

isc Silicon NPN Darlington Power Transistor

2SD2495

DESCRIPTION

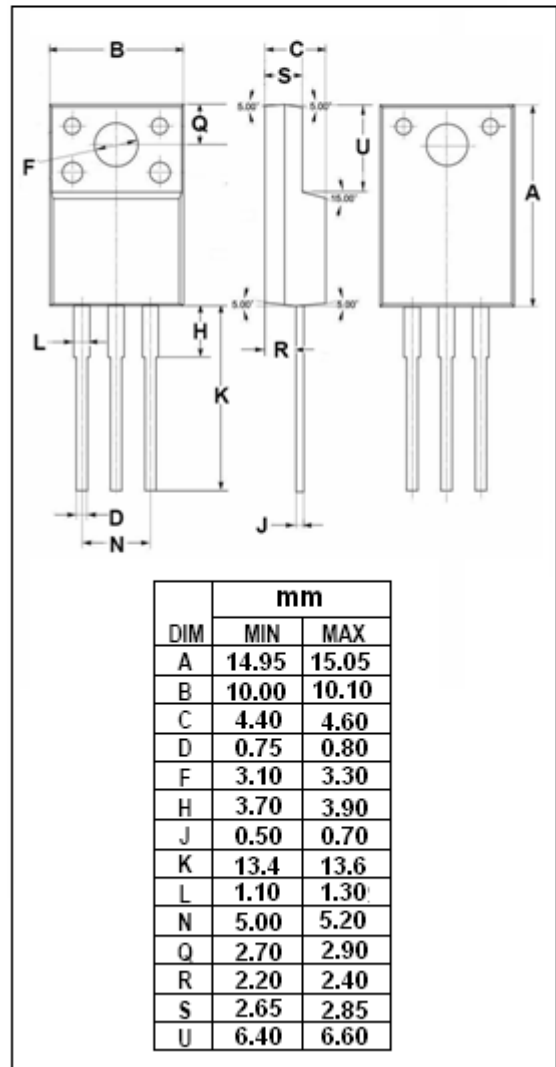
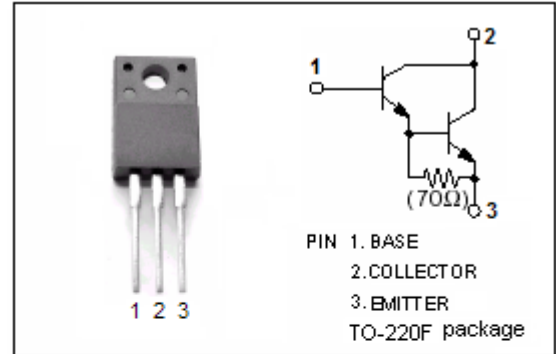
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 110V(\text{Min})$
- High DC Current Gain-  
:  $h_{FE} = 5000(\text{Min.}) @ (I_C = 5A, V_{CE} = 4V)$
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 2.5V(\text{Max}) @ (I_C = 5A, I_B = 5mA)$
- Complement to Type 2SB1626

APPLICATIONS

- Designed for audio, series regulator and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	110	V
$V_{CEO}$	Collector-Emitter Voltage	110	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	6	A
$I_B$	Base Current-Continuous	1	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	30	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



**isc Silicon NPN Darlington Power Transistor****2SD2495****ELECTRICAL CHARACTERISTICS****T<sub>j</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 30mA ; I <sub>B</sub> = 0	110			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 5mA			2.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 5mA			3.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 110V; I <sub>E</sub> = 0			100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			100	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 5A; V <sub>CE</sub> = 4V	5000			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1MHz		55		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = -0.5A ; V <sub>CE</sub> = 12V		60		MHz

## Switching Times

t <sub>on</sub>	Turn-on Time	V <sub>CC</sub> = 30V, R <sub>L</sub> = 6 Ω , I <sub>C</sub> = 5A; I <sub>B1</sub> = -I <sub>B2</sub> = 5mA,		0.8		μ s
t <sub>stg</sub>	Storage Time			6.2		μ s
t <sub>f</sub>	Fall Time			1.1		μ s

◆ **h<sub>FE</sub> Classifications**

O	P	Y
5000-12000	6500-20000	15000-30000