TRANSISTOR (NPN) **Plastic-Encapsulate Transistor**

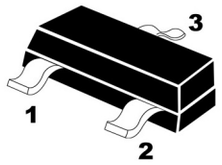
FEATURES

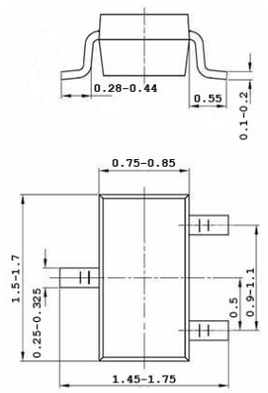
- Low Cob: Cob = 2.0pF(typ.)
- Complement to 2SA1774

MARKING: BQ, BR, BS

SOT-523

1. BASE
2. EMITTER
3. COLLECTOR





UNIT:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

MAXIMUM RATINGS

Parameter	Symbol	Value	UNITS
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current - Continuous	I_C	150	mA
Collector Dissipation	P_C	150	mW
Junction and Storage Temperature	T_J, T_{stg}	-55-150	℃

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=50μA, I_E=0	60			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	50			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=50μA, I_C=0	7			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=7V, I_C=0			0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=6V, I_C=1mA	120		560	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=50mA, I_B=5mA			0.4	V
Transition Frequency	f_T	V_{CE}=12V, I_C=2mA, f=100MHz		180		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=12V, I_E=0, f=1MHz			3.5	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	120-270	180-390	270-560