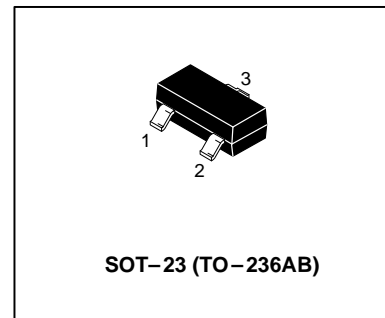
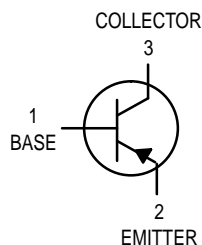




WMBT5401LT1

PNP Silicon Transistor



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CEO}	-150	Vdc
Collector–Base Voltage	V_{CBO}	-160	Vdc
Emitter–Base Voltage	V_{EBO}	-5.0	Vdc
Collector Current — Continuous	I_C	-500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D		mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$		$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

DEVICE MARKING

WMBT5401LT1 = 2L

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage ($I_C = -1.0 \text{ mAdc}, I_E = 0$)	$V_{(BR)CEO}$	-150	—	Vdc
Collector–Base Breakdown Voltage ($I_C = -100 \mu\text{Adc}, I_E = 0$)	$V_{(BR)CBO}$	-160	—	Vdc
Emitter–Base Breakdown Voltage ($I_E = -10 \mu\text{Adc}, I_C = 0$)	$V_{(BR)EBO}$	-5.0	—	Vdc
Collector Cutoff Current ($V_{CB} = -120 \text{ Vdc}, I_E = 0$) ($V_{CB} = -120 \text{ Vdc}, I_E = 0, T_A = 100^\circ\text{C}$)	I_{CB0}	— —	-50 -50	nAdc μAdc

WMBT5401LT1

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Continued)

Characteristic	Symbol	Min	Max	Unit
ON CHARACTERISTICS				
DC Current Gain ($I_C = -1.0\text{ mA}_{dc}$, $V_{CE} = -5.0\text{ V}_{dc}$) ($I_C = -10\text{ mA}_{dc}$, $V_{CE} = -5.0\text{ V}_{dc}$) ($I_C = -50\text{ mA}_{dc}$, $V_{CE} = -5.0\text{ V}_{dc}$)	h_{FE}	80 80 80	— 240 —	—
Collector–Emitter Saturation Voltage ($I_C = -10\text{ mA}_{dc}$, $I_B = -1.0\text{ mA}_{dc}$) ($I_C = -50\text{ mA}_{dc}$, $I_B = -5.0\text{ mA}_{dc}$)	$V_{CE(sat)}$	— —	-0.2 -0.5	Vdc
Base–Emitter Saturation Voltage ($I_C = -10\text{ mA}_{dc}$, $I_B = -1.0\text{ mA}_{dc}$) ($I_C = -50\text{ mA}_{dc}$, $I_B = -5.0\text{ mA}_{dc}$)	$V_{BE(sat)}$	— —	-1.0 -1.0	Vdc
SMALL–SIGNAL CHARACTERISTICS				
Current–Gain — Bandwidth Product ($I_C = -10\text{ mA}_{dc}$, $V_{CE} = -10\text{ V}_{dc}$, $f = 100\text{ MHz}$)	f_T	100	300	MHz
Output Capacitance ($V_{CB} = -10\text{ V}_{dc}$, $I_E = 0$, $f = 1.0\text{ MHz}$)	C_{obo}	—	6.0	pF
Small Signal Current Gain ($I_C = -1.0\text{ mA}_{dc}$, $V_{CE} = -10\text{ V}_{dc}$, $f = 1.0\text{ kHz}$)	h_{fe}	40	200	—
Noise Figure ($I_C = -200\text{ }\mu\text{A}_{dc}$, $V_{CE} = -5.0\text{ V}_{dc}$, $R_S = 10\text{ }\Omega$, $f = 1.0\text{ kHz}$)	NF	—	8.0	dB