

isc Silicon NPN Darlington Power Transistor
2SD2091
DESCRIPTION

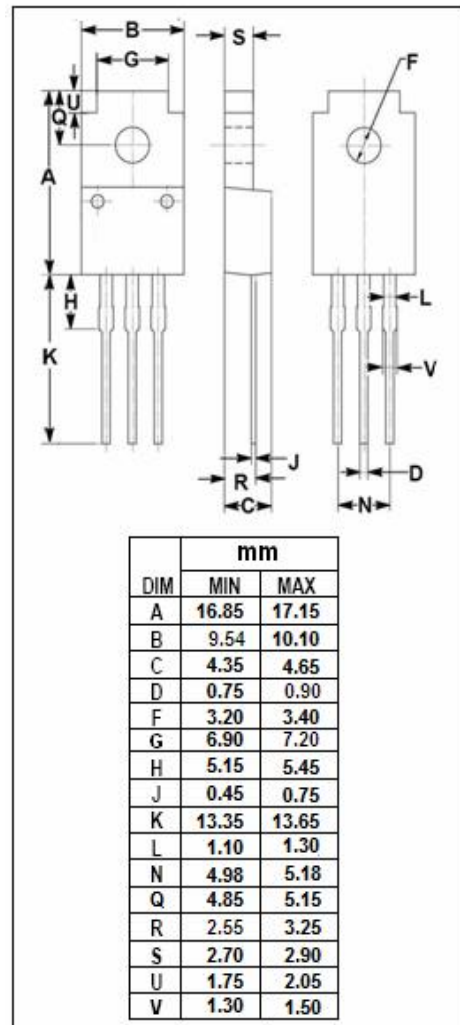
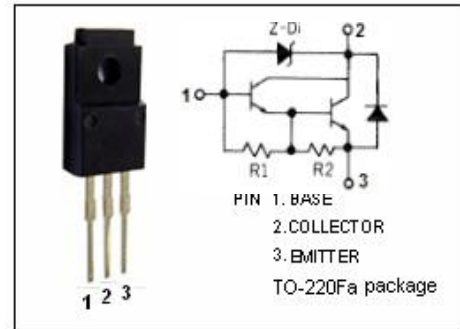
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min})@ I_C = 1\text{A}$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 1.5\text{V}(\text{Max})@ I_C = 1\text{A}$
- Incorporating a built-in zener diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Low-frequency power amplifier amplifications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80-110	V
V_{CEO}	Collector-Emitter Voltage	80-110	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Base Current-Peak	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	20	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 = 1mA; I _B = 0	80		110	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA; I _E = 0	80		110	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 3mA; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 1mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 1mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 70V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			3.0	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 2V	1000		10000	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		25		pF
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A ; V _{CE} = 5V		80		MHz

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