

isc Silicon NPN Darlington Power Transistor

2SD2141

DESCRIPTION

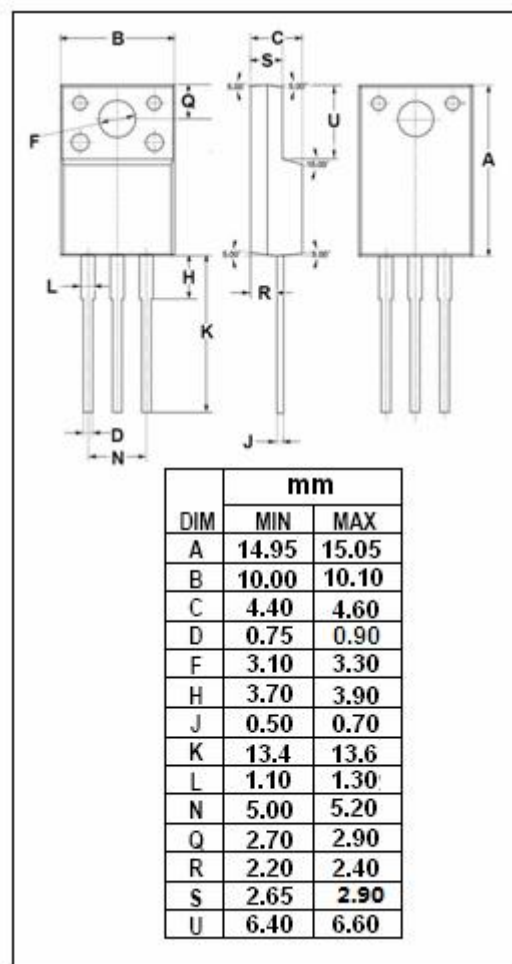
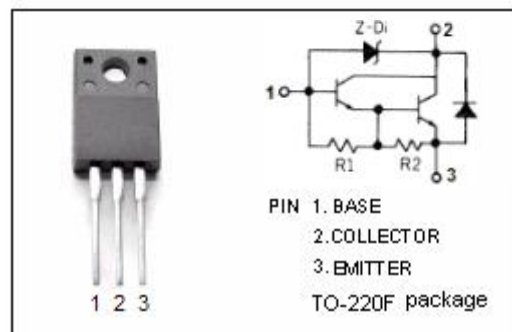
- High DC Current Gain-
: $h_{FE} = 1500(\text{Min}) @ I_C = 3A$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 4A$
- Incorporating a built-in zener diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in ignitor, driver for solenoid, motor and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	330-430	V
V_{CEO}	Collector-Emitter Voltage	330-430	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Base Current-Peak	10	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	35	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD2141****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 = 25mA; I _B = 0	330		430	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA; I _E = 0	330		430	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 20mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 20mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 20mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 330V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			20	mA
h _{FE}	DC Current Gain	I _C = 3A; V _{CE} = 2V	1500			
f _T	Current-Gain—Bandwidth Product	I _E = 0.5A ; V _{CE} = 12V		20		MHz
C _{OB}	Output Capacitance	I _E =0 ; V _{CB} =10V; f _{test} =1.0MHz		95		pF

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