

isc Silicon NPN Darlington Power Transistor

2SD1895

DESCRIPTION

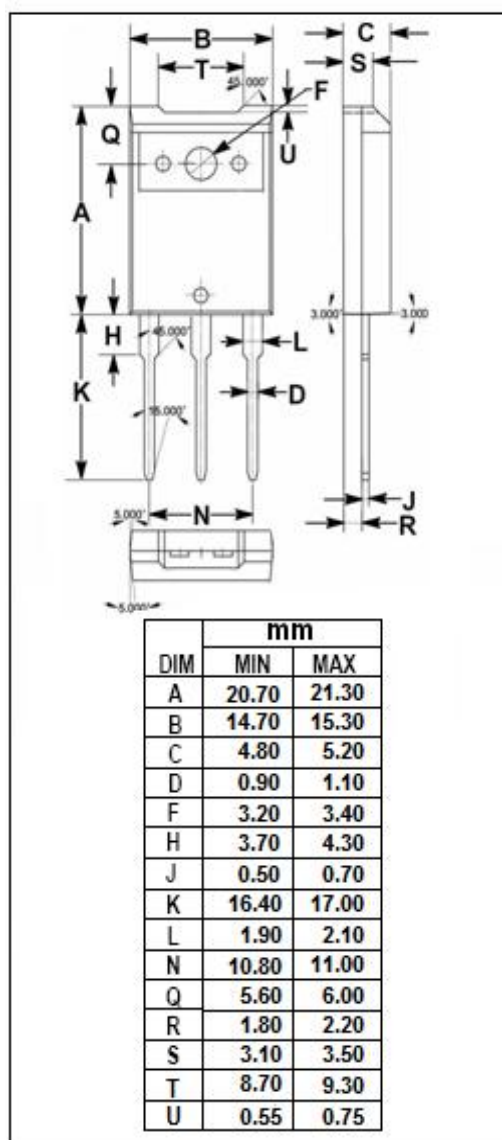
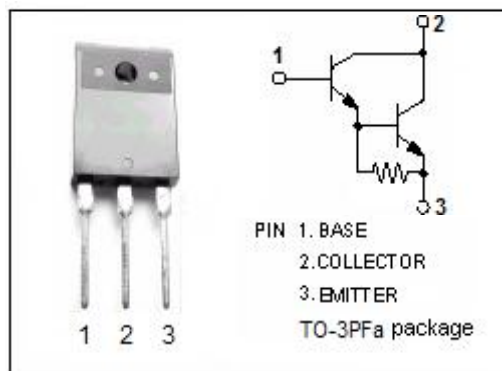
- High DC Current Gain-
: $h_{FE} = 5000(\text{Min}) @ I_C = 7A$
- Low-Collector Saturation Voltage-
: $V_{CE(sat)} = 2.5V(\text{Max.}) @ I_C = 7A$
- Complement to Type 2SB1255
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	15	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	100	W
	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	3	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1895****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	140			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 7mA			2.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 7A; I _B = 7mA			3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 160V; I _E = 0			100	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 140V; I _B = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			100	μ A
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 5V	2000			
h _{FE-2}	DC Current Gain	I _C = 7A; V _{CE} = 5V	5000		30000	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		20		MHz

Switching Times

t _{on}	Turn-on Time	I _C = 7A; I _{B1} = I _{B2} = 7mA, V _{CC} = 50V		2.0		μ s
t _{stg}	Storage Time			6.0		μ s
t _f	Fall Time			1.2		μ s

◆ h_{FE-2} Classifications

Q	P
5000-15000	8000-30000

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