

# isc Silicon PNP Darlington Power Transistor

## 2SB963

### DESCRIPTION

- With TO-251(IPAK) packaging
- Very high DC current gain
- Monolithic darlington transistor with integrated antiparallel collector-emitter diode
- Complement to type 2SD1286
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

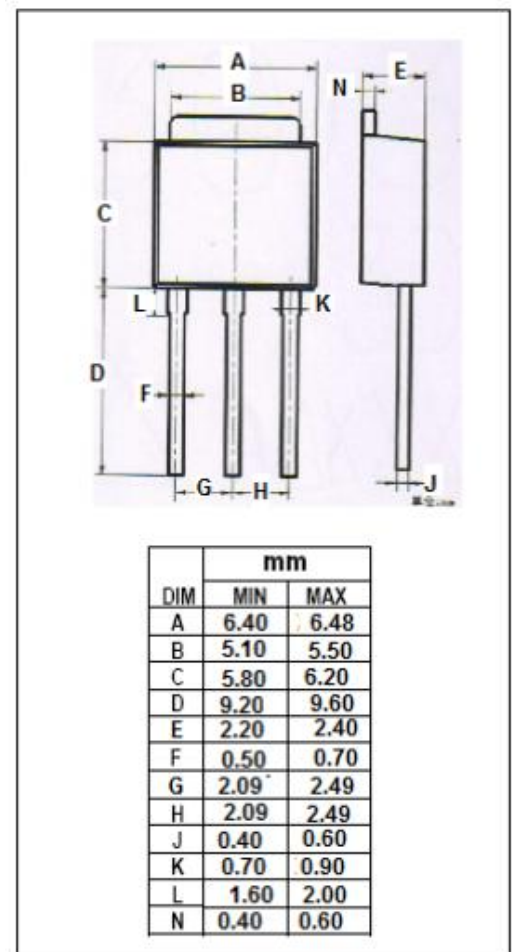
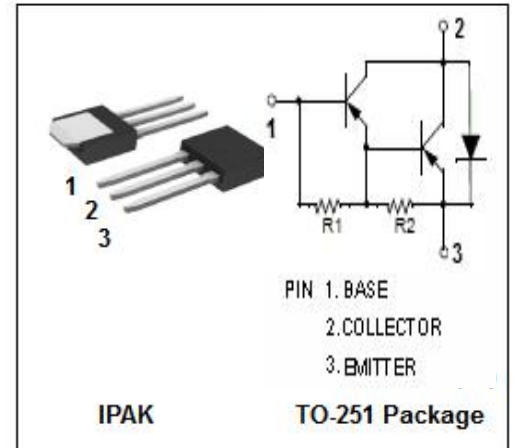
- AC-DC motor control
- Electronic ignition
- Alternator regulator

### ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CB0</sub>	Collector-Base Voltage	-60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-60	V
V <sub>EB0</sub>	Emitter-Base Voltage	-8	V
I <sub>C</sub>	Collector Current-Continuous	-1	A
I <sub>CM</sub>	Collector Current-Peak	-2	A
P <sub>T</sub>	Total Power Dissipation	10	W
T <sub>j</sub>	Max.Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-a</sub>	Thermal Resistance,Junction to Ambient	62.5	°C/W



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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -1mA, I <sub>B</sub> = 0	-60		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> =-0.5A, I <sub>B</sub> = -50mA		-1.5	V
V <sub>BE(sat)1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> =-0.5A, I <sub>B</sub> = -50mA		-2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =-60V, I <sub>E</sub> = 0		-10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0		-10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -0.2A; V <sub>CE</sub> = -2V	1000	-	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -0.5A; V <sub>CE</sub> = -2V	6000	30000	

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