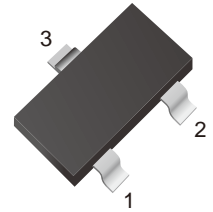


NPN General Purpose Amplifier

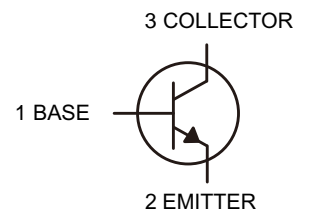
Features

- Epoxy Meets UL 94 V-0 Flammability Rating
- Small Outline Surface Mount Package
- For High-Speed Switching Applications
- Tape specification: Conductive
- Lead free in comply with EU RoHS 2011/65/EU directives



Ordering Information

Part Number	Shipping	Reel
LT2C4081A/B/C-TR3	3000PCS Tape&Reel	7 inches
LT2C4081A/B/C-TR12	12000PCS Tape&Reel	13 inches



Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Continuous Collector Current	150	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	55~+150	°C

Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=50\mu A, I_E=0$	60			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1mA, I_B=0$	50			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\mu A, I_C=0$	7			V
I_{CBO}	Collector Cut-Off Current	$V_{CB}=60V, I_E=0$			0.1	μA
I_{EBO}	Emitter Cut-Off Current	$V_{EB}=7V, I_C=0$			0.1	μA
h_{FE}	DC Current Gain	$V_{CE}=6V, I_C=1mA$	120		560	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=50mA, I_B=5mA$			0.4	V
f_T	Transition Frequency	$V_{CE}=12V, I_C=2mA$ $f=30MHz$		180		MHz
C_{ob}	Collector Output Capacitance	$V_{CB}=12V, I_E=0, f=1MHz$		2	3.5	pF

