

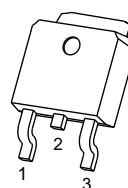
FEATURES

Low Speed Switching

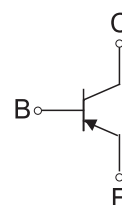


TO-252-2L

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER



Equivalent Circuit



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current -Continuous	-3	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	100	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55-150	°C

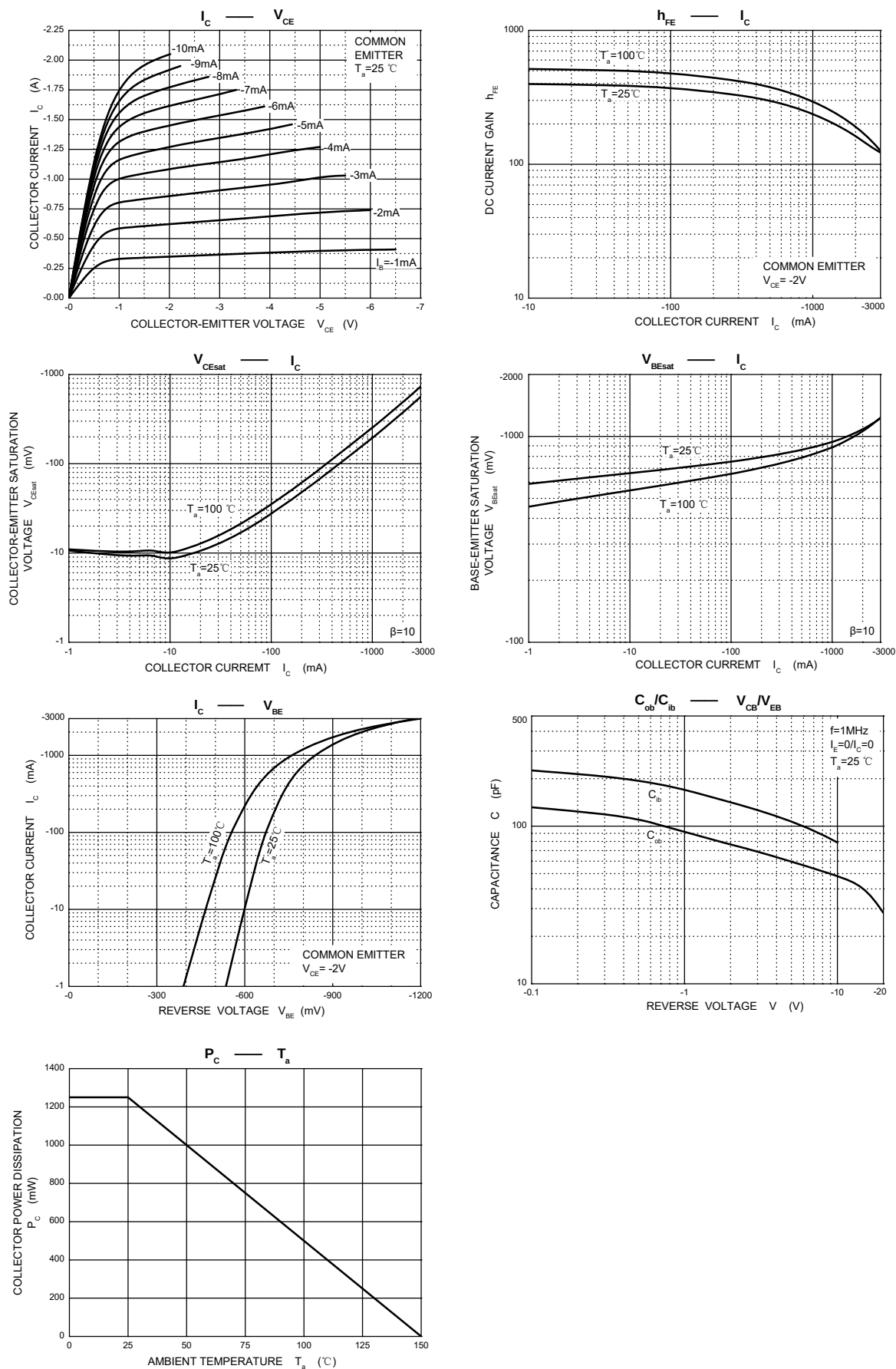
ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -40V, I_E = 0$			-1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = -30V, I_B = 0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-1	μA
DC current gain	h_{FE}	$V_{CE} = -2V, I_C = -1A$	60		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2A, I_B = -0.2A$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2A, I_B = -0.2A$			-1.5	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -0.1A$ $f = 10MHz$	50	80		MHz

