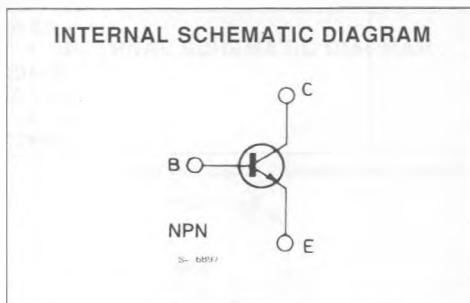
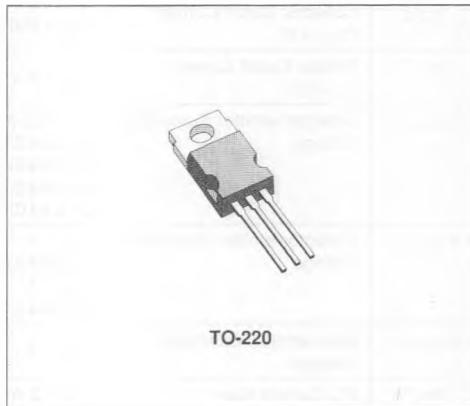


LINEAR AND SWITCHING APPLICATIONS

DESCRIPTION

The D44C1 to D44C12 are silicon multiepitaxial planar transistors in TO-220 plastic package intended for linear and switching applications.


ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value				Unit
		D44C 1/2/3	D44C 4/5/6	D44C 7/8/9	D44C 10/11/12	
V_{CES}	Collector-emitter Voltage ($V_{BE} = 0$)	40	55	70	90	V
V_{CEO}	Collector -emitter Voltage ($I_B = 0$)	30	45	60	80	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	5	5	5	5	V
I_C	Collector Current			4		A
I_{CM}	Collector Peak Current ($t_p = 10 \text{ ms}$)			6		A
P_{tot}	Total Power Dissipation $T_{case} \leq 25^\circ\text{C}$ $T_{amb} \leq 25^\circ\text{C}$			30 1.67		W W
T_{stg}	Storage Temperature			- 55 to 150		°C
T_J	Junction Temperature			150		°C

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	Max	4.2	$^{\circ}\text{C}/\text{W}$
$R_{th(j-amb)}$	Thermal Resistance Junction-ambient	Max	75	$^{\circ}\text{C}/\text{W}$

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	$V_{CE} = \text{Rated } V_{CES}$			10	μA
I_{EBO}^*	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 5 \text{ V}$			100	μA
$V_{CEO(sus)}^*$	Collector-emitter Sustaining Voltage	$I_C = 100 \text{ mA}$ for D44C1-2-3 for D44C4-5-6 for D44C7-8-9 for D44C10-11-12	30			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 1 \text{ A}$ $I_B = 50 \text{ mA}$ for D44C2-3-5-6-8-9-11-12 $I_C = 1 \text{ A}$ $I_B = 0.1 \text{ A}$ for D44C1-4-7-10			0.5	V
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = 1 \text{ A}$ $I_B = 100 \text{ mA}$			1.3	V
h_{FE}^*	DC Current Gain	$I_C = 0.2 \text{ A}$ $V_{CE} = 1 \text{ V}$ $I_C = 2 \text{ A}$ $V_{CE} = 1 \text{ V}$ for D44C3-6-9-12 $I_C = 0.2 \text{ A}$ $V_{CE} = 1 \text{ V}$ $I_C = 1 \text{ A}$ $V_{CE} = 1 \text{ V}$ for D44C2-5-8-11 $I_C = 0.2 \text{ A}$ $V_{CE} = 1 \text{ V}$ $I_C = 1 \text{ A}$ $V_{CE} = 1 \text{ V}$ for D44C1-4-7-10	40 20 100 20 25 10		120 220	

* Pulsed . pulse duration = 300 μs , duty cycle = 2%.