



isc Silicon NPN Darlington Power Transistor

2SD1856

DESCRIPTION

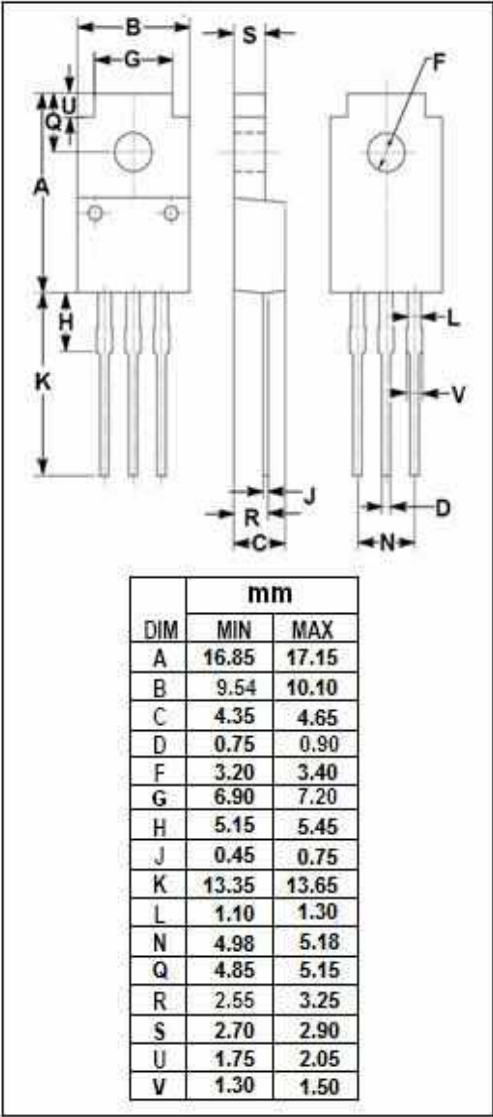
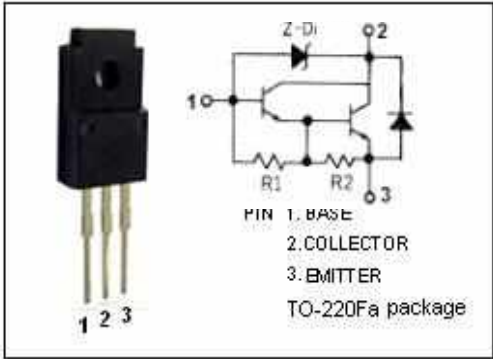
- High DC Current Gain
: $h_{FE}= 2000(\text{Min}) @ I_C= 2A$
- Low Collector Saturation Voltage
: $V_{CE(sat)}= 1.5V(\text{Max.}) @ I_C= 2A$
- Built-in damper diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for Motor, Relay and Solenoid driver applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50-70	V
V_{CEO}	Collector-Emitter Voltage	50-70	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
I_{CP}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ $T_a=25^{\circ}\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	25	
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1856****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 = 5mA; I _B = 0	50		70	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 0.1mA; I _E = 0	50		70	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} = 40V; 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 = 2A; V _{CE} = 3V	2000		30000	
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V, f _{test} = 1MHz		75		pF