Transistors
USP8099

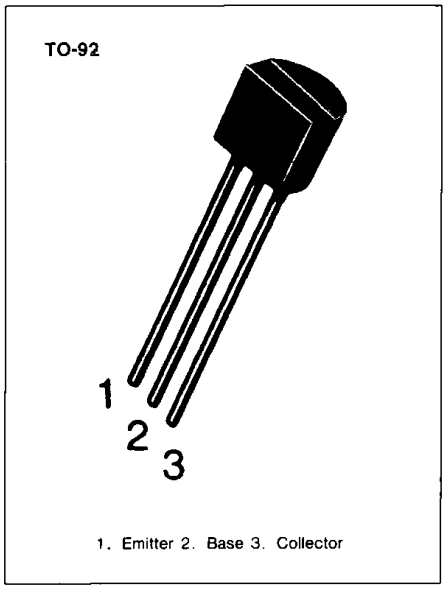
USHA (INDIA) LTD

AMPLIFIER TRANSISTOR

- **Collector Dissipation: P_C (max)=625mW**

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	500	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	−55~150	°C



1. Emitter 2. Base 3. Collector

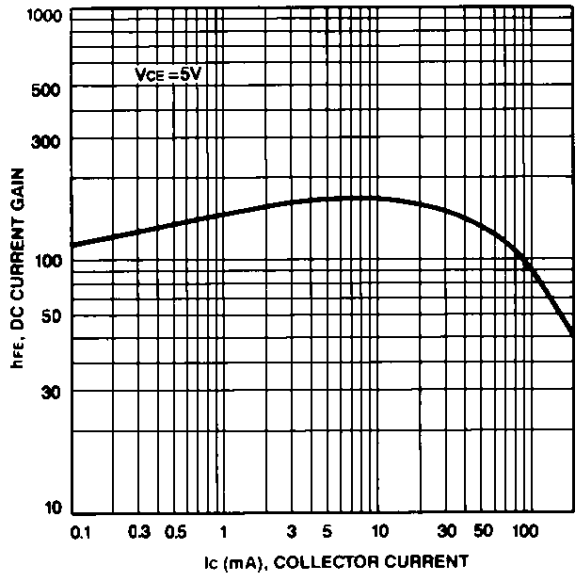
ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, I_E=0	80		V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	80		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	6		V
Collector Cut-off Current	I_{CBO}	V_{CB}=80V, I_E=0		100	nA
Collector Cut-off Current	I_{CEO}	V_{CE}=60V, I_B=0		100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=6V, I_C=0		100	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=1mA	100	300	
		V_{CE}=5V, I_C=10mA	100		
		V_{CE}=5V, I_C=100mA	75		
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=100mA, I_B=5mA		0.4	V
		I_C=100mA, I_B=10mA		0.3	V
*Base-Emitter On Voltage	V_{BE} (on)	V_{CE}=5V, I_C=10mA	0.6	0.8	V
Current Gain Bandwidth Product	f_T	V_{CE}=5V, I_C=10mA f=100MHz	150		MHz
Output Capacitance	C_{OB}	V_{CB}=5V, I_E=0 f=1MHz		6	pF

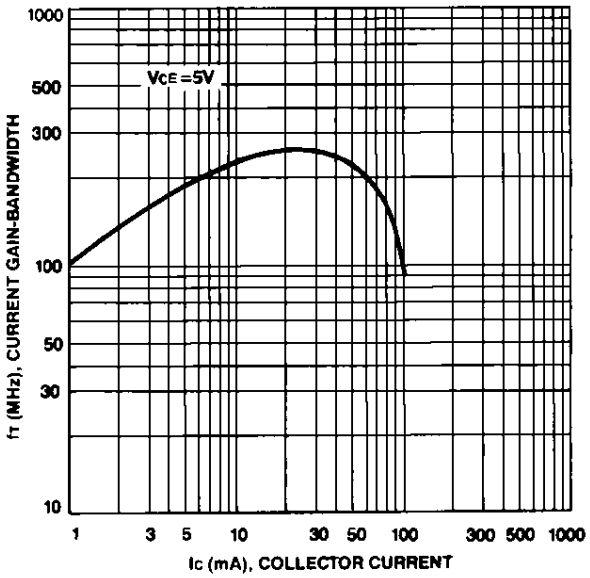
*Pulse Test: PW=300μs, Duty Cycle=2%

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY

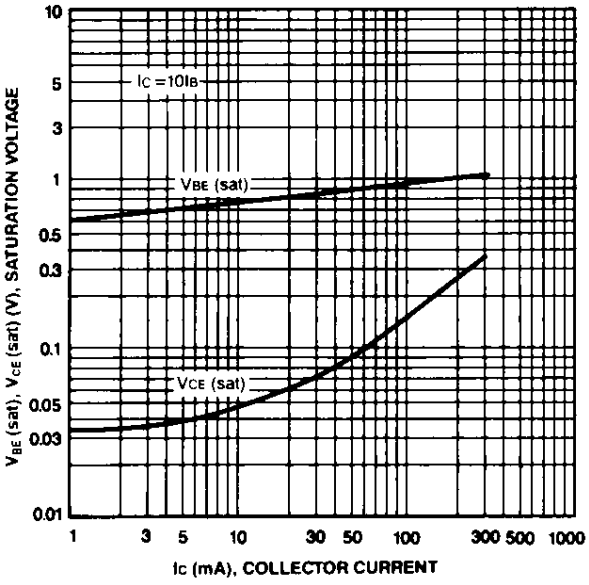
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE