

isc Silicon NPN Darlington Power Transistors

D44D1/2/3/4/5/6

DESCRIPTION

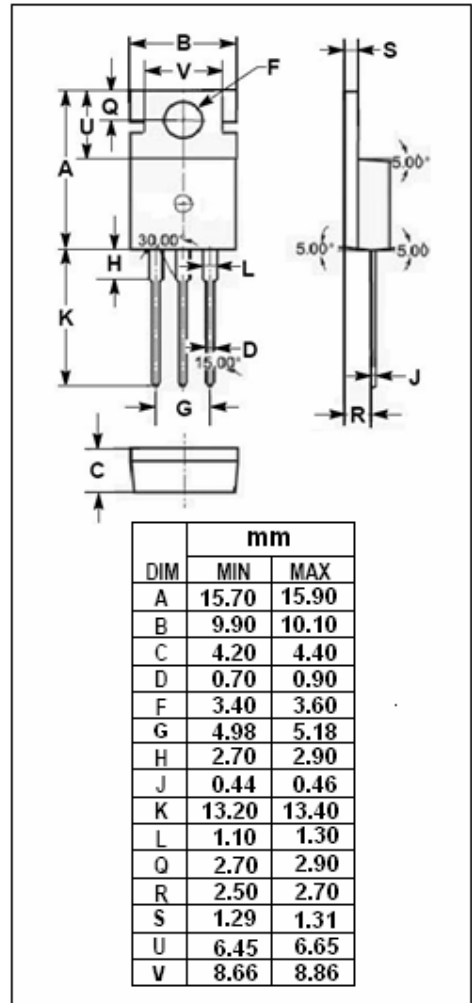
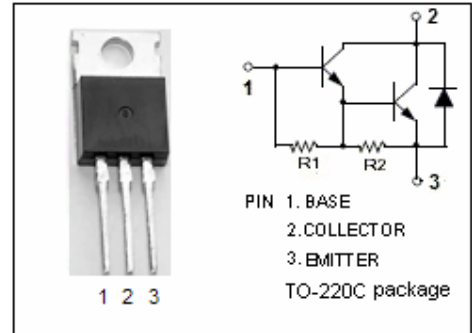
- High DC Current Gain- $h_{FE} = 2000(\text{Min}) @ I_C = 1A$
- Complement to Type D45D1/2/3/4/5/6

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	
		D44D2	
		D44D3	-60
		D44D4	-80
		D44D5	-100
		D44D6	-120
V_{CEO}	Collector-Emitter Voltage	D44D1	
		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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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	D44D1				V	
		D44D2					
		D44D3	$I_C = -30\text{mA}; I_B = 0$	-60			
		D44D4		-80			
		D44D5		-100			
		D44D6		-120			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -5\text{A}; I_B = -20\text{mA}$			-2.0	V	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}; I_B = -100\text{mA}$			-3.0	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -5\text{A}; V_{CE} = -4\text{V}$			-2.5	V	
V_{ECF-1}	C-E Diode Forward Voltage	$I_F = -5\text{A}$			-2.0	V	
I_{CEO}	Collector Cutoff Current	$V_{CE} = \frac{1}{2}V_{CE0max}; I_B = 0$			-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	$V_{EB} = -5\text{V}; I_C = 0$			-5	mA	
h_{FE}	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -2\text{V}$	2000				