

TRANSISTOR (NPN)

Plastic-Encapsulate Transistor

FEATURES

Power dissipation

$$P_{CM} : 0.15W \text{ (Tamb=25}^{\circ}\text{C)}$$

Collector current

$$I_{CM} : 0.1A$$

Collector-base Voltage

$$V_{(BR)CBO} : 50 \text{ V}$$

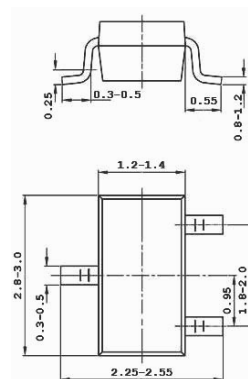
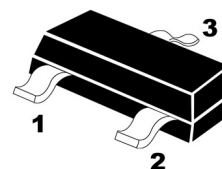
Operating and storage junction temperature range

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

MARKING:J6

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	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100 \mu A, I_E=0$	50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1mA, I_B=0$	45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100 \mu A, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=50V, I_E=0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=35V, I_B=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3V, I_C=0 \text{ mA}$		0.1	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	200	1000	
Collector-emitter saturation voltage	V_{CEsat}	$I_C=100mA, I_B=5mA$		0.3	V
Base-emitter saturation voltage	V_{BEsat}	$I_C=100mA, I_B=5mA$		1	V
Transition frequency	f_r	$V_{CE}=5V, I_C=10mA, f=30MHz$	150		MHz

CLASSIFICATION OF h_{FE}

Rank	L	H
Range	200-450	450-1000