

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Darlington Power Transistors

D44D1/2/3/4/5/6

DESCRIPTION

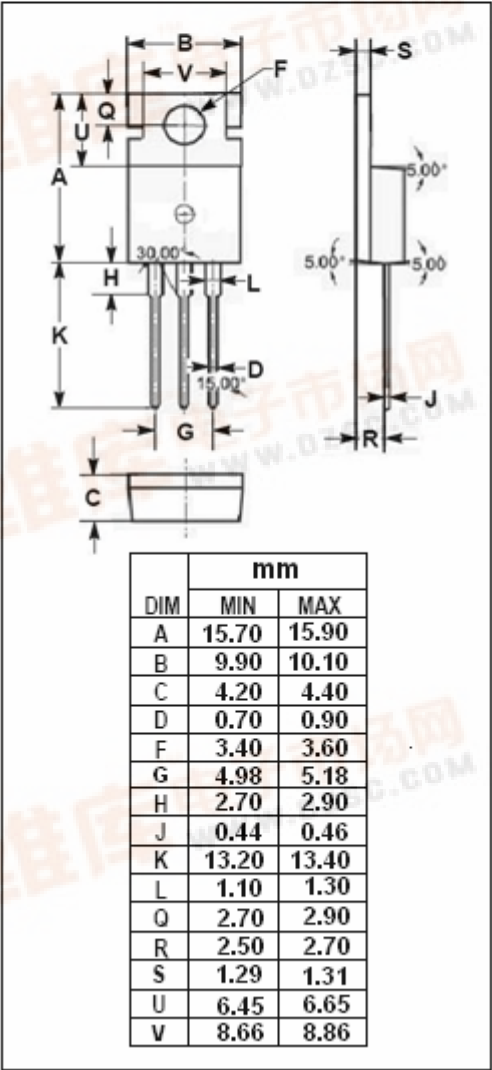
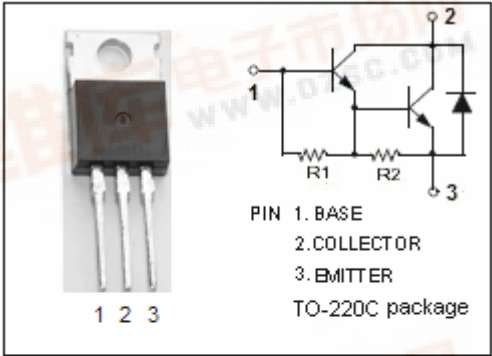
- High DC Current Gain- $h_{FE}=2000(\text{Min})@I_C=1\text{A}$
- Complement to Type D45D1/2/3/4/5/6

APPLICATIONS

- Designed for use in power linear and switching applications

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

SYMBOL	PARAMETER		VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	D44D1		V
		D44D2		
		D44D3	-60	
		D44D4	-80	
		D44D5	-100	
		D44D6	-120	
V_{CEO}	Collector-Emitter Voltage	D44D1		V
		D44D2		
		D44D3	-60	
		D44D4	-80	
		D44D5	-100	
		D44D6	-120	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-12	A
I_{CM}	Collector Current-Peak		-20	A
I_B	Base Current-Continuous		-0.5	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}\text{C}$		125	W
T_J	Junction Temperature		150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range		-65~150	$^{\circ}\text{C}$



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D44D1/2/3/4/5/6

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	D44D1				V
		D44D2				
		D44D3	-60			
		D44D4	-80			
		D44D5	-100			
		D44D6	-120			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -5A; I_B = -20mA$			-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -10A; I_B = -100mA$			-3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -5A; V_{CE} = -4V$			-2.5	V
V_{ECF-1}	C-E Diode Forward Voltage	$I_F = -5A$			-2.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE} = \frac{1}{2}V_{CEOmax}; I_B = 0$			-0.2	mA
I_{CBO}	Collector Cutoff Current	$V_{CB} = V_{CB0max}; I_E = 0$ $V_{CB} = \frac{1}{2}V_{CB0max}; I_E = 0; T_C = 150^{\circ}\text{C}$			-0.4 -2.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$			-5	mA
h_{FE}	DC Current Gain	$I_C = -1A; V_{CE} = -2V$	2000			