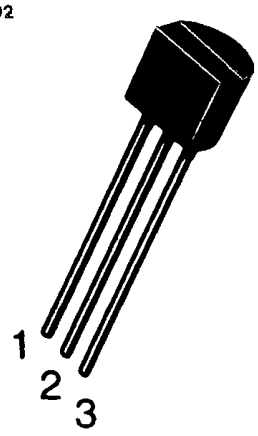
Transistors
2N5086

USHA (INDIA) LTD

AMPLIFIER TRANSISTOR

- **Collector-Emitter Voltage: V_{CEO} =50V**
- **Collector Dissipation: P_C (max)=625mW**

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a =25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	−50	V
Collector-Emitter Voltage	V_{CEO}	−50	V
Emitter-Base Voltage	V_{EBO}	−3	V
Collector Current	I_C	−50	mA
Collector Dissipation	P_C	−625	mW
Junction Temperature	T_j	150	°C
Storage Temperature	Tstg	−55 ~ 150	°C

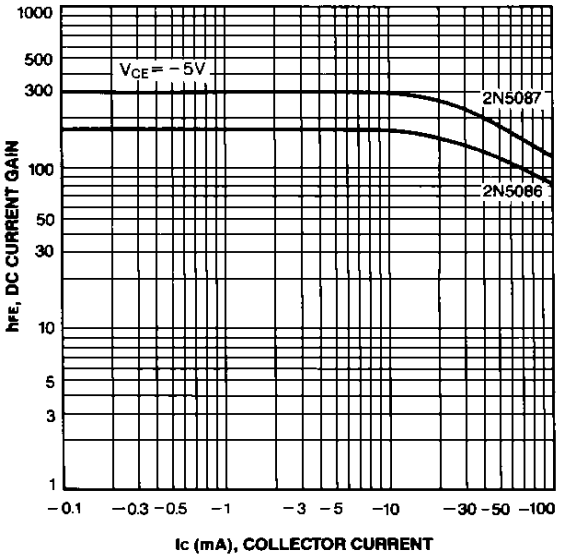
ELECTRICAL CHARACTERISTICS (T_a =25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=−100μA, I_E=0	−50			V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=−1mA, I_B=0	−50			V
Collector Cut-off Current	I_{CBO}	V_{CB}=−10V, I_E=0			−10	nA
		V_{CB}=−35V, I_E=0			−50	nA
Base Cut-off Current	I_{EBO}	V_{BE}=−3V, I_C=0			−50	nA
DC Current Gain	h_{FE}					
		V_{CE}=−5V, I_C=−100μA	150		500	
		V_{CE}=−5V, I_C=−1mA	150			
		*V_{CE}=−5V, I_C=−10mA	150			
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=−10mA, I_B=−1mA			−0.3	V
Base-Emitter On Voltage	V_{BE} (on)	I_C=−1mA, V_{CE}=−5V			−0.85	V
Collector-Base Capacitance	C_{CB}	V_{CB}=−5V, I_E=0 f=100KHz			4	pF
Current Gain bandwidth Product	f_T	V_{CE}=−5V, I_C=−500μA f=20MHz	40			MHz
Noise Figures	N_F	V_{CE}=−5V, I_C=−20μA R_S=10KΩ f=10Hz to 15.7KHz			3	dB
		V_{CE}=−5V, I_C=−100μA R_S=3KΩ, f=1KHz			3	dB

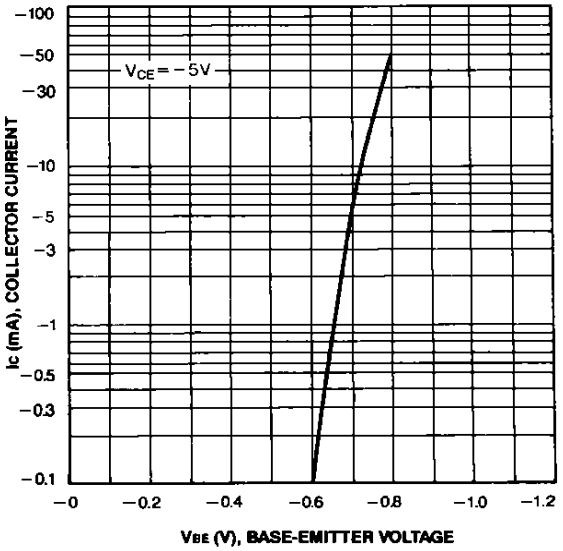
*Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY

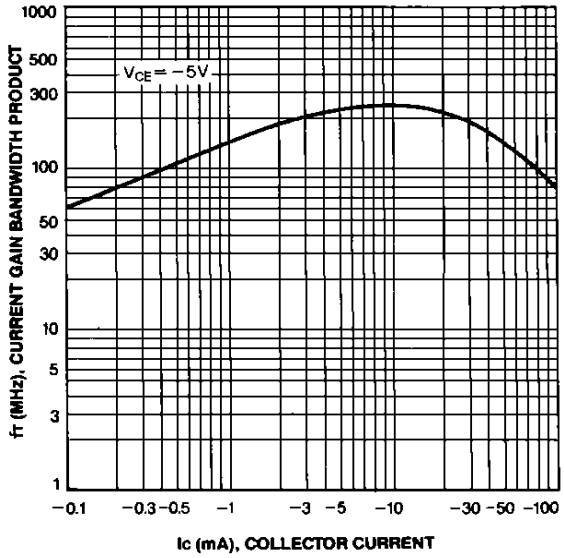
DC CURRENT GAIN



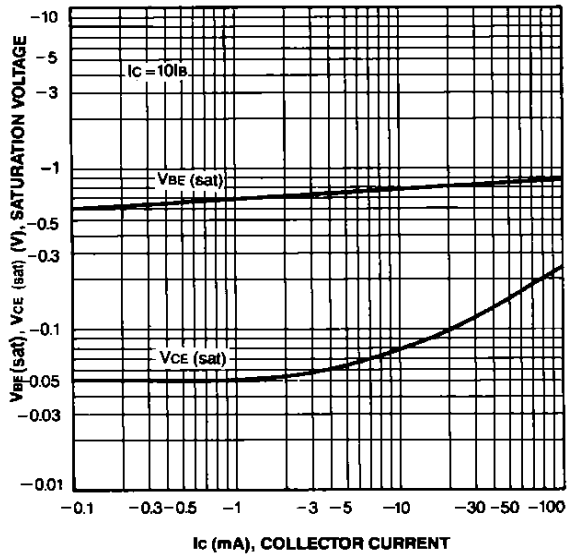
BASE-EMITTER ON VOLTAGE



CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR-BASE CAPACITANCE