

isc Silicon NPN Darlington Power Transistor

2SC4350

DESCRIPTION

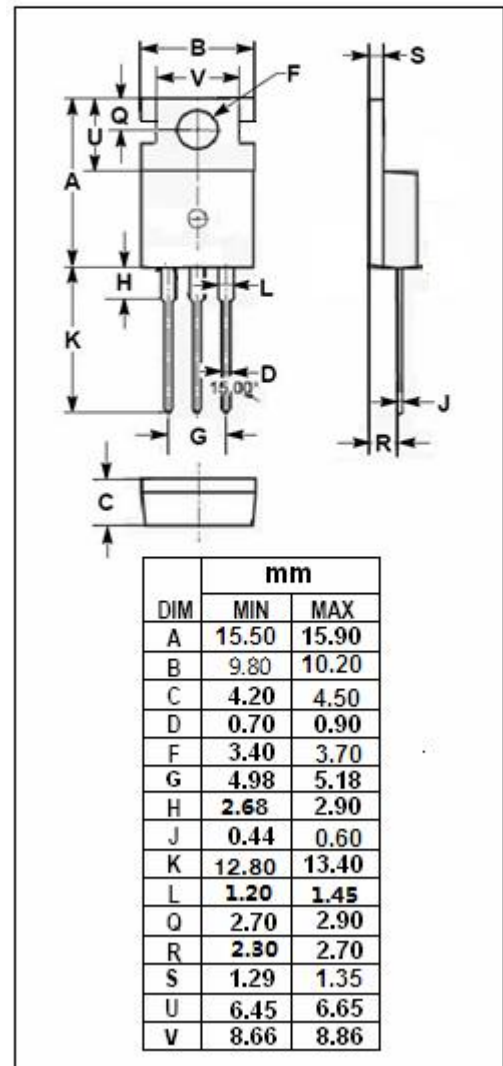
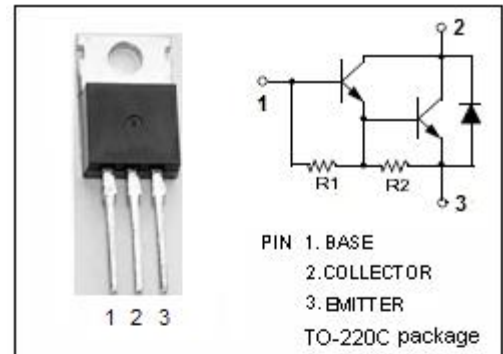
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 2000 \sim 20000(\text{Min}) @ I_C = 5A$
- Fast Switching Speed
- Good Linearity of h_{FE}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high-precision control such as PWM control for pulse motors or brushless motors in OA and FA equipment.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.1\text{A}; I_B=0$	100			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	100			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=5\text{mA}; I_C=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=5\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=5\text{mA}$			2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=100\text{V}; I_E=0$			1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=$			5.0	mA
h_{FE}	DC Current Gain	$I_C=5\text{A}; V_{CE}=2\text{V}$	2000		20000	

Switching times

t_{on}	Turn-on Time	$I_C=5\text{A}, I_{B1}=-I_{B2}=5\text{mA}$ $R_L=10\Omega; V_{CC}\approx 50\text{V}$		0.4		μs
t_{stg}	Storage Time			2.5		μs
t_f	Fall Time			0.7		μs

◆ h_{FE} Classifications

M	L	K
2000-5000	4000-10000	8000-20000

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