

isc Silicon PNP Darlington Power Transistor

2SB673

DESCRIPTION

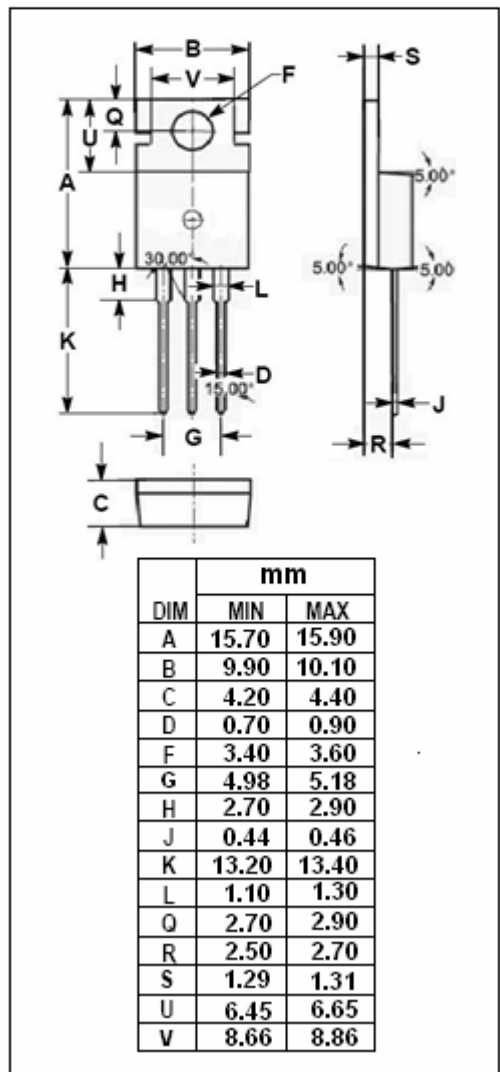
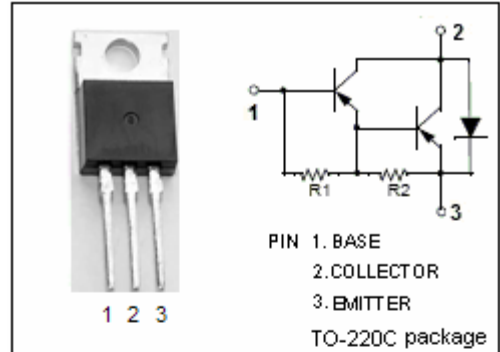
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min}) @ I_C = -3A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -100V(\text{Min})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -1.5V(\text{Max}) @ I_C = -3A$
- Complement to Type 2SD633

APPLICATIONS

- High power switching applications.
- Hammer drive, pulse motor drive applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-100	V
V _{CEO}	Collector-Emitter Voltage	-100	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current-Continuous	-7	A
I _B	Base Current-DC	-0.2	A
P _C	Collector Power Dissipation T _C =25°C	40	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -50\text{mA}$, $I_B = 0$	-100			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}$, $I_B = -6\text{mA}$			-1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -7\text{A}$, $I_B = -14\text{mA}$			-2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -3\text{A}$, $I_B = -6\text{mA}$			-2.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -100\text{V}$, $I_E = 0$			-100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$			-4	mA
h_{FE-1}	DC Current Gain	$I_C = -3\text{A}$; $V_{CE} = -3\text{V}$	2000		15000	
h_{FE-2}	DC Current Gain	$I_C = -7\text{A}$; $V_{CE} = -3\text{V}$	1000			

Switching times

t_{on}	Turn-on Time	$R_L = 15\ \Omega$, $V_{CC} = -45\text{V}$ $I_{B1} = -I_{B2} = -6\text{mA}$		0.8		μs
t_{stg}	Storage Time			2.0		μs
t_f	Fall Time			2.5		μs