

isc Silicon PNP Darlington Power Transistor

2SB677

DESCRIPTION

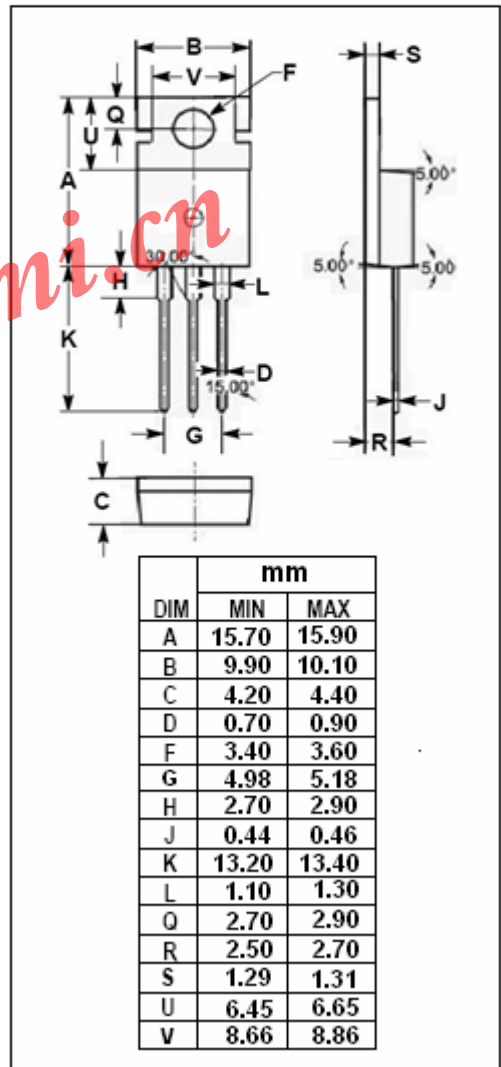
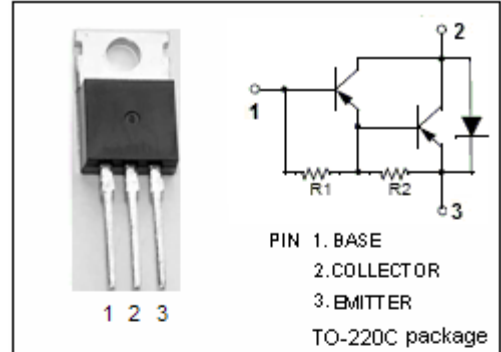
- High DC Current Gain-  
:  $h_{FE} = 2000(\text{Min}) @ I_C = -1\text{A}$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -40\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-  
:  $V_{CE(\text{sat})} = -1.5\text{V}(\text{Max}) @ I_C = -2\text{A}$

APPLICATIONS

- Switching applications.
- Hammer drive, pulse motor drive applications.
- Power amplifier applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-40	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-3	A
$P_C$	Collector Power Dissipation $T_C = 25^\circ\text{C}$	25	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	$I_C = -25\text{mA}$ , $I_B = 0$	-40			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}$ , $I_B = -4\text{mA}$			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2\text{A}$ , $I_B = -4\text{mA}$			-2.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -60\text{V}$ , $I_E = 0$			-20	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ , $I_C = 0$			-2.5	mA
$h_{FE-1}$	DC Current Gain	$I_C = -1\text{A}$ ; $V_{CE} = -2\text{V}$	2000			
$h_{FE-2}$	DC Current Gain	$I_C = -3\text{A}$ ; $V_{CE} = -2\text{V}$	1000			
$t_{on}$	Turn-on Time	$V_{CC} = -30\text{V}$ ; $I_{B1} = -I_{B2} = -6\text{mA}$ , $R_L = 10\Omega$		0.30		$\mu\text{s}$
$t_{stg}$	Storage Time			0.60		$\mu\text{s}$
$t_f$	Fall Time			0.25		$\mu\text{s}$