Classification Of hFE

Rank	LT2C4081A	LT2C4081B	LT2C4081C
Range	120-270	180-390	270-560



Characteristics Curves

Fig.1 Static Characteristics

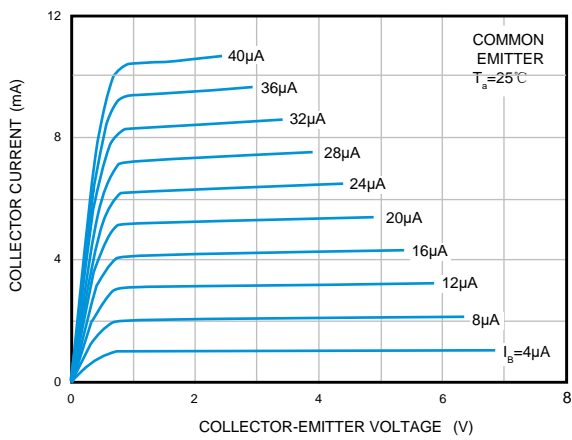


Fig.2 DC Current Gain Characteristics

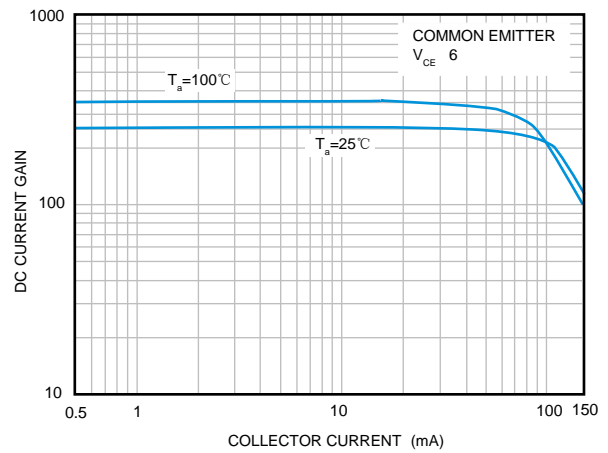


Fig.3 Base-Emitter Saturation Voltage Characteristics

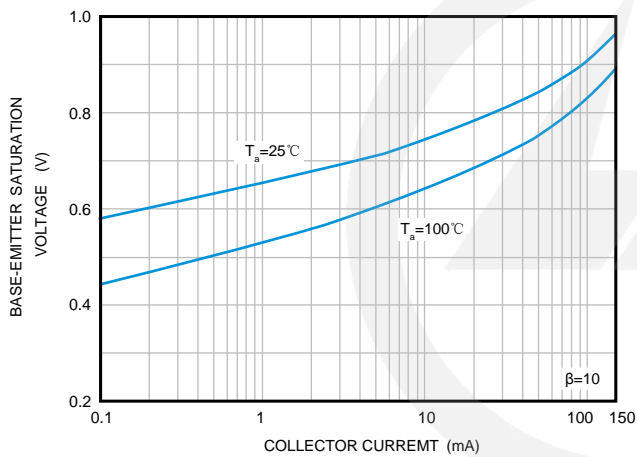


Fig.4 Collector-Emitter Saturation Voltage Characteristics

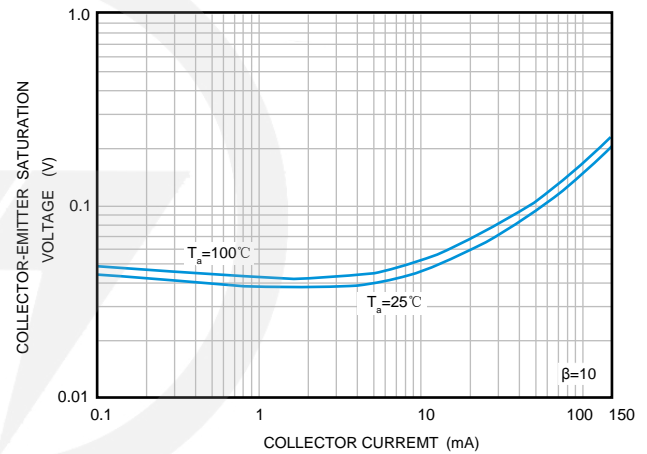


Fig.5 Base-Emitter Voltage Characteristics

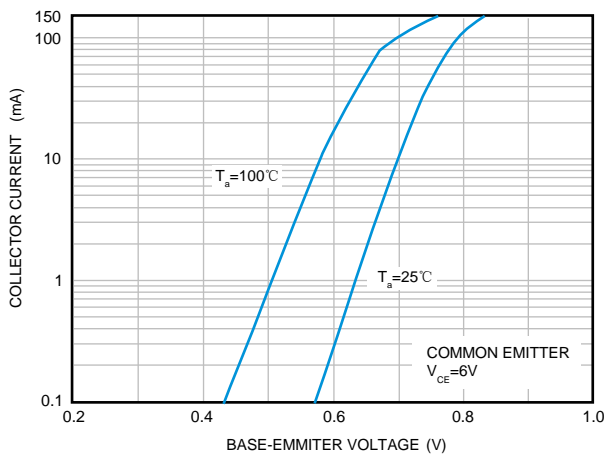
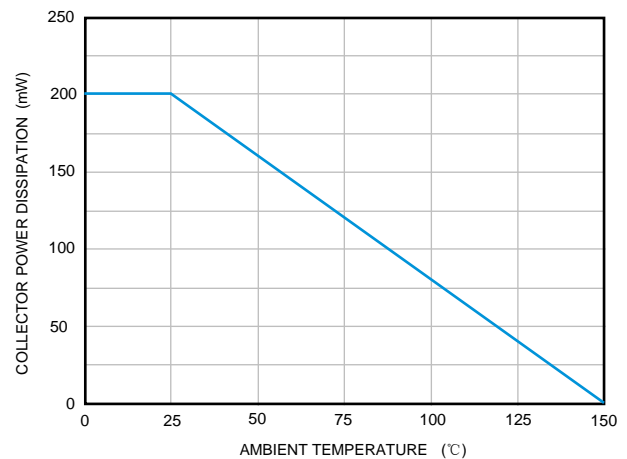
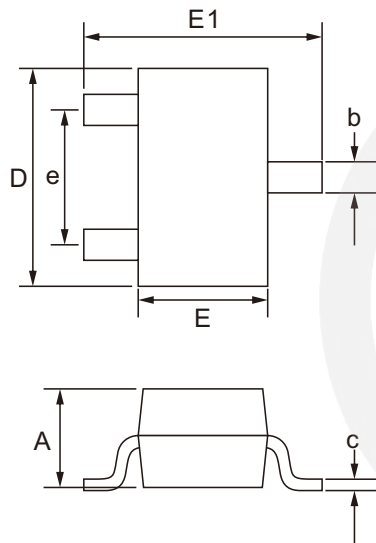


