

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistors

D44TD3/4/5

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 300V(\text{Min})$ - D44TD3
= 350V(Min)- D44TD4
= 400V(Min)- D44TD5
- High Switching Speed
- Low Saturation Voltage

APPLICATIONS

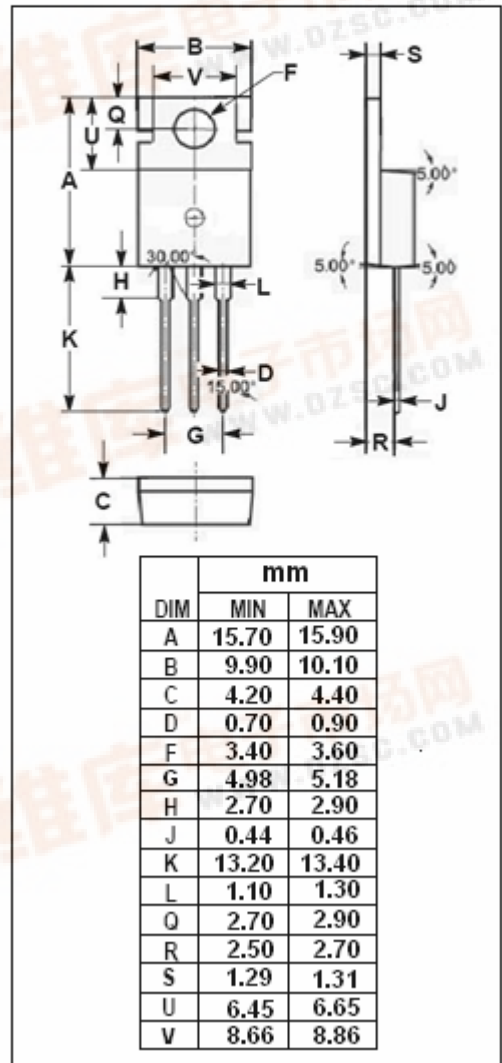
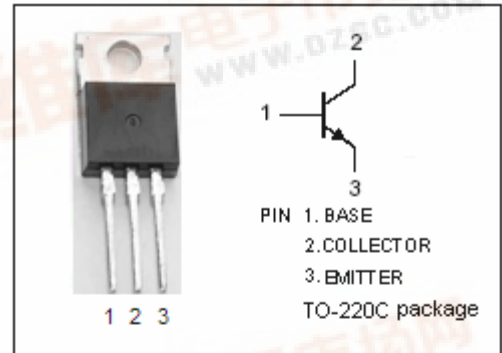
- Designed for switching regulators, high resolution deflection circuits, inverters and motor drivers.

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	D44TD3	400	V
		D44TD4	500	
		D44TD5	600	
V_{CEO}	Collector-Emitter Voltage	D44TD3	300	V
		D44TD4	350	
		D44TD5	400	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		4	A
I_{CM}	Collector Current-Peak		8	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$		50	W
T_J	Junction Temperature		150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range		-65~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.56	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	D44TD3	$I_C = 0.1\text{A}; I_B = 0$	300		V
		D44TD4		350		
		D44TD5		400		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = 2\text{A}; I_B = 0.4\text{A}$		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		$I_C = 2\text{A}; I_B = 0.4\text{A}$		1.5	V
I_{CEV}	Collector Cutoff Current	D44TD3	$V_{CE} = 400\text{V}; V_{BE(off)} = 1.5\text{V}$		0.1	mA
		D44TD4	$V_{CE} = 500\text{V}; V_{BE(off)} = 1.5\text{V}$		0.1	
		D44TD5	$V_{CE} = 600\text{V}; V_{BE(off)} = 1.5\text{V}$		0.1	
I_{EBO}	Emitter Cutoff Current		$V_{EB} = 6\text{V}; I_C = 0$		1.0	mA
h_{FE}	DC Current Gain		$I_C = 2\text{A}; V_{CE} = 3\text{V}$	5		