CLASSIFICATION OF h_{FE}

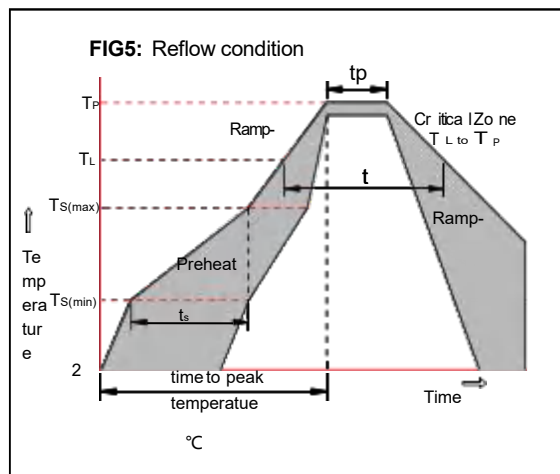
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

RATING AND CHARACTERISTIC CURVES



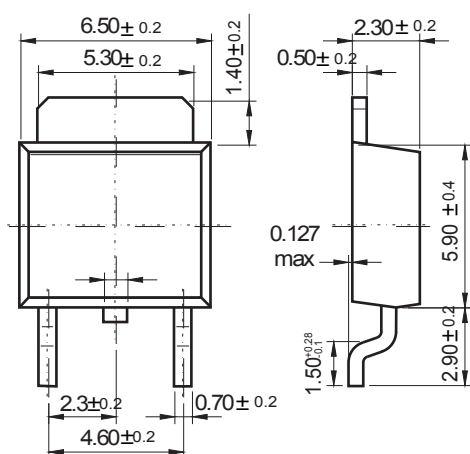
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C

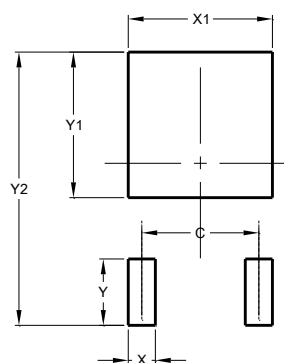


Package Dimensions & Suggested Pad Layout

TO-252



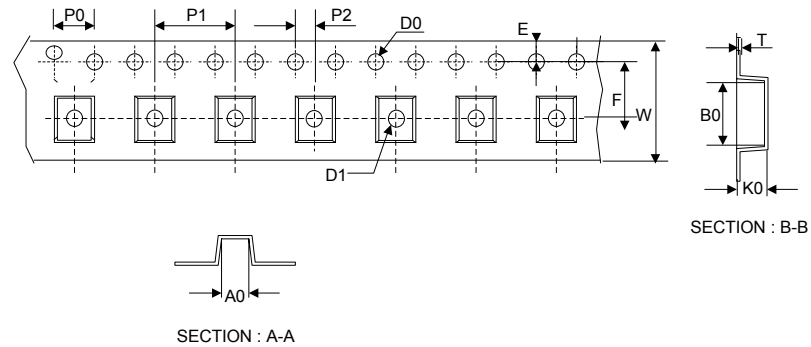
Dimensions in inches and (millimeters)



Dimensions	Value (in mm)
C	4.55
X	1.50
X1	5.80
Y	2.70
Y1	6.00
Y2	10.90

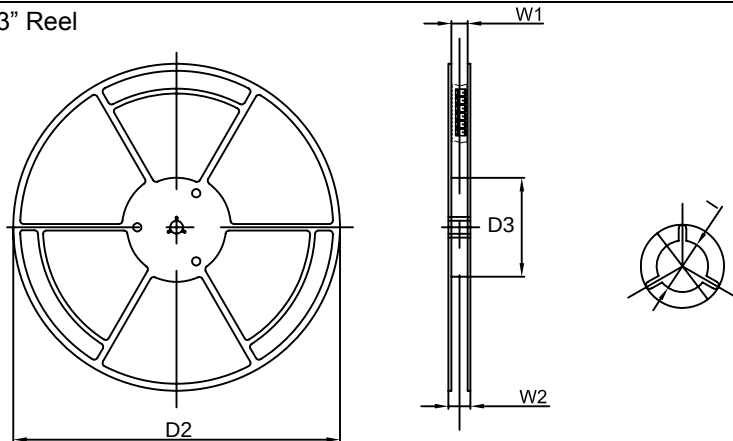
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.55±0.15
D1	1.55±0.20
E	1.75±0.20
F	7.50±0.20
W	16.00±0.20
A0	7.10±0.20
B0	10.50±0.20
K0	2.70±0.20
T	0.30±0.10
D2	330.0±5.0
D3	100.0±4.0
W1	20.0±5.0
W2	25.0±5.0
I	13.0±2.0

13" Reel



Quantity: 2500PCS