

**SOT-23**


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

**MARKING: 2L**
**Features**

- Complementary to MMBT5551
- Epitaxial planar die construction
- Power Dissipation of 300mW

**Maximum Ratings**

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-160	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-150	V
Emitter -Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current-Continuous	I <sub>c</sub>	-600	mA
Collector Power Dissipation	P <sub>c</sub>	300	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	416	°C/W

**Electrical Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-160		V
Collector-emitter breakdown voltage	V(BR)CEO *	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-150		V
Emitter-base breakdown voltage	V(BR)EBO	I <sub>E</sub> =-10μA, I <sub>C</sub> =0	-5		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-120V, I <sub>E</sub> =0		-100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0		-100	nA
DC current gain	h <sub>FE</sub> (1) *	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1mA	80		
	h <sub>FE</sub> (2) *	V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA	100	300	
	h <sub>FE</sub> (3) *	V <sub>CE</sub> =-5V, I <sub>C</sub> =-50mA	30		
Collector-emitter saturation voltage	V <sub>CE(sat)1</sub> *	I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA		-0.2	V
	V <sub>CE(sat)2</sub> *	I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA		-0.5	V
Base -emitter saturation voltage	V <sub>BE(sat)1</sub> *	I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA		-1.00	V
	V <sub>BE(sat)2</sub> *	I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA		-1.00	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =10mA, f=30MHz	100		MHz

\*Pulse test: pulse width ≤ 300μs, duty cycle ≤ 2.0%

**CLASSIFICATION OF h<sub>FE</sub>(2)**

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

