

isc Silicon NPN Darlington Power Transistor
2SD715
DESCRIPTION

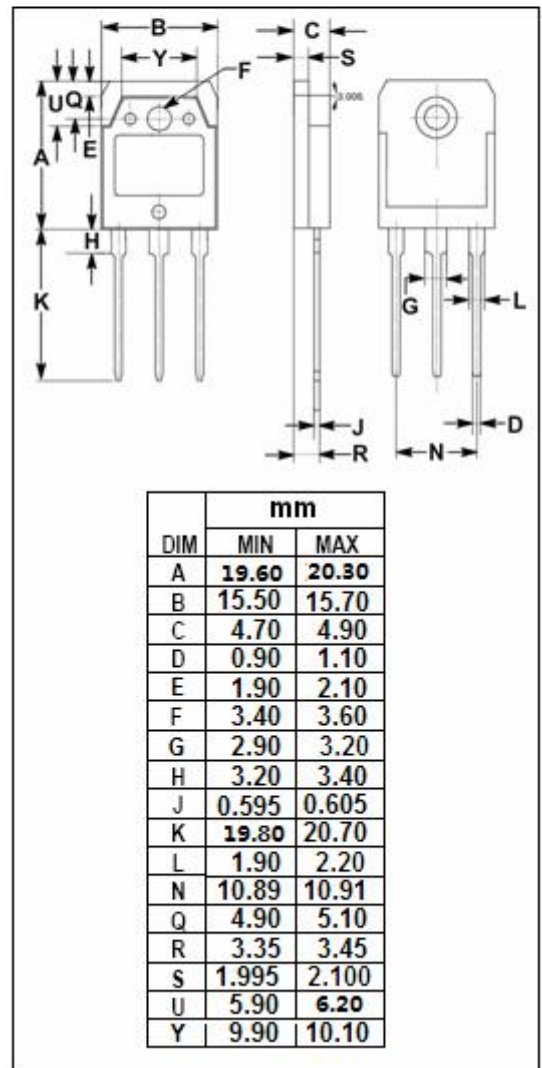
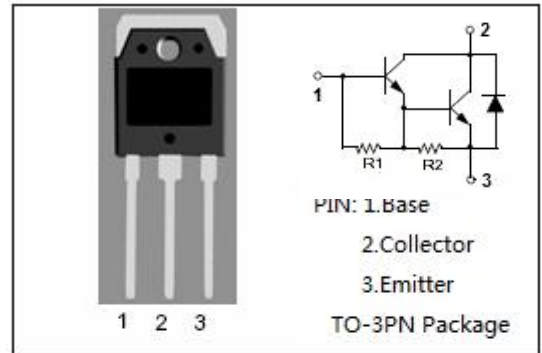
- High DC Current Gain
: $h_{FE} = 2000(\text{Min}) @ I_C = 1\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 110\text{V}(\text{Min})$
- High Reliability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio frequency power amplifier and low speed high current switching industrial use

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	7	A
I_{CM}	Collector Current-Peak	12	A
P_C	ollector Power Dissipation @ $T_C = 25^\circ\text{C}$	80	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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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	120			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 6A, I _B = 12mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 6A, I _B = 12mA			2.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 6A ; V _{CE} = 3V			2.5	V
I _{CBO}	Collector Cutoff current	V _{CB} = 110V, I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0			5	mA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 4V	2000		24000	
h _{FE-2}	DC Current Gain	I _C = 6A; V _{CE} = 4V	750			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A ; V _{CE} = 10V		30		MHz

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