Fig.6 Collector Power Derating Curve



SOT-323 Package Outline



Unit: mm

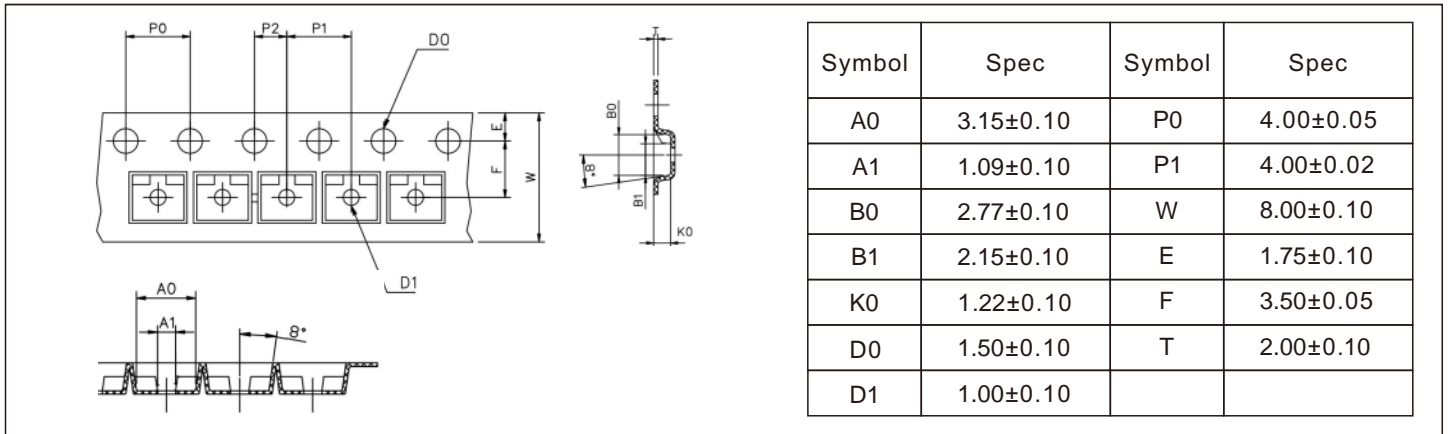
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.000
b	0.200	0.400
D	1.800	2.200
E	1.150	1.350
E1	2.150	2.450
C	0.080	0.250
e	1.200	1.400

