

**isc Silicon NPN Darlington Power Transistor**

**GT43**

**DESCRIPTION**

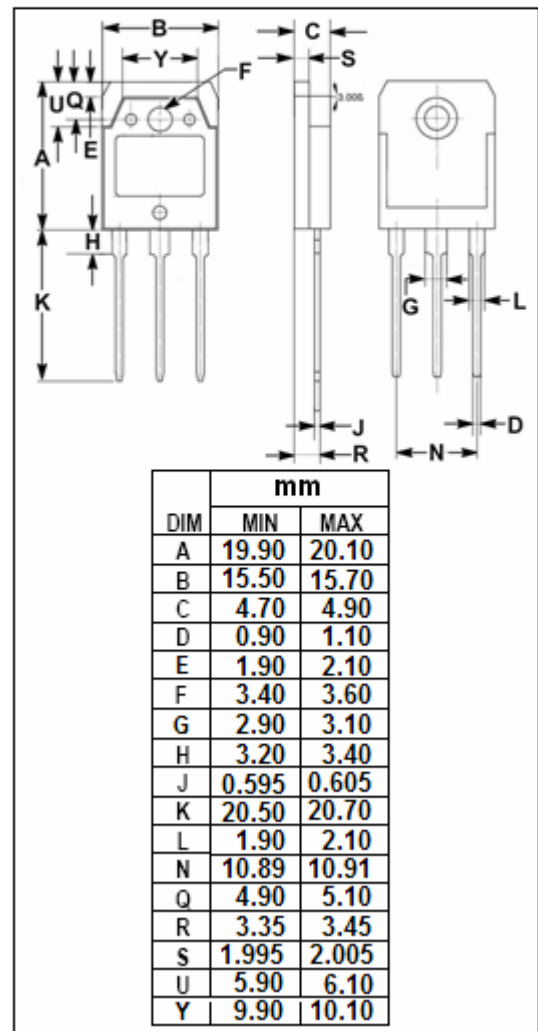
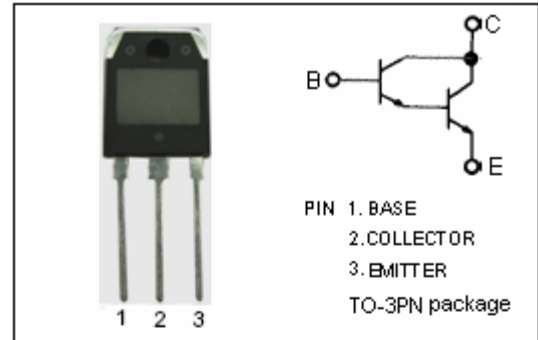
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 300V(\text{Min})$
- High DC Current Gain  
:  $h_{FE} = 2000(\text{Min.}) @ I_C = 4A$
- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = 3.0V(\text{Max.}) @ I_C = 6A$

**APPLICATIONS**

- Switching for dynamotor excitation
- General purpose power amplifier

**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	400	V
$V_{CEO}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	10	A
$I_B$	Base Current-Continuous	1	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	100	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



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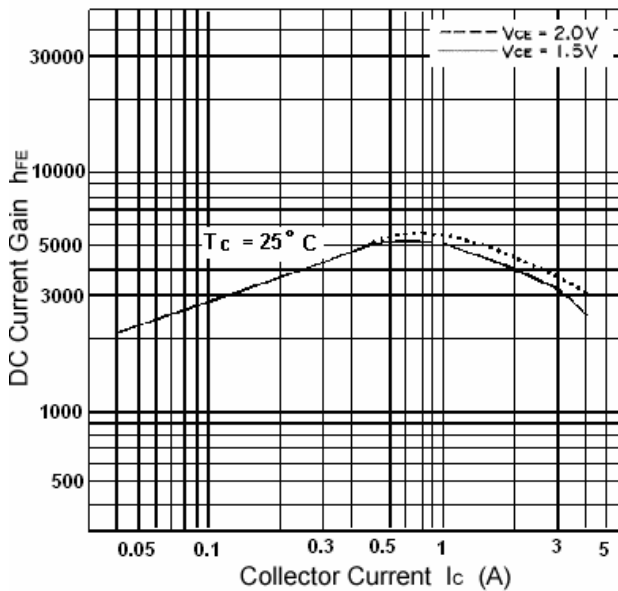
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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =10mA ;I <sub>B</sub> =0	300			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> =1mA ;I <sub>E</sub> =0	400			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =50mA ;I <sub>C</sub> =0	7			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> =1A; I <sub>B</sub> =10mA			1.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> =6A; I <sub>B</sub> =50mA			3.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 400V; I <sub>E</sub> = 0			100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0			100	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 4V	2000			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 5mA; V <sub>CE</sub> = 4V	300			

DC Current Gain



Safe Operating Area

