

General Purpose Transistors

NPN Silicon

FEATURES

- High current
- High power dissipation capability
- Three current gain selections
- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

APPLICATIONS

- Linear voltage regulators
- Power management
- Low-side switches
- MOSFET drivers
- Battery-driven devices
- Amplifiers

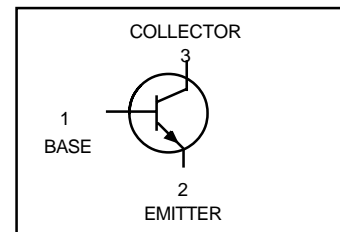
ORDERING INFORMATION

Device	Marking	Shipping
LBTN180D3T1G S-LBTN180D3T1G	N3	3000/Tape & Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CEO}	85	V
Collector–Base Voltage	V_{CBO}	105	V
Emitter–Base Voltage	V_{EBO}	6	V
Collector Current — Continuous	I_C	1	A
total power dissipation	P_D	0.42	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ~ +150	°C

LBTN180D3T1G
S-LBTN180D3T1G



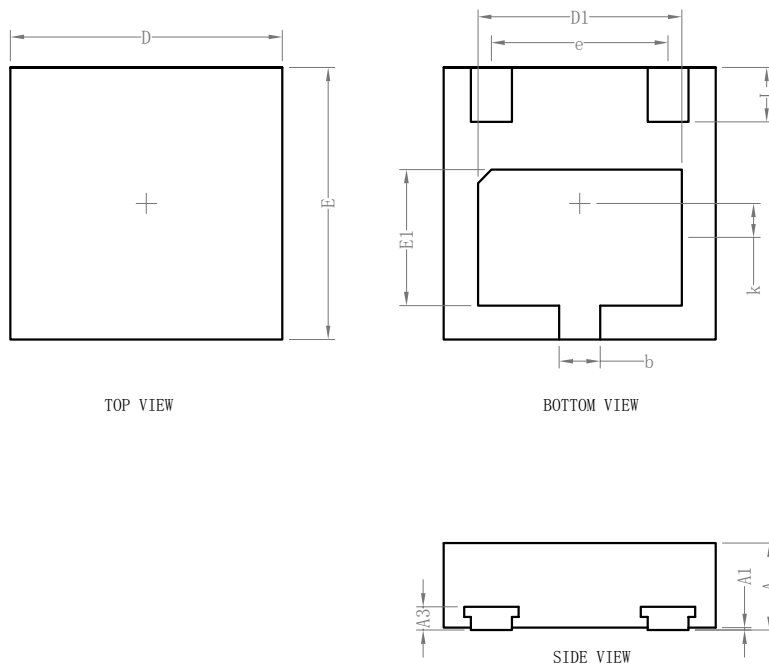
LBTN180D3T1G,S-LBTN180D3T1G
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector-base cut-off current	$I_E = 0; V_{CB} = 30\text{ V}$	–	100	nA
I_{EBO}	emitter-base cut-off current	$I_C = 0; V_{EB} = 5\text{ V}$	–	100	nA
I_{CEO}	emitter-base cut-off current	$I_B = 0; V_{CE} = 80\text{ V}$	–	5	uA
h_{FE}	DC current gain	$I_C = 5\text{ mA}; V_{CE} = 2\text{ V}$	63	–	
		$I_C = 150\text{ mA}; V_{CE} = 2\text{ V}$	63	250	
		$I_C = 500\text{ mA}; V_{CE} = 2\text{ V}$	40	–	
V_{CEsat}	collector-emitter saturation voltage	$I_C = 500\text{ mA}; I_B = 50\text{ mA}$	–	500	mV
V_{BEon}	base-emitter turn on voltage	$I_C = 500\text{ mA}; V_{CE} = 2\text{ V}$	–	1	V
f_T	transition frequency	$I_C = 50\text{ mA}; V_{CE} = 5\text{ V}; f = 100\text{ MHz}$	100	–	MHz
C_c	collector capacitance	$I_E = I_e = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$	6(typ.)		pF

LBTN180D3T1G,S-LBTN180D3T1G

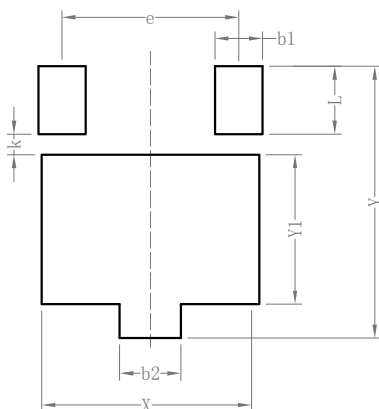
DFN2020-3

Package Outline Dimension



DFN2020-3			
Dim	Min.	Typ.	Max.
A	0.60	0.65	0.70
A1	0.00	0.02	0.05
A3	0.152REF.		
D	1.95	2.00	2.05
E	1.95	2.00	2.05
D1	1.45	1.50	1.55
E1	0.95	1.00	1.05
b	0.25	0.30	0.35
e	1.30TYP.		
k	0.20	0.25	0.30
L	0.35	0.40	0.45
All Dimensions in mm			

Suggested Pad layout



DFN2020-3	
Dim	(mm)
X	1.60
Y	2.00
b1	0.35
b2	0.45
L	0.50
Y1	1.10
k	0.15
e	1.30