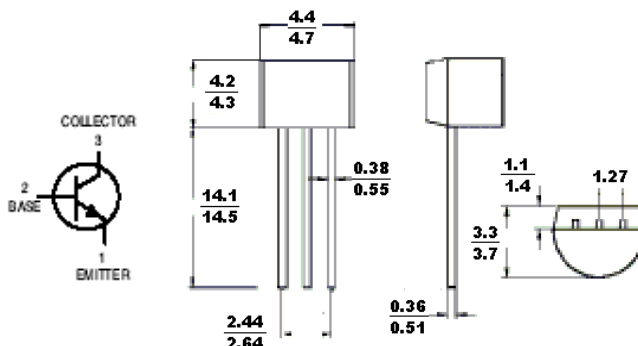
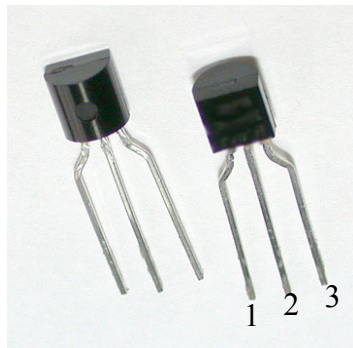


NPN Epitaxial Planar Transistor

Mechanical Dimensions

MPSA44



TO-92

Dimensions in mm

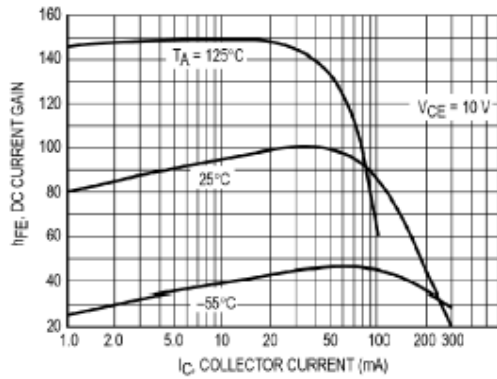
Feature

- * Power Dissipation $P_{cm} = 625 \text{ mW}$ ($T_a = 25^\circ\text{C}$)
- * Collector Current $I_{cm} = 0.2\text{A}$
- * Collector-base Voltage $V_{br}(cbo) = 400\text{V}$
- * Operating and Storage Junction Temperature Range $T_j, T_{stg}: -55^\circ\text{C} \sim +150^\circ\text{C}$
- * Marking A44

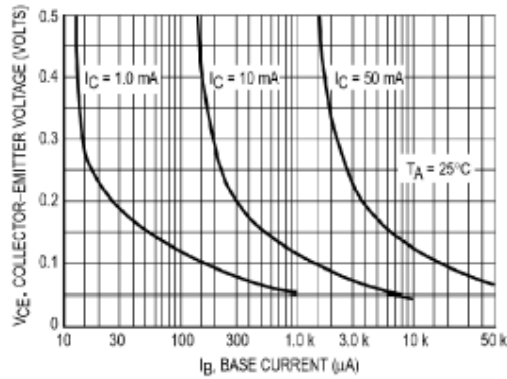
Max Ratings at $T_a = 25^\circ\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Test Condition	MIN	MAX	Unit
Collector-base breakdown Voltage	$V_{br}(cbo)$	$I_c = 100\mu\text{A}, I_e = 0$	400		V
Collector-Emitter breakdown Voltage	$V_{br}(ceo)$	$I_c = 1\text{mA}, I_b = 0$	400		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}	$V_{cb} = 400\text{V}, I_e = 0$		0.1	μA
Base cut- off current	I_{ceo}	$V_{ce} = 400\text{V}, I_b = 0$		5	μA
Emitter cut- off current	I_{ebo}	$V_{eb} = 4\text{V}, I_c = 0$		0.1	μA
DC current Gain	HFE1	$V_{ce} = 10\text{V}, I_c = 10\text{mA}$	80	300	
DC current Gain	HFE2	$V_{ce} = 1\text{V}, I_c = 50\text{mA}$	70		
DC current Gain	HFE3	$V_{ce} = 1\text{V}, I_c = 100\text{mA}$	60		
Collector-Emitter Saturation Voltage	$V_{ce(sat)}$	$I_c = 10\text{mA}, I_b = 1\text{mA}$		0.2	V
Collector-Emitter Saturation Voltage	$V_{ce(sat)}$	$I_c = 50\text{mA}, I_b = 5\text{mA}$		0.2	V
Base-Emitter Saturation Voltage	$V_{be(sat)}$	$I_c = 10\text{mA}, I_b = 1\text{mA}$		0.75	V
Transition Frequency	f_T	$V_{ce} = 20\text{V}, I_c = 10\text{mA}, f = 30\text{MHz}$	50		MHz

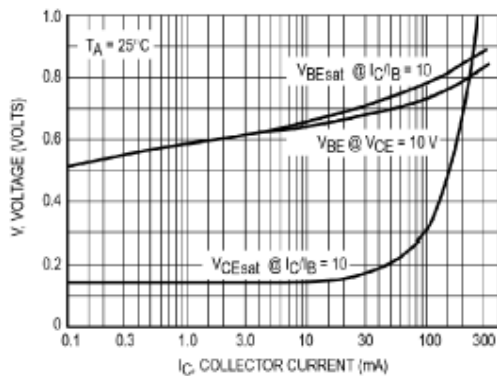
Typical Characteristics



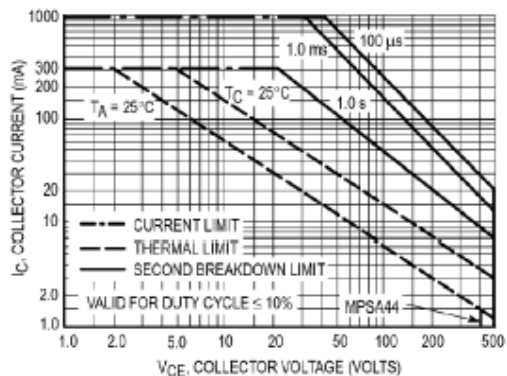
DC Current Gain



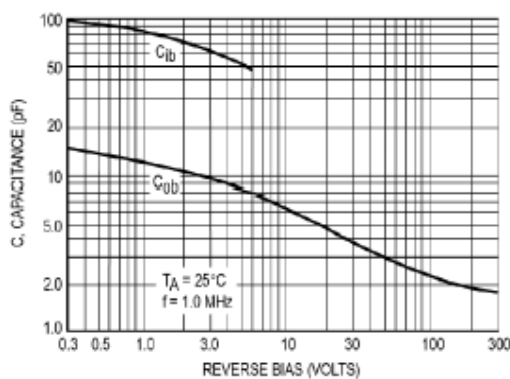
Collector Saturation Region



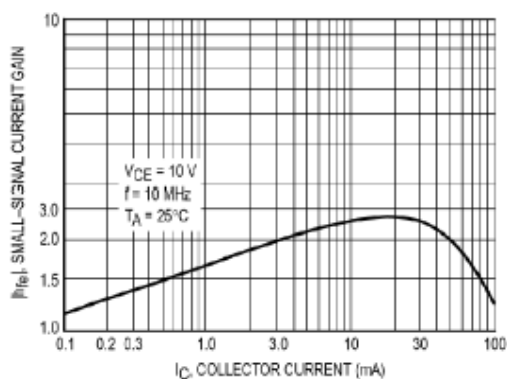
"On" Voltages



Active Region — Safe Operating Area



Capacitance



High Frequency Current Gain