

TRANSISTOR (PNP)
Plastic-Encapsulate Transistors

FEATURES

Power dissipation
 $P_{CM} : 0.2W$ ($T_{amb}=25^{\circ}C$)

Collector current
 $I_{CM} : -0.15A$

Collector-base Voltage
 $V_{(BR)CBO} : -60 V$

Operating and storage junction temperature range
 $T_J, T_{stg} : -55^{\circ}C$ to $+150^{\circ}C$

MARKING: FQ , FR , FS

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

Unit:mm

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

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-50\mu A, I_E=0$	-60			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-50			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-50\mu A, I_C=0$	-6			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-60V, I_E=0$			-0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-6V, I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-6V, I_C=-1mA$	120		560	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-50mA, I_B=-5mA$			-0.5	V
Transition Frequency	f_T	$V_{CE}=-12V, I_C=-2mA, f=30MHz$	120			MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-12V, I_E=0, f=1MHz$		5.0		pF

CLASSIFICATION OF h_{FE}

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

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