

isc Silicon PNP Darlington Power Transistor

2SB1253

DESCRIPTION

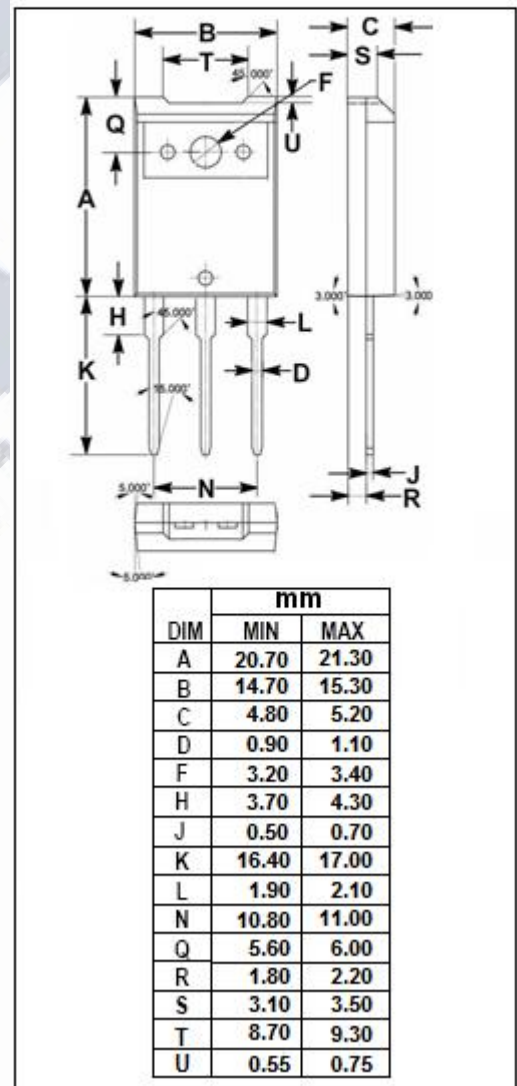
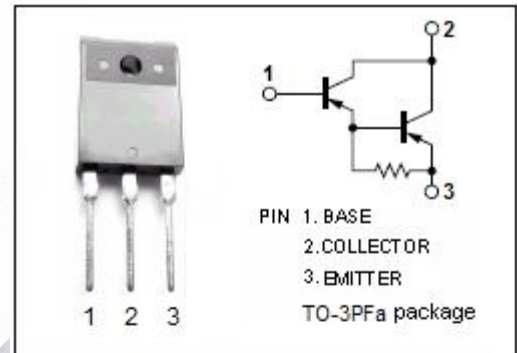
- High DC Current Gain-
: $h_{FE} = 5000(\text{Min}) @ I_C = -5A$
- Low-Collector Saturation Voltage-
: $V_{CE(sat)} = -2.5V(\text{Max.}) @ I_C = -5A$
- Complement to Type 2SD1893
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-130	V
V_{CEO}	Collector-Emitter Voltage	-110	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-6	A
I_{CM}	Collector Current-Peak	-10	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	50	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 PNP Darlington Power Transistor**2SB1253****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	-110			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -5A; I _B = -5mA			-2.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -5A; I _B = -5mA			-3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -130V; I _E = 0			-100	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = -110V; 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 = -5A; 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 = -5A; I _{B1} = -I _{B2} = -5mA, V _{CC} = -50V,		0.9		μ s
t _{stg}	Storage Time			2.5		μ s
t _f	Fall Time			1.7		μ s

◆ **h_{FE-2} Classifications**

Q	P
5000-15000	8000-30000

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