

TRANSISTOR (PNP)

Plastic-Encapsulate Transistors

FEATURES

Power dissipation

$$P_{CM} : 0.2W \text{ (Tamb=25}^{\circ}\text{C)}$$

Collector current

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

Collector-base Voltage

$$V_{(BR)CBO} : -60 \text{ V}$$

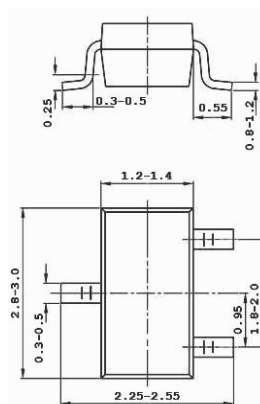
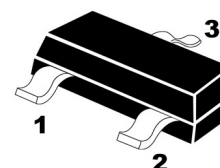
Operating and storage junction temperature range

$$T_J, T_{stg} : -55^{\circ}\text{C to } +150^{\circ}\text{C}$$

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