

isc Silicon NPN Darlington Power Transistor

2SD1566

DESCRIPTION

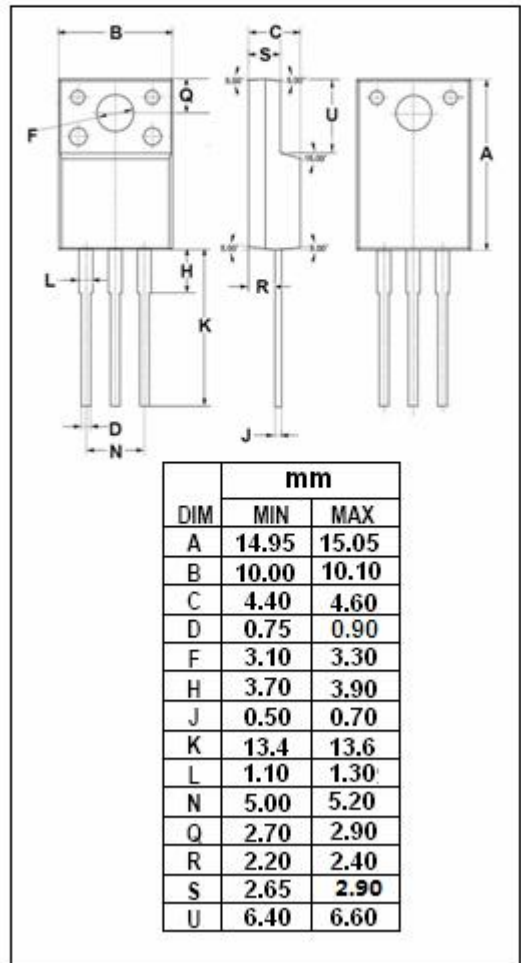
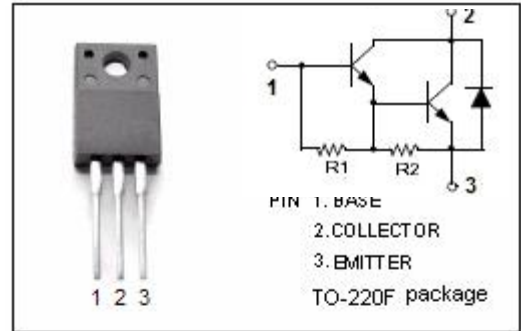
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 100V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 10A$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	60	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**2SD1566****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 = 10mA; I _B = 0	100			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 25mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 10A; I _B = 25mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 150V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0			5	mA
h _{FE}	DC Current Gain	I _C = 10A; V _{CE} = 2V	1000			
V _{ECF}	C-E Diode Forward Voltage	I _F = 10A			3.0	V
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 5V		20		MHz

Switching times

t _{on}	Turn-on Time	I _{B1} = I _{B2} = 25mA; R _L = 5 Ω ; V _{CC} = 50V			1.0	μ s
t _{stg}	Storage Time				5.0	μ s
t _f	Fall Time				2.0	μ s

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