Elektronische Bauelemente

S9014T

NPN Silicon

Pre-Amplifier, Low Level & Low Noise

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

TO-92

FEATURES

Power dissipation

P_{CM} : 0.4 W

Collector current

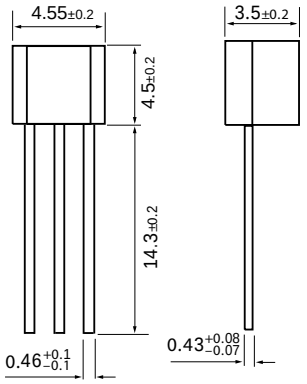
I_{CM} : 0.1 A

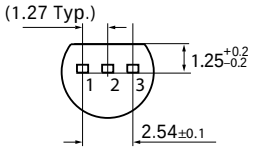
Collector-base voltage

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

Operating & storage junction temperature

T_j, T_{stg} : - 55°C ~ + 150°C





1: Emitter
2: Base
3: Collector

ELECTRICAL CHARACTERISTICS (Tamp.=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic= 100 μ A, I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic= 0.1mA, I_B=0	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100 μ A, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50 V , I_E=0			0.1	μ A
Collector cut-off current	I_{CEO}	V_{CE}=35V , I_B=0			0.1	μ A
Emitter cut-off current	I_{EBO}	V_{EB}= 3V , I_C=0			0.1	μ A
DC current gain	h_{FE}	V_{CE}=5V, I_C= 1mA	60		1000	
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=100 mA, I_B= 5mA			0.3	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=100 mA, I_B= 5mA			1	V
Transition frequency	f_T	V_{CE}=5V, I_C= 10mA f=30MHz	150			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	**A**	**B**	**C**	**D**
Range	**60-150**	**100-300**	200-600	400-1000

Typical Characteristics

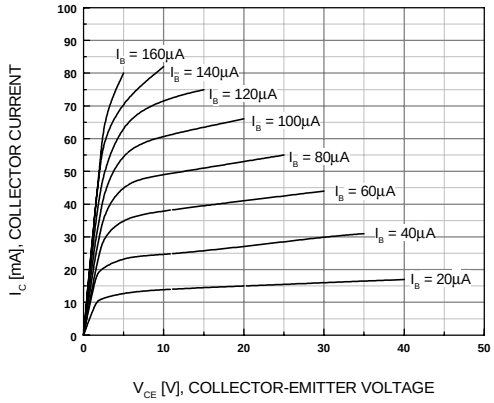


Figure 1. Static Characteristic

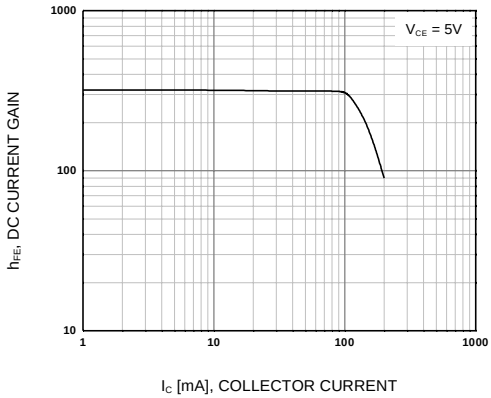


Figure 2. DC current Gain

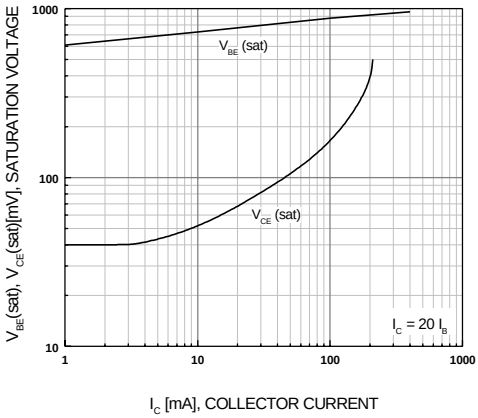


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

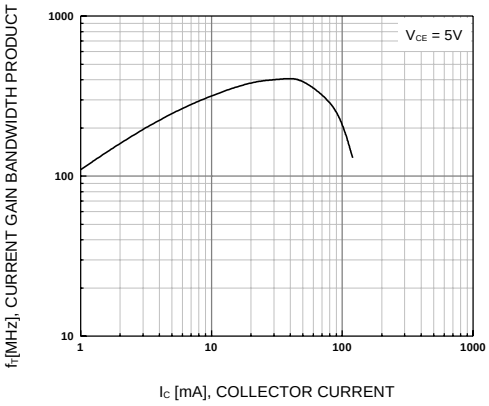


Figure 4. Current Gain Bandwidth Product