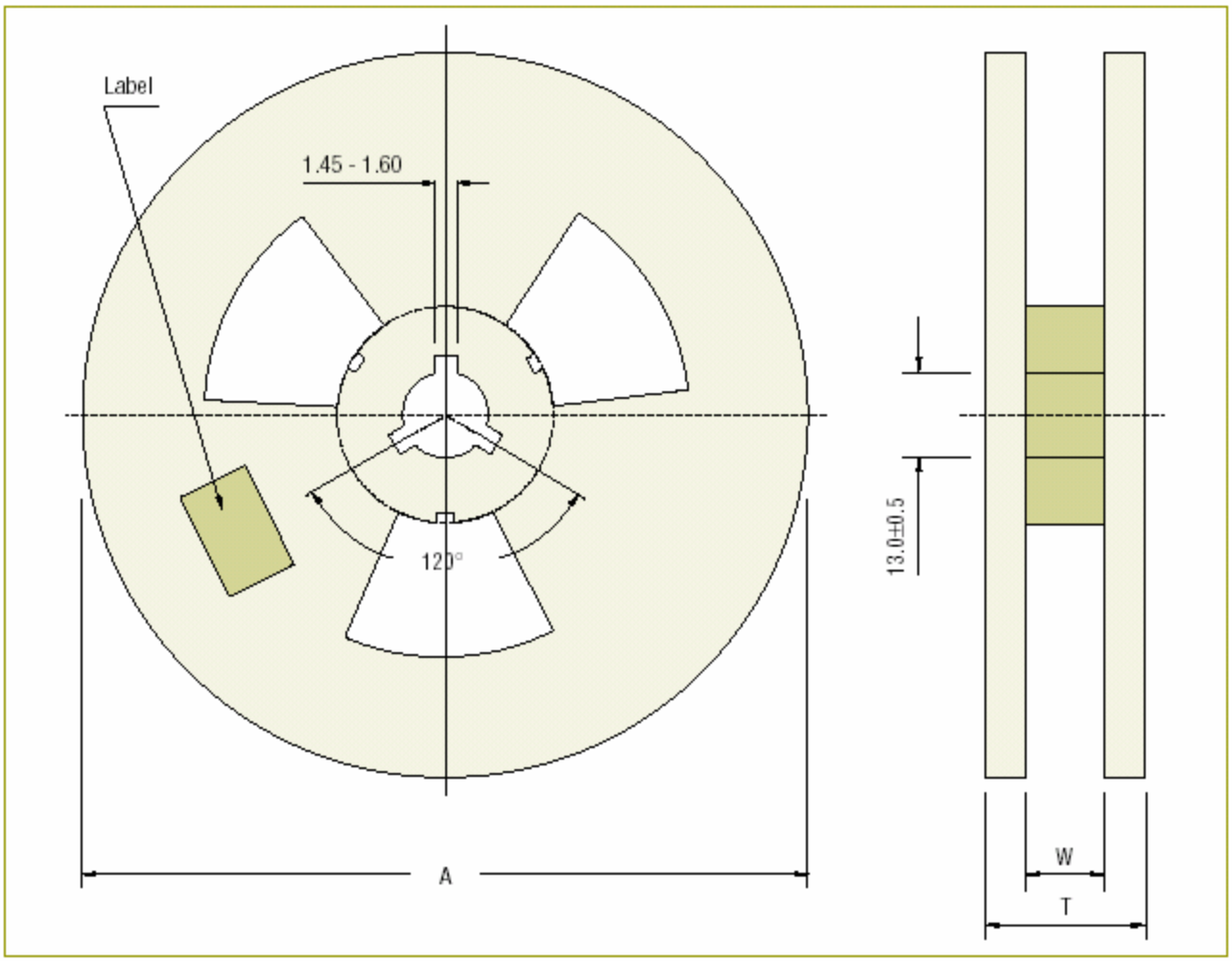
Device	D1	D2	D3	T1	T2	T3	T4	S1	S2	S3
						Max	Max			Dia
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SOT-23	3.2±0.1	2.8±0.1	4.0±0.1	8.0±0.2	1.75±0.1	1.60	0.35	4.0±0.1	2.0±0.1	1.5±0.1

Packaging Specifications ...

T & A: Tape and Ammo Pack; **T & R:** Tape and Reel; **Bulk:** Loose in Poly Bags; **Tube:** Tube and Carton; **K:** 1,000

Package / Case Type	Packaging Type	Std. Packing	Inner Carton			Outer Carton		
		Qty	Qty	Size L x W x H	Gross Weight	Qty	Size L x W x H	Gross Weight
				(cm)	(Kg)		(cm)	(Kg)
SOT-23	T & R	3,000	15K	19 x 19 x 8	0.6	51K	23 x 23 x 23	2.2
	T & R	3,000	15K	19 x 19 x 8	0.6	408K	48 x 48 x 51	20.2
	T & R	10,000	50K	35.5 x 35.5 x 8.9	2.4	350K	48 x 48 x 51	19.2

Reel Specifications for SMD Packages



Reel Specifications

Package	Tape Width	Reel Dia. A - Max	Devices per Reel and MOQ	Inside Thickness W	Reel Thickness T - Max
SOT-23	8	180	3,000	8.4±2	14.4
	8	330	10,000	8.4±2	14.4

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).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited
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