Marking

Type number	Marking code
LT2C4081A	BQ
LT2C4081B	BR
LT2C4081C	BS

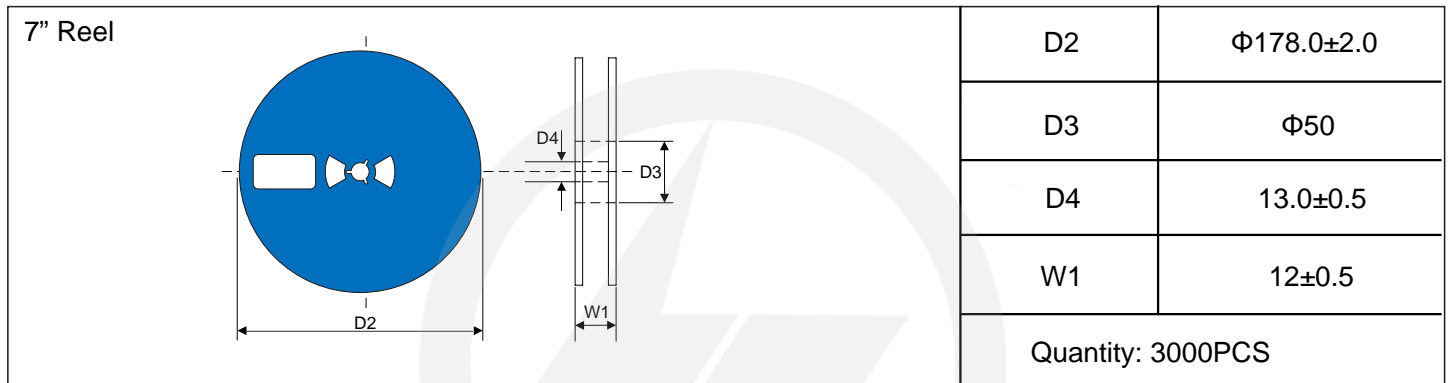
Carrier Tape Dimensions

Unit : mm



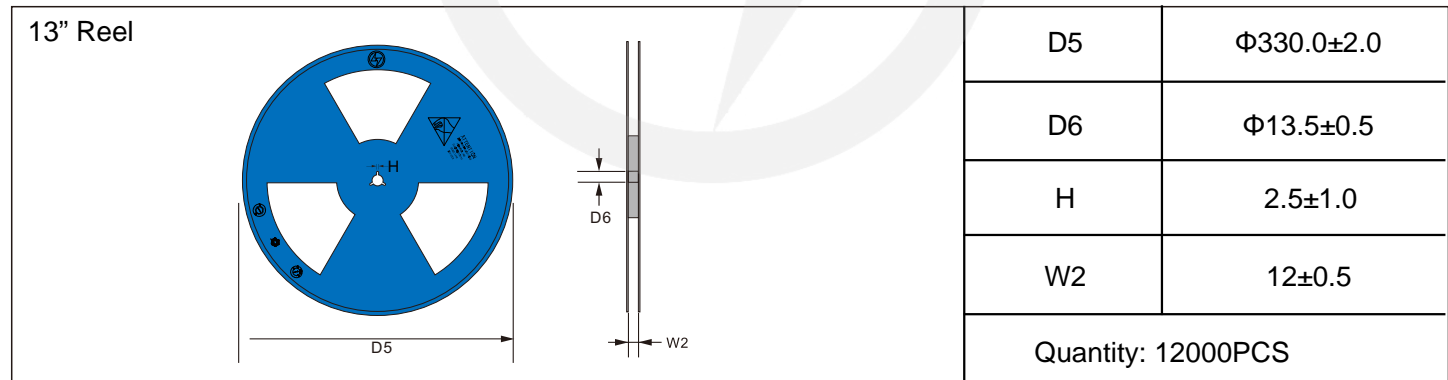
Reel Dimensions

Unit : mm

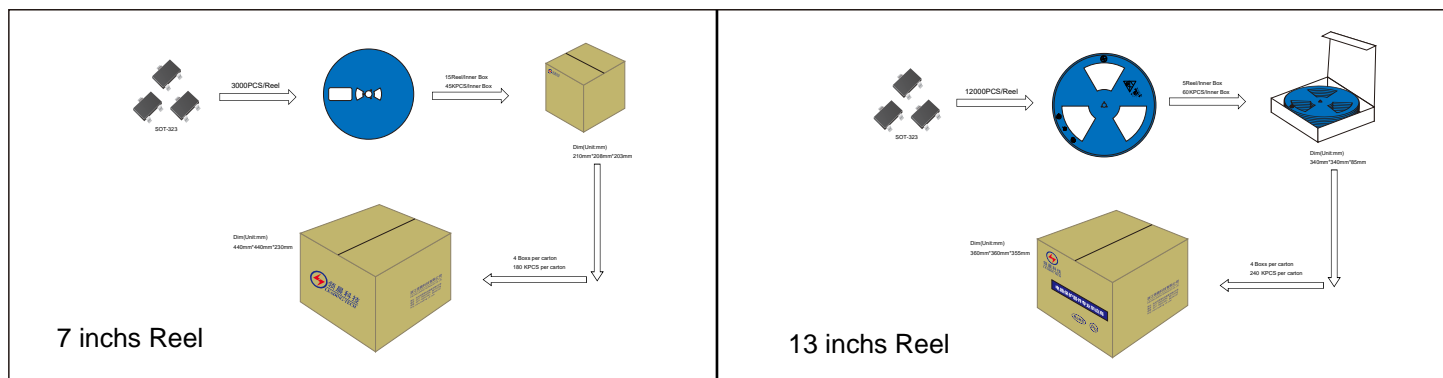


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.12.06	2024.12.06	3.0	New File	/	Ding	
02	2025.06.11	2025.06.11	3.1	Update packaging information	/	Ding	