



# S8050LT1

# PLASTIC-ENCAPSULATE TRANSISTORS

S8050LT1 TRANSISTOR ( NPN )

SOT-23

## FEATURES

Power dissipation

$$P_{CM} : 0.3 \text{ W ( } T_{amb}=25^{\circ}\text{C )}$$

Collector current

$$I_{CM} : 0.5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : 40 \text{ V}$$



1. BASE

2. EMITTER

3. COLLECTOR

## ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100 \mu\text{A}$ , $I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1\text{mA}$ , $I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100 \mu\text{A}$ , $I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40\text{V}$ , $I_E=0$			0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CB}=20\text{V}$ , $I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}$ , $I_C=0$			0.1	$\mu\text{A}$
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=1\text{V}$ , $I_C=50\text{mA}$	120		350	
	$H_{FE(2)}$	$V_{CE}=1\text{V}$ , $I_C=500\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$ , $I_B=50\text{mA}$			0.6	V
Base-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$ , $I_B=50\text{mA}$			1.2	V
Base-emitter voltage	$V_{BE}$	$I_E=100\text{mA}$			1.4	
Transition frequency	$f_T$	$V_{CE}=6\text{V}$ , $I_C=20\text{mA}$ $f=30\text{MHz}$	150			MHz

## CLASSIFICATION OF $H_{FE(1)}$

Rank	L	H
Range	100-200	200-350

DEVICE MARKING : S8050LT1=J3Y