

**isc Silicon NPN Power Transistor**
**2SC4595**
**DESCRIPTION**

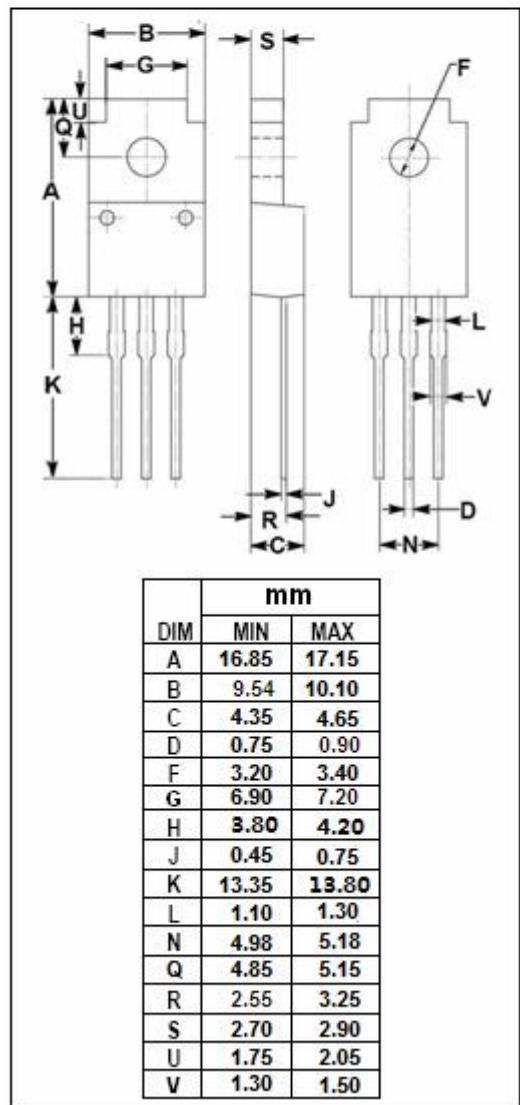
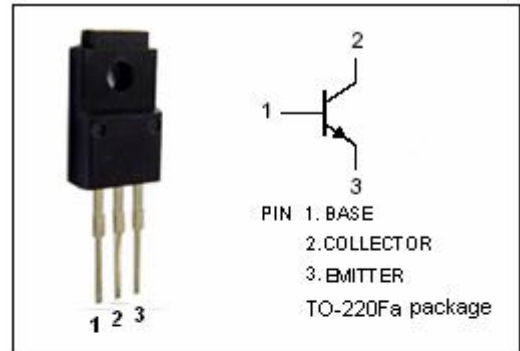
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 60V(\text{Min})$
- DC Current Gain-  
:  $h_{FE} = 60(\text{Min})@ (V_{CE} = 2V, I_C = 2A)$
- Low Saturation Voltage-  
:  $V_{CE(sat)} = 0.3V(\text{Max})@ (I_C = 6A, I_B = 0.3A)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for power switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	12	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	30	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



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**ELECTRICAL CHARACTERISTICS**

 T<sub>j</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> = 1mA ; I <sub>B</sub> = 0	60			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 50 μ A ; I <sub>C</sub> = 0	5			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 6A ; I <sub>B</sub> = 0.3A			0.3	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 8A ; I <sub>B</sub> = 0.4A			0.5	V
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 6A ; I <sub>B</sub> = 0.3A			1.2	V
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 8A ; I <sub>B</sub> = 0.4A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 100V ; 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> = 1A ; V <sub>CE</sub> = 2V	100			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 2A ; V <sub>CE</sub> = 2V	60		320	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 10V		120		MHz

**◆ h<sub>FE-2</sub> Classifications**

D	E	F
60-120	100-200	160-320

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