

**Silicon PNP Darlington Power Transistor**

**2SB880**

**DESCRIPTION**

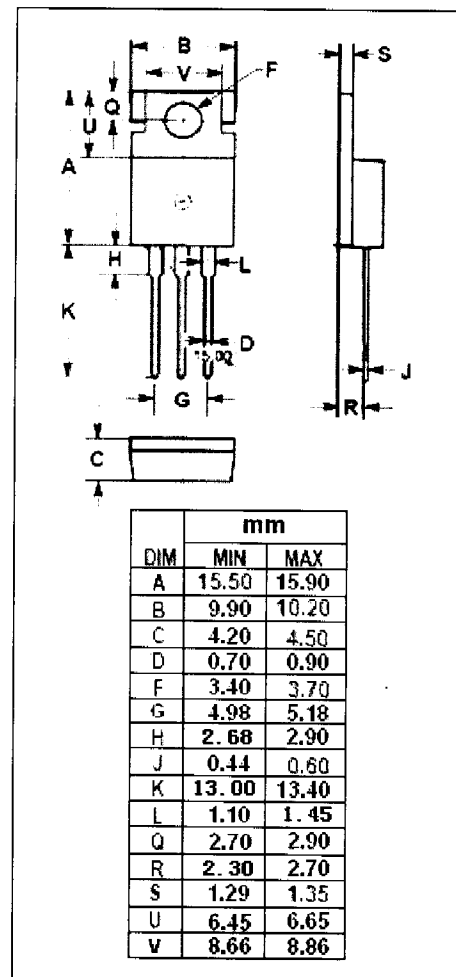
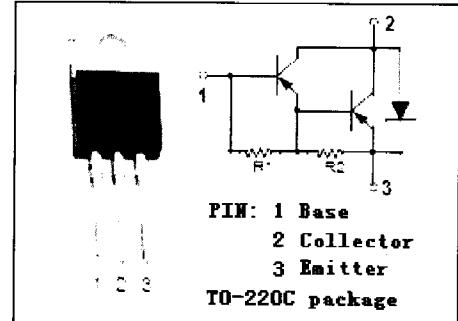
- High DC Current Gain-  
 :  $h_{FE} = 2000(\text{Min}) @ I_C = -2A$
- Wide Area of Safe Operation
- Low Collector-Emitter Saturation Voltage-  
 :  $V_{CE(\text{sat})} = -1.5V(\text{Max}) @ I_C = -2A$
- Complement to Type 2SD1190

**APPLICATIONS**

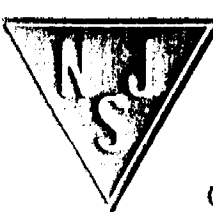
- Designed for motor drivers, printer hammer drivers, relay drivers, voltage regulators applications.

**ABSOLUTE MAXIMUM RATINGS (Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-70	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-4	A
$I_{CM}$	Collector Current-Peak	-6	A
$P_C$	Collector Power Dissipation $T_C = 25^\circ\text{C}$	30	W
	Collector Power Dissipation $T_a = 25^\circ\text{C}$	1.75	
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



# Silicon PNP Darlington Power Transistor

# 2SB880

## 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	$I_C = -30\text{mA}$ , $R_{BE} = \infty$	-60			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -5\text{mA}$ , $I_E = 0$	-70			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	$V_{CB} = -40\text{V}$ , $I_E = 0$			-100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ , $I_C = 0$			-3	mA
$h_{FE}$	DC Current Gain	$I_C = -2\text{A}$ ; $V_{CE} = -2\text{V}$	2000			
$f_T$	Current-Gain—Bandwidth Product	$I_C = -2\text{A}$ ; $V_{CE} = -5\text{V}$		20		MHz

### Switching times

$t_{on}$	Turn-on Time	$R_L = 10\Omega$ , $V_{CC} \approx -20\text{V}$ $I_C = -2\text{A}$ ; $I_{B1} = -I_{B2} = -4\text{mA}$		0.5		$\mu\text{s}$
$t_{stg}$	Storage Time			1.4		$\mu\text{s}$
$t_f$	Fall Time			1.2		$\mu\text{s}$