

isc Silicon NPN Darlington Power Transistor

2SD2017

DESCRIPTION

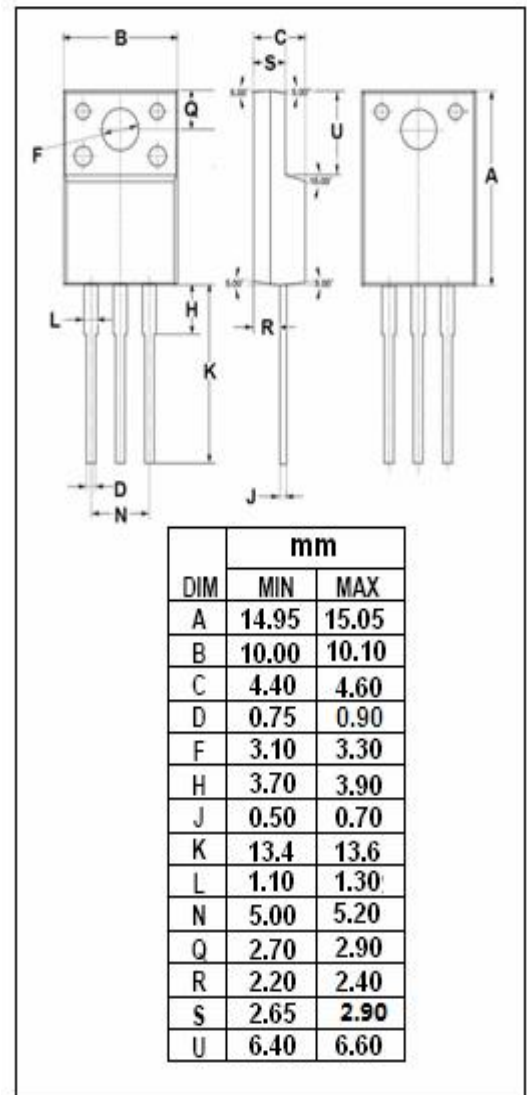
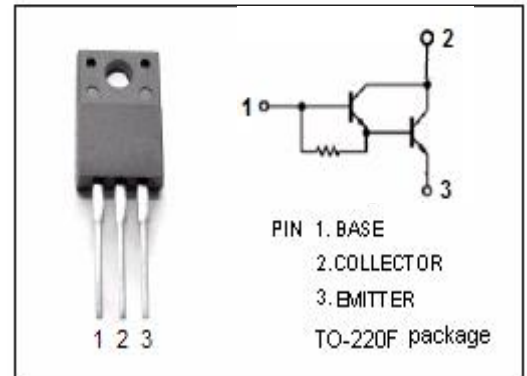
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 250V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 2A$
- High DC Current Gain
: $h_{FE} = 2000(\text{Min}) @ I_C = 2A, V_{CE} = 2V$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed of driver of solenoid, relay and motor, and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	20	V
I_C	Collector Current-Continuous	6	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	$^\circ\text{C}$



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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 25mA ; I _B = 0	250			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A ; I _B = 2mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A ; I _B = 2mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 300V ; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 20V ; I _C = 0			10	mA
h _{FE}	DC Current Gain	I _C = 2A ; V _{CE} = 2V	2000			
f _T	Current-Gain—Bandwidth Product	I _E = -1A ; V _{CE} = 12V		20		MHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V, f _{test} = 1MHz		65		pF

Switching times

t _{on}	Turn-on Time	I _C = 2A ; I _{B1} = 5mA ; I _{B2} = 10mA ; R _L = 50 Ω ; V _{CC} = 100V		0.6		μ s
t _{stg}	Storage Time			16.0		μ s
t _f	Fall Time			3.0		μ s

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