TRANSISTOR (PNP) **Plastic-Encapsulate Transistors**

FEATURES

Power dissipation

P_{CM} : 0.2W (Tamb=25°C)

Collector current

I_{CM} : -0.15A

Collector-base Voltage

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

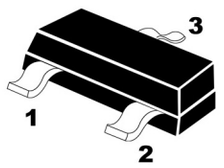
Operating and storage junction temperature range

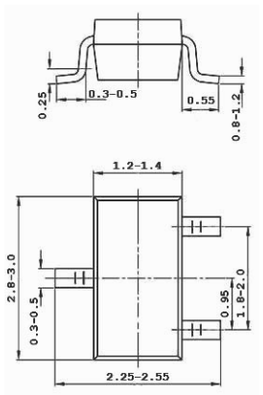
T_J, T_{stg} : -55°C to +150°C

MARKING: FQ , FR , FS

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR





Unit:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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	-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

RoHS Pb-free TIP Semiconductor