

TRANSISTOR (PNP)
Plastic-Encapsulate Transistors

FEATURES

- Large $I_{C-ICMax.} = -500mA$
- Low $V_{CE(sat)}$ Ideal for low-voltage operation

MARKING: HP, HQ, HR

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

Unit:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
 Ratings at 25°C ambient temperature unless otherwise specified.

MAXIMUM RATINGS

Parameters	Symbols	Value	UNITS
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-32	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-500	mA
Collector Dissipation	P_C	200	mW
Junction and Storage Temperature	T_J, T_{stg}	-55-150	°C

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

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-40			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-32			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -20V, I_E = 0$			-1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-1	μA
DC Current Gain	h_{FE}	$V_{CE} = -3V, I_C = -10mA$	82		390	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$			-0.4	V
Transition Frequency	f_T	$V_{CE} = -5V, I_C = -20mA, f = 100MHz$		200		MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		7		